

RESULT Release Notes

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About This Document

This document contains a revision history of RESULT, including new features that may not be included in the User's Guide, resolved issues, and known issues.

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About RESULT Software

RESULT Software is a dedicated analysis software package for industrial analyzers. It is comprised of the following software applications:

- **RESULT Operation** is an intuitive, easy-to-use graphical interface for routine sample analysis. *RESULT Operation* uses the security features of the Microsoft® Windows® operating system, including user passwords, *logons*, and digital signatures, to secure the system for routine operation. The software is compatible with standard readers and web browsers, allowing easy viewing of spectra, reports and instructions and complies with regulatory and validation requirements for production pharmaceutical, chemical, gas, and polymer analyses.
- **RESULT Integration** is a sophisticated yet easy-to-use development package for setting up controlled operating environments for routine sample analysis. *RESULT Integration* allows an analyst to integrate quantitative, qualitative, and spectral measurement methods with simple data collection, archiving, and reporting routines to create a custom analysis without the use of complicated programming or macro coding. *RESULT Integration* includes features for generating custom reports and for attaching instructions or a standard operating procedure (SOP) to an analysis. The software's data simulation features allow the developer to create and test methods on non-production systems. After a process has been defined and tested, it can be secured and then transferred from system to system for accurate, repeatable analysis RESULTS.
- **RESULT Data View** is a tool for viewing sequence data files. It is a companion to the *RESULT* sequence module, which allows real-time data collection and analysis for time-based experiments. You can use the Data View application to display sequence spectra as well as the measured concentration values or other analysis RESULTS. The analytical data *are presented on a time axis; selecting a data point displays the corresponding spectrum.*

Note: RESULT may be combined with *the Thermo Security Administration software*, a Windows-based security application, for additional security features.

RESULT 4.7

Release Date: April-2024

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*
- *Windows 11 64-bit*

New Features

RESULT now supports OPC UA. Existing OPC DA tags are now written to equivalent OPC UA tags. This requires the installation of Factory Automation Service 1.4 or newer.

Resolved Issues

Audit log entries not saved to database

If security is enabled for RESULT, the option to “Save audit to database” may not be honored. This has been resolved.

Known Issues

None

RESULT 4.6 Hotfix 3

Release Date: Jul-2023

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*
- *Windows 11 64-bit*

New Features

None

Resolved Issues

Audit log entries displayed wrong GMT offset

Entries collected during Standard Time then displayed during Daylight Saving Time showed an incorrect GMT offset compared to time displayed in report. This has been resolved in this hot fix.

Write to Modbus Service

Negative floating-point values written modbus were incorrectly rounded to specified significant digits.

Known Issues

None

RESULT 4.6 Hotfix 2

Release Date: October 2022

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

None

Resolved Issues

Unable to access the Update Instrument Information command in the RESULT Operation Service menu

On a new system you get an error message when you try to access the Update Instrument Information command in the Service menu of RESULT Operation. On other systems you are able to get into the Update Instrument Information dialog, but you get an error message when you try to create a backup of the instrument information. This is now fixed by this hot fix. It was caused by unintended interactions caused when translation support was added for the instrument driver.

Known Issues

None

RESULT 4.6 Hotfix 1

Release Date: August 2022

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

None

Resolved Issues

Problem in Photometric Linearity Test in USP_EP_ValPro_IS_Internal workflow

The 8333 cm-1 intercept value is not tested with the correct limits. Fix this acceptance limits to lie between -0.0500 and +0.0500.

Known Issues

None

RESULT 4.6

Release Date: July 2022

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

Policy to prevent overwriting RESULT Operation data files

A new policy has been added to prevent the overwriting of RESULT Operation data files. This policy is separate from the policy to prevent overwriting of workflow files in RESULT Integration. This policy can be found in the Additional Policies section in Security Admin. This affects the Archive event.

Resolved Issues

Could not detect when Security Service was interrupted

RESULT will now detect when communication to the Security Service has been interrupted.

Incorrect validation time stamp in the report

Instrument Validation timestamp displayed in a report is now displayed with the correct time zone offset.

Empty service log entry in Audit Manager

Service Log entries are now limited in length to prevent an empty entry in Audit Manager. Multiple entries can be created instead of single long entries.

Correct issues in the ValPro workflows when checking if a value is within limits

When the Logical Specification of a Check Event is applied, the items to be tested are blank. Fix all of this instances by reloading the measurement to be tested.

Error when moving the autosampler with a tablet detector

Raise the snout of the tablet detector before attempting to move the autosampler.

Unable to save a validation path for IGS when no security is present

Fix in the IGS options setting for the validation path.

USB reply possible issue

Ensure that the semaphore is not released before USB reply retry.

Components in table are shown with too many decimal digits

Fix this to honor the number of decimal digits expected in the method.

The background spectrum is not saved with the final spectrum when retrieved

This is now added back when saving a spectrum. This feature was lost in the previous release.

Confidence values (e.g. standard error) cannot be accessed properly

Clean up how the confidence values are saved during a measurement.

Pressure value saved by Sequence is shown in torr, not hPa

Fixed how pressure values are computed and saved in Sequence, especially in the mini-header.

Known Issues

None

RESULT 4.5

Release Date: November 2021

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

RESULT is only available in English since RESULT 4

Since the introduction of RESULT 4, the RESULT software has only been in English. With this release RESULT is also available in Chinese, French, German, Spanish and Italian. This version also introduces RESULT software in Japanese.

Implement missing diagnostic values from Unscrambler measurements

The inlier distance and the X sample Q residual values available from the Unscrambler measurements are now available from RESULT.

Fix the default for running a while loop

The new default is to force running a workflow at least once from a while loop.

Allow the default laser frequency for data collection in RESULT to be changed

Allow a registry item to define a new default laser frequency that will be used for all data collects.

Bitmap files supported by RESULT are secure

Any bitmap file used by RESULT software may now be secured.

Remove “Launch OPC Server at startup” from RESULT settings

This option is now always done.

Add “Before each and reset the timer” as a new background option

Add the “Before each and reset the timer” to provide a background option that will restart the timer for the timed background options. This option may be selected in the Collect event and then if the Sample Specification is used with a different Collect event, you can reset the time to time zero for the second Collect event.

Resolved Issues

RESULT Operation doesn't create a database at startup

If the RESULT.mdb doesn't already exist, then the error where the database didn't get created was fixed.

RESULT software will crash if the “Test Measurement” menu item is selected with no workflow open or active

This is now fixed.

The copyright symbol doesn't display properly in Chinese

This is now fixed for all multi-byte languages.

The step zero offset for the Autosampler carousel was not saved properly if the value is large

This is now fixed. It only occurred when the offset was at least 10 steps.

RESULT may crash if the file name is not present in Use Sampling Sequence

This is now fixed.

RESULT crashes when a bar code read is terminated with a carriage return

This is now fixed by taking care of a null exception.

Pass/Fail returns Pass if no spectrum is available

Now set to return Fail if no spectrum is available.

Problems when adding an item to the event viewer

Make sure that the security client is available before adding to the event viewer.

The Report to OPC event does not apply the number of decimal digits specified in the event table

When sending a floating point RESULT to OPC, the number of decimal digits was ignored. Thus the full precision RESULT was sent out on OPC. The number of OPC decimal digits is now applied properly. This problem with also found and fixed in the Write to Modbus event.

Known Issues

None

RESULT 4.4 Hotfix 1

Release Date: February 2021

Supported Operating Systems

- *Windows 10 64-bit*_ Version 1607 and newer_

New Features

Record the time and date when the computer was rebooted from ReStartRESULTOperation program

The ReStartRESULTOperation program supports the ability to reboot the computer from a workflow on demand (using the `–SHUTDOWN` or `–RUNAPPSHUTDOWN` command line options). This feature gives a log of the times when the reboot command was issued.

Resolved Issues

Unable to view in OPC a Request event item set from the Report to OPC event / specification

The Request item is set to an OPC tag index that is greater than the number of request items that are supported. When that happens now, rather than setting the value into a Request item, set it to a Measurement item. This allows it to still be viewed from OPC.

Unable to save Collect Dual Tablet backgrounds with instrument collection

The Collect Dual Tablet background worked properly in simulation mode, but it was broken on instrument. The issue has been fixed.

Background frequency doesn't work properly in Operation mode

The background frequency on Collect event doesn't work in Operation mode when "Save to audit trail" is not checked. Now the dependency on this setting has been removed, and the background will be archived properly in Operation mode to support different settings of background frequency.

Known Issues

None

RESULT 4.4

Release Date: January 2021

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

Read from Modbus and Write to Modbus events are available to add to Collect Sequence

These two events now are available to add to Collect Sequence when creating a workflow.

Diagnostics values for Measure event are available to report out in Report to OPC and Write to Modbus events

In addition to concentration RESULTS, diagnostics values are now available for Report to OPC and Write to Modbus events for TQ Analyst, Unscrambler and PLSplus/IQ.

Note: Any existing workflow created prior to RESULT 4.4 using Write to Modbus or Read from Modbus will have to be recreated.

ValPro USP35 workflows updated to include the Wavelength Reproducibility test and available for use with RESULT 3

The Wavelength Reproducibility test was added to the USP35 ValPro workflows for RESULT 3. This makes the historical USP35 workflows fully compatible with USP 1856 and EP 2.2.40. These updated workflows must be copied to the Program Files (x86) / RESULT / ValPro directory, overwriting the old USP35 files. These are the same ValPro 4 workflows released in RESULT 4.2.

Resolved Issues

Sample archive log is not included in Archive Log records for all prior RESULT 4 releases

When “Save to Audit Trail” policy was checked, only background archiving record was captured in Archive Log, but sample archiving record was missing.

Note: In all cases, RESULT.MDB must be installed in the RESULT Data/Config folder with user permissions set per the Installing Your Software manual.

Spectrum range issue with dual channel collect in Operation

Spectrum range got clipped if regions are not the same for both transmission and reflection.

Update the linearity test to eliminate the 5000 cm-1 test for tablet analyzer ValPro

The 5000 cm-1 linearity test RESULT does not apply to the tablet detector and was removed from the USP_EP workflow. It was correct for the old USP35 tests for the tablet analyzer ValPro workflow.

Manuals for Antaris NIR instruments and RESULT software not included with RESULT 4

Antaris hardware and RESULT software manuals were previously available on the RESULT 3 language pack DVD. In RESULT 4 the language files are not supported, and the DVD was eliminated. PDF manuals are now available on the RESULT 4 Program DVD in the RESULT Documents directory.

RESULT launches when access to the application is denied in Security Admin settings

When a user's access to RESULT Integration or RESULT Operation is denied in Security Admin settings, user can still launch RESULT.

Known Issues

None

RESULT 4.3 Hotfix 1

Release Date: November 2020

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

None

Resolved Issues

The Unscrambler Measurement is not available in Measure event

The Unscrambler Measurement is not available in the list of templates for new specification in Measure event. A configuration file formatting issue was corrected to resolve the problem.

Known Issues

None

RESULT 4.3

Release Date: October 2020

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

RESULT is updated to support new ValPro workflows to comply with new USP and existing EP standards

USP35 workflows and methods are replaced with USP_EP workflows and methods to comply with new USP 1856 and existing EP 2.2.40 standards. The legacy ValPro workflows and methods are still available and remain unchanged.

Resolved Issues

Problem of reading temperature from Heater Block

One of production utility failed to read temperature properly from Heater Block due to a problem in instrument driver.

Known Issues

Collect Dual Tablet blanking issue

Collect Dual Tablet event shows blanked regions when different spectral ranges are used for transmission and reflection. Quantitative RESULTS may be impacted.

Workaround: Archived data can be reprocessed to recover the full spectral range.

RESULT 4.2

Release Date: September 2020

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

RESULT is updated to work with a new electronics module to deal with parts obsolescence

Two drivers are installed with RESULT software, one for old electronic module, and one for the new one. RESULT will automatically detect and use the correct driver when connected with instrument.

Resolved Issues

Collect event slows down during continuous long-term workflow running

Fixed the slowing down issue related to memory usage in live display of spectrum plots.

TQ Analyst security related features are not enabled with Security Suite

Fixed the issue caused by missing components in installation.

Known Issues

TQ Analyst DS Data Security is bundled with ValPro for Antaris NIR

“TQ Analyst DS Data Security” is bundled with ValPro for Antaris NIR. When Security Suite is not installed, TQ Analyst will not start and you will get errors.

Workaround: Uninstalling “TQ Analyst DS Data Security” will fix the problem.

RESULT 4.1 and older version won't work with new electronics module

If your bench's electronics module needs an update to new module, you will need at least RESULT 4.2 and a firmware update.

RESULT 4.1

Release Date: August 2020

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

RESULT is updated to support reading and writing data with Modbus TCP through Thermo Scientific Factory Automation Service

A new service – Thermo Scientific Factory Automation Service is installed and runs in the background to support Modbus TCP communication. Two text documents with help information are installed under “C:\ProgramData\Thermo Scientific\FactoryAutomationService”: ModbusConfiguration.txt for workflow configuration, and PCConfig.txt for Modbus TCP configuration and default RESULT identifiers configuration.

Read From Modbus Service event

This event allows information from workflow events to be read from Thermo Scientific Factory Automation Service.

Write To Modbus Service event

This event allows information from workflow events to be written to Thermo Scientific Factory Automation Service.

RESULT is updated to support Security Suite 2.3.10 and Audit Manager 1.3

RESULT is updated to work with Security Suite 2.3 and Audit Manager 1.3 with fixes of handling Unicode language properly.

RESULT OPC Server is updated to support up to 20 Operator Request and Request Event tags

RESULT OPC Server database is updated to support up to 20 Operator Request and Request Event tags. RESULT OPC Test Client is also updated to display 20 sets of tags for Operator Request and Request Event.

Resolved Issues

Check Signature failed with security installed but no secure folders enabled

Fixed the issue related to “Check Signature” on workflows when secure folders are not enabled.

Issues related to opening workflow or “Check Signature” on workflow in a read-only folder

Fixed the crash when opening workflow in a read-only folder and fixed the failure with “Check Signature” on a workflow in a read-only folder.

Known Issues

None

RESULT 4.0

Release Date: June 2020

Supported Operating Systems

- *Windows 10 64-bit_ Version 1607 and newer_*

New Features

RESULT is updated to support Security Suite 2.2.6 and Audit Manager 1.2

RESULT is updated to work with Security Suite 2.2 that supports secure folders. Also RESULT 4.0 uses Audit Manager for audit trail logs. RESULT built-in Logs still work as before.

Import function in Integration and Operation in secure folders mode

When secure folders are enabled, user won't be able to copy in and out of any files from the secure folders using Windows file explorer. In Integration, under File menu a "Import..." submenu should be available, and in Operation, on Manage Workflows dialog, the Import button should be enabled. User can use this Import function to import any types of files into the secure folder location.

New security policy – “Prevent using secure data folder locations”

By default, this policy is checked. In order to enable secure folders in RESULT, you need to uncheck this policy in Security Administration. When this policy is unchecked, RESULT will automatically select secure folder locations for Workflows, Archive, Standards and Backgrounds and disable the editing of these fields in Options dialog. With secure folders enabled, users can only run RESULT software to save, archive and import files to secure folders, and any modification (add, copy, delete and rename) outside RESULT will be prohibited by Thermo Security File Service.

New security policy for Integration – “Prevent signing file multiple times”

By default, this policy is unchecked, and the behavior is the same as in older version of RSEULT, i.e. the same user can sign the same file multiple times. When this policy is checked, if trying to sign the same file more than once, an error message will pop up.

New security policy for Integration – “Enforce a view-only mode”

By default, this policy is unchecked. When checked, RESULT Integration will only give users a view-only user interface without any menu items on the top. User can still create or open workflow and run the workflow but won't be able to save workflow.

New security policy for Integration and Operation – “Prevent canceling signature on file save”

By default, this policy is unchecked. When checked and also the Archive setting of “Require digital signature” is checked, during workflow runtime, user won't be able to cancel the “Sign File” dialog. If it fails on the first try, user will be prompted three times. If all three tries failed, a workflow error will be generated.

New security policy for Operation – “Prevent stopping workflow while running”

By default, this policy is unchecked. When checked, running a workflow in Operation, user can only Pause and Resume a workflow, but won't be able to Stop the workflow.

Resolved Issues

Update RESULTOPCDB.mdb to support 24 RequestInputEvent items

To support a special application, increase the number of RequestInputEvent items from 16 to 24 in RESULTOPCDB.mdb

Error reading a spectrum with a full path in Load Spectrum

Fixed Load Spectrum and Operator Request where the directory name was incorrect when processing a file name with a full path.

OPC inconsistency when setting the workflow file name and the workflow path

Reset WorkflowStatus and ReadToRun when no workflow is selected. Make sure that the workflow name is set after the path is set. Handle the case where there is a duplicate workflow name in two different paths. Initially get the path from the administrative settings.

The gas cell Pathlength does not persist in NeonBenchSetup

The call to set gas cell Pathlength has been obsoleted. Use the new supported call.

Improve how Simple OMNIC correlation works in RESULT

Change the correlation to fail if the interferogram peak falls outside of the PeakRange. Add diagnostics (written to CoaddErrors.txt) to indicate when there are bad scans during a data collect. Many of the failures will be generated when the interferogram falls outside the peak range or when correlation fails.

Beam path changes are not always complete before the next scan starts

Set a seven second delay on any beam path change.

The Unscrambler predict. Predictions failed at apparent random times

The Unscrambler predict would fail if some obscure parameter was not present. Ignore these occurrences and continue predicting.

The Unscrambler. Add the path to support Unscrambler X Engine 10.5.0

Add the path where the Unscrambler X Engine version 10.5.0 is found. This path cannot be found in the registry or any other location on my computer. It must be hand loaded.

Double signature is invisible on report file

Report file (.htm file) can be signed twice when the policy of “double signature” is allowed with security or when security is not installed. Double signatures are displayed properly on “Check Signature” dialog.

Known Issues

None

RESULT 3 SP12 hot fix 2**Release Date: December 2019****Resolved Issues****Return the released version of TQ Analyst, version 9.8.**

Correct an issue with TQ Analyst that caused a conflict with Thermo Client 1.8 (or earlier). TQ Analyst, version 9.8 added to the DVD.

History: This is fixed in RESULT 3 SP12 hot fix 2.

ValPro 3 SP12 hot fix 1

Resolved Issues

Update answer comments in Algorithms.wfl

Update/correct values expected answer in text for PCR-R, Distance Match-D, RMS Noise, Peak-to-Peak Noise, Single Beam 1%, Single Beam 2%, Single Beam 5%, Peak Width High Location, Location Low Location, Location High Location, Data Range (in Composite Calculation Test D).

History: This is fixed in ValPro 3 SP12 hot fix 1.

Sign wavelength repeatability workflows in ValPro for NIR

Sign the user workflows “EP Wavelength Repeatability.wfl” and “MX_EP Wavelength Repeatability.wfl”.

History: This is done in ValPro 3 SP12 hot fix 1.

RESULT 3 SP12 hot fix 1

Release Date: April 2018

New Features

None

Resolved Issues

From OPC you can launch a workflow even when the Login dialog is showing

If you launch RESULT Operation from OPC when security is installed, the Login dialog comes up on the instrument computer. However in OPC you can launch a workflow before the login dialog is accepted. This violates the login feature. Fixed in this hot fix.

History: This is a longstanding problem that is fixed in RESULT 3 SP12 hot fix 1.

When a workflow is launched from OPC, the signature status in RESULT Operation is not updated

When a workflow is selected and launched from OPC in RESULT Operation, the signature status on the user interface is not updated. A signed workflow is not shown as signed.

History: This is a longstanding problem that is fixed in RESULT 3 SP12 hot fix 1.

When the ValPro Qualification button is pressed, the signature status is not updated

When the ValPro Qualification button is pressed in RESULT Operation, the workflow name is updated to match the ValPro workflow being run. However the signature status on the user interface does not update for the ValPro workflow. The workflow may not be shown as Signed.

History: This is a longstanding problem that is fixed in RESULT 3 SP12 hot fix 1.

Servo reset is needed when the beam path is changed for Antaris IGS

A servo reset is required when the beam path is changed on an Antaris IGS instrument. Then need a delay to make sure that the reset scan does not occur while any (beam path) mirror is moving.

History: This is good practice and is fixed in RESULT 3 SP12 hot fix 1.

The saturated peak check is rejecting scans for Very limited scan rejection

The fix is to remove the saturated peak check for SimpleOMNIC correlation. In this correlation it should be nearly impossible to reject a scan.

History: This is corrected in RESULT 3 SP12 hot fix 1.

Cannot measure a spectrum using Unscrambler 10.5 models

Add support of Unscrambler 10.5 models and handle the 64 bit model case. Also turned off the Unscrambler bias and slope correction for old models.

History: This is fixed in RESULT 3 SP12 hot fix 1.

NTE_BAD_KEY_STATE error when running in multiple domains

Corrected the NTE_BAD_KEY_STATE error in software. If the KEYSET is found to be bad, then delete it and create a new one.

History: This is fixed in RESULT 3 SP12 hot fix 1.

Clean up invalid value in the delay event

Correct problem when delay of zero is encountered. Actually use this value to enter a programmable delay. If zero, check for a text file named SetDelay.txt where the delay could be entered.

History: This is corrected and enhanced in RESULT 3 SP12 hot fix 1.

Set delay on Background Only data collect selection

When a background only data collect event is used, grab the delay from the sample specification. In the past there was no way to set a delay for a background only collect.

History: This is fixed in RESULT 3 SP12 hot fix 1.

RESULT 3 SP12

Release Date: May 2017

New Features

Brief descriptions of the new features in RESULT version 3 SP12 are provided below.

RESULT is now fully Window 10 compliant

The only part of RESULT software that was not Windows® 10® compliant was running tutorials from the version of TQ Analyst software (v. 9 SP5) that was included with the release. This has now been addressed with the addition of TQ Analyst 9 SP7 to the RESULT software.

Update Thermo Client to version 1.8

Update to Thermo Client version 1.8.

TQ Analyst 9.7 release notes show new features and changes that affect RESULT

See the TQ Analyst 9.7 release notes for a listing of issues that might be important for RESULT software.

Add a delay before the ReStartRESULTOperation program shuts down RESULT Operation software

Put the number of seconds to delay before closing the Operation software into the second argument of the executable call for the ReStartRESULTOperation program. If only one parameter is used, then wait one second – which has always been the default.

Set zero as the default OPC value in the Request event

If the Request event is used to enter an OPC value and the OPC server is not available, then pass a zero (0) as the expected value. This is done instead of exposing the request dialog that is shown when OPC is not being read. This allows automated analysis with OPC.

Update how the RepeatCount OPC value is set

Update how the OPC variable RepeatCount is updated by making it zero based. When the repeat count is zero, no RESULTS should appear. After the last repeat, the repeat count is incremented one more time which can be used to show the last set of values in the OPC variables.

Show more Measure RESULT values in the OPC Client software

In the past the measure RESULTS for measurements 1 through 5 were shown. Since many more measurements may now be filled, changed the to measure RESULTS for measurements 1 through 4 and for measurements 77 through 80.

Add a special Point type in the Read IO and Write IO events

A special point type is defined for the Read IO and Write IO events. It is called “Embedded Number String Memory” and it is used to pass specially formatted numbers. For example the string “100F” might be passed and that will be interpreted as the number 100. This is used to report temperature values from a special Opto22 device.

Save Trend RESULTS to a text file

Allow an option to save the values being written to the Trend display in RESULT Operation into a text file. This will only be done if there is an entry in RESULTSettings.ini in the group with the value "SaveToText=1". The values are saved to a file named "TrendData yyyy-MM-dd HH-mm-ss.txt". A new file is created if nothing has been written to the current text file for 30 minutes.

New OPC items – set and report as different data types

1. Add a floating point version of the current OPC long values Mode, RunningState, NumberWorkflowErrors and RepeatCount. New R4 version names are fMode, fRunningState, fNumberWorkflowErrors and fRepeatCount. 2. Add a long (I4) version of the values that are currently sent by OPC to the Request event. The old names in OPC are of the form InputField.FieldData. The new I4 names are of the form InputField.DataI4.

Enhance spectrum correction type (S/B)/X

The spectrum collect correction called (S/B)/X is usually used to correct a spectrum where the background was collected on a different beampath than the sample. This equation now assumes that "X" is a ratioed spectrum. In the new feature, if "X" is actually a single beam, then this correction changes automatically to S/X. This means that the "X" single beam is assumed to be a background single beam collected on the same beampath. If "X" is a ratioed spectrum, then the equation (S/B)/X is still calculated.

Able to view Omnic CNC and series files in RESULT Data View

The ability to open and view CNC files (with associated SRS file) that have been created in the Series capability in Omnic software has been added to RESULT Data View. In Omnic series the CNC file usually has an index number added to the root SRS file name. This is handled in this new option.

Resolved Issues

The option to collect a background once for each workflow run does not work

If the background frequency is set to "Once for each workflow run", you still will be required to collect a background with each sample. This happens in RESULT Operation, but not in RESULT Integration.

Workaround: The workaround for this issue is to go into RESULT Options and check the "Save audit trail to database" checkbox.

History: Problem created with RESULT 3 SP11. This is fixed in RESULT 3 SP12.

ValPro passes, but the RESULT Operation front screen does not say "Satisfied"

Despite the fact that the ValPro test passes, the condition on the front screen of RESULT Operation remains "Required" and not "Satisfied". This may cause a user to be unable to run any production workflows.

Workaround: The workaround for this issue is to go into RESULT Options and check the "Save audit trail to database" checkbox.

History: Problem created with RESULT 3 SP11. This is fixed in RESULT 3 SP12.

MainOperator COM Server error whenever you do a Quick Collect

The Quick Collect menu item – when selected - causes a crash in RESULT software. Caused by an invalid access of memory and fixed for this version.

History: Problem created with RESULT 3 SP11. This is fixed in RESULT 3 SP12.

Must enter executable name with a full path in the RunExe event

The RunExe event has always required that a full pathname be included with the name of the program being executed. In this corrected version, if no pathname is specified, then the pathname of the workflow is added to the executable name.

History: This is fixed in RESULT 3 SP12.

Data collect appears to fail on the first scan

Rather than failing when an incomplete data buffer is received on the first scan, set the data collect to try again to collect the first scan.

History: This is fixed in RESULT 3 SP12.

No improvement when coadding single beams

When you try to coadd single beams, there is no noise improvement in the RESULT. The single beam was not actually being coadded; only the latest scan was reported. Now perform the coadd and report that as the RESULT.

History: This is fixed in RESULT 3 SP12.

Unable to collect the background spectrum in one workflow and use it in another

The “No expiration” option for Background Frequency allows you to collect a background in one workflow and use it in another or collect a background with one collect specification and use it with a different specification. The “No expiration” option is selected when you want to collect the spectrum that will use the common background.

History: This is fixed in RESULT 3 SP12.

When Security Administration is running there is no way to access two of the RESULT Options

The RESULT Options “Save audit trail to database” and “Launch OPC at startup” are new with the SP11 build. Thus there is no historical security policy to allow these to be set. However the options are grayed when Security Administration is running and therefore these options may not be changed. In the fixed version, the presence or absence of the policy for these items is checked and the items become available if necessary.

Workaround: If you reinstall the RESULT application into Security Administration, new policies will become present for these options. This is correct behavior.

History: This issue was created in RESULT 3 SP11 and is fixed in RESULT 3 SP12.

The quant RESULTS for Method title and Method file name are incorrect

The quant RESULTS for Method title and Method file name are empty for a Search method – and actually for any classification method. This is now fixed and the correct method title and method file name are reported.

History: This issue was created with the release of RESULT 3 SP11. It is fixed in RESULT 3 SP12.

If a Pass/Fail test is valid, but not done, return N/A

If a Measure event is supposed to return a Pass or Fail for an answer and the RESULT is not actually valid for this test, then do not return an empty string. Instead return a "N/A".

History: This was fixed in RESULT 3 SP12.

No longer need the full pathname for the program used in RunExe

Instead of requiring the full pathname for the program in RunExe, if the fullpath is not included, then replace it with the directory from which the workflow is being run. This simplifies RunExe setup.

History: This was fixed in RESULT 3 SP12.

Instrument Check in RESULT for IGS does not display all spectra

The Instrument Check menu item in the Maintenance menu of RESULT Operation and Integration for the IGS does not display the three spectra that are included in the check. Only the third spectrum is displayed at the end of the command. This is now fixed and all three spectra are available.

History: This problem was created in SP11 and was fixed in RESULT 3 SP12.

ValPro 3 SP12

Resolved Issues

ValPro does not load ThermoIQ information

When you run ThermoIQ and attempt to access the ValPro file information, ThermoIQ does not respond and it runs forever. This required a fix in the ValPro installer.

History: Problem created with RESULT 3 SP11. This is fixed in ValPro 3 SP12.

RESULT 3 SP11

Release Date: August 2016

New Features

Brief descriptions of the new features in RESULT version 3 SP11 are provided below.

RESULT is supported on Windows 8.1 and Window 10

RESULT software is supported on Windows® 8.1® and Windows® 10®.

TQ Analyst 9.5 release notes show new features and changes that affect RESULT

See the TQ Analyst 9.5 release notes for a listing of new features that might be used in RESULT measurements and also for fixes to existing features. The TQ Analyst features are implemented in Spectrum.dll that is part of the RESULT release.

Implement a new model type – the Antaris II DR

Additions were made to support the Antaris II DR model (Diffuse Reflectance). This model does not have a transmission detector in the sample compartment.

Permit an addition type of Scan Rejection called Very Limited for near infrared data collects

This scan rejection type is already implemented for RESULT IGS. With this option a scan will rarely, if ever, be rejected. A scan will be rejected if an incomplete scan – not enough data points – returns from the instrument, but otherwise it will add the scan. This is implemented for the transmission collect, the integrating sphere collect, the fiber optic collect and the multi-channel collect.

Problems occur when the RESULT Access data base fills

RESULT.mdb, which can be used to store values and answers in RESULT Operation, has a finite size and with some customers has filled up and caused problems. The only solution was to manually archive the old file and create a new file. In this new implementation when the data base reaches 80% of its maximum size, a signal is sent to archive the current data base and create a new one. This operation will wait and only occur the next time that the computer is rebooted. Still to be addressed is automatically searching and accessing all of the archived data bases as well as the current version of RESULT.mdb.

Respond to a Composite Component called “InstrumentDiags”, to report if any diagnostics failed

This ability will be available The instrument values are read when the composite component “InstrumentDiags” is first called for a spectrum.

Add “Save audit trail” to RESULT Options display

Add the ability to save an audit trail to the RESULT data base in RESULT Operation.

Add “Launch RESULT OPC Server at startup” to RESULT Options display

Add the ability to automatically start the RESULT OPC server when RESULT Operation is started.

Add ability to launch a workflow at startup of RESULT Operation

Add the ability to automatically start a RESULT workflow when RESULT Operation software is started. It does this by looking for a file called “LaunchWorkflowAtStartup.txt” in the RESULT Data directory.

Allow a Repeat option that will never terminate a loop

Add an ability that will never terminate the loop in the Repeat event. If the number of repetitions is set to -1, then the loop will never terminate.

Add OPC value to show the repeat count

Add an OPC value that will track the count of an unnested Repeat event.

Resolved Issues

In Report To File, need a tab to always separate answer fields in the report – rather than a CRLF after each method

In a recent version the behavior of the Report to File output was changed. After each answer was reported, the line was terminated with a CRLF. This caused a problem in some old workflows where a tab was expected. A registry item was added to revert to separating with a tab always. The registry key is “TabAlways” under RESULT. If set to one, then the tab replaces the end of line indication.

History: Problem created in RESULT 3 SP6. This is improved in RESULT 3 SP11.

Selecting the time option on the chart in the Trend Tab causes a crash

You can choose to display the answers by index or by time on the Trend Tab. However if you selected the Time option, it caused a crash of the software. This was caused by an out-of-range index in an array and it was fixed in this version.

History: Problem occurred in earlier versions of RESULT. This is corrected in RESULT 3 SP11.

After hours of use the Trend Tab fails and the workflow stops

There was the small chance of a conflict between displaying the trend chart graph and filling the trend array in the application. When this happened the system locked. This hole was fixed and the conflict avoided. As part of this change, the Setup and Refresh buttons on the Trend tab are disabled when a workflow is running.

History: Problem occurred in earlier versions of RESULT. This is corrected in RESULT 3 SP11.

The time/date stamp on the Trend Tab shows GMT time rather than local time

The time that is shown in the table on the Trend Tab in RESULT Operation displays the GMT time followed by the GMT-x:xx label. It should show the local time. This was fixed in this version.

History: Problem occurred in earlier versions of RESULT. This is corrected in RESULT 3 SP11.

There are not enough OPC items allowed

Thirty OPC items were allowed and this values was ultimately raised to 101. This number was selected for a particular application, but it should cover virtually any situation.

History: This was changed in RESULT 3 SP11.

If there are more than 26 columns required in the Write to Excel command, the spreadsheet doesn't have the correct layout

There was an error in the Write to Excel (and Read from Excel) events when more than 26 columns were required. The translation between column number and Excel column symbol (an alpha string) was fixed and now operates correctly.

History: Problem existed in earlier versions of RESULT. This was fixed in RESULT 3 SP11.

Unable to connect to the Pressure controller in RESULT IGS if there is not a Temperature controller already attached

All of the operations with the Pressure controller were dependent on the presence of a Temperature controller. This was changed to make the two controllers function independently. Also add the ability to read temperature or pressure values even if the event to set up the controllers is not part of the workflow.

History: Problem existed in earlier versions of RESULT. This was fixed in RESULT 3 SP11.

Unable to predict using an Unscrambler method created with version 10.3 of Unscrambler

The Unscrambler assigns different default directories for their methods – based on the version of the Unscrambler. Added directories that will support Unscrambler version 10.3 for both OLUP and OLUC.

History: This was fixed in RESULT 3 SP11.

Unable to do an instrument Align from a workflow in NIR like I can in IGS

This feature had only been added for IGS, but makes sense to have it for NIR too. This was added.

History: This was added in RESULT 3 SP11 to work the same as for RESULT IGS software.

RESULT 3 SP10 Hot Fix 1

Release Date: February 2015

Resolved Issues

A brief description of the problems handled in the hot fix are provided below.

The size of the security token buffer was increased

The size of the security token buffer needed to be expanded since a customer had a problem when their local security buffer exceeded 8000 bytes. The problem prevented them from logging into the system in a secure environment.

History: The size of the buffer has always been 8000, but it is a best idea to increase to 65535. This is corrected in RESULT 3 SP10 Hot Fix 1.

RESULT 3 SP10

Release Date: January 2014

New Features

Brief descriptions of the new features in RESULT version 3 SP10 are provided below.

Allow an Archive event to added under Collect Sequence

Add the Archive event to the events allowed under Collect Sequence. This allows individual sequence spectra to be saved.

Allow the uncertainty value to be reported to OPC

In Report to OPC, allow the standard error or uncertainty to be reported. Thus the value and its uncertainty (error) may be reported.

Resolved Issues

The incorrect pressure information is being used to quantify a spectrum

Make sure that if the temperature and pressure are attached to the spectrum that these values are always used to quantify a sample spectrum.

History: Problem occurred in earlier versions of RESULT. This is corrected in RESULT 3 SP10.

The external ValPro workflow doesn't work on the Target instrument

USP35_BA_ValPro_Target_External.wfl was incorrect on the ValPro distribution media with SP9.

History: Problem introduced in SP9 and corrected in RESULT 3 SP10 (ValPro 3 SP10).

RESULT 3 SP9

New Features

Brief descriptions of the new features in RESULT version 3 SP9 are provided below.

Add support for models developed in the Unscrambler X

Add support for models developed with the Unscrambler X from CAMO. This requires that either OLUPX (for predictive models) or OLUCX (or classifier models) be installed. These are also CAMO products. Add support for Hotelling Q residual RESULTS and for inlier distance RESULTS for Unscrambler models.

Save the aperture value for an Antaris IGS data collect

Retain the aperture value for an Antaris IGS data collect. This value will be reported in the spectrum info when the spectrum is viewed from TQ Analyst.

Collect 4x the number of sample scans for a background collect

Add the ability to select 4x the number sample scans for a background data collect.

Set default to not require the user to log on in RESULT Operation.

Change the RESULT Operation default to not require the user to log on. Of course this is overridden if Thermo Security is turned on.

Resolved Issues

The Write to Excel event does not return the correct RESULTS

The Write to Excel event gives a variety of errors when it is used. The RESULTS are not dependable. The Excel file that is created does not always have the correct information saved into it. This was fixed and Write to Excel now works properly, but there are additional clean-ups that were done. Write to Excel only writes to a workbook with extension “.xlsm”. Excel is always closed at the end of the experiment (workflow). The ability to handle date output (VT_DATE) was added. It is no longer possible to have an invalid data format output to Excel.

History: Problem occurred in earlier versions of RESULT. This is corrected in RESULT 3 SP9.

There is a data collect error on an Antaris reported if the background and sample are collected from the same transmission beam path

If the background and sample are collected in the same beampath with the transmission accessory, then an error was reported. There should be no problem with this scenario. This problem was introduced when a different problem was fixed in the previous version of RESULT.

History: This problem was created in RESULT 3 SP8. It is corrected by RESULT 3 SP9.

The USP version dropdown is available for an Antaris IGS

There is a difference between the attribute label, which indicates that the peak width is measured at 40% of the peak maximum, and the comment at the bottom of the report, which indicates at 10% of peak maximum. The correct value, 40%, is changed in the comment text. The answer for the test, the actual peak width, is correct.

History: This problem was introduced in the last release of RESULT. This is corrected in RESULT 3 SP9.

RESULT 3 SP8

New Features

Brief descriptions of the new features in RESULT version 3 SP8 are provided below.

New ValPro workflows to support the wavelength accuracy changes in the First Supplement to USP 35

All of the wavelength accuracy tests in RESULT for NIR have been changed to report in wavelength and to use the wavelength uncertainties specified in the USP. This means modified workflows and TQ Analyst methods to support the changes.

Allow the selection of which version of USP tests a user might use

Under ValPro options there is a new selection called “USP Version”. A customer may choose to use the legacy USP tests or the latest version from USP 35.

Up to four custom qualification tests may be attached to the ValPro sampling tests

The ability to attach up to four custom workflows to the ValPro sampling tests has been added. This feature is available from ValPro options. This is an enhancement to the previous software where it was possible to add one custom workflow.

RESULT supports Windows 7 32 bit operating system for Antaris Target

Antaris Target systems are now supported on Microsoft Windows 7 32 bit.

Note: Antaris Target systems are not supported in Microsoft Windows 7 64 bit.

Honor the TQ Analyst setting for whether a component measurement may be displayed

In TQ Analyst it is possible to indicate that a component is computed, but not reported. When this is done, that RESULT is not included when the RESULTS are reported. This indication was ignored by RESULT and the Measure event. This feature is now honored, but only for newly created workflows. Workflows created by previous versions of RESULT will continue to use all components whether or not they should be reported.

Report the Maximum Deviation for a Distance Match method

In a distance match method, the maximum deviation – as well as the proportion of data points that fall outside the specified limits – may be reported. The maximum deviation is now available for reporting from the Report event.

New Correction options available

Two new Correction methods are available to be used in the Collect event. The more important one allows a beam path correction spectrum to be specified that will be divided into the ratioed spectrum. This correction spectrum may be loaded as a transmittance or %T spectrum. These options are described when you select the Correction option.

Pass / Fail not reported for some components / composites

If the limits for the pass/fail test are set in TQ Analyst, it is possible to selectively decide which answers will return with a pass or fail indication. If a TQ Analyst quantitative (or measurement only) method is set with the same value for the high and low limit, then no pass/fail indication will be returned and reported.

Antaris IGS: Add a correlation that mimics the OMNIC Simple correlation

A third correlation type is made available. The new type is the same as the OMNIC Simple correlation. The difference between the RESULT Simple correlation and the OMNIC Simple correlation is that in the OMNIC version scans are never rejected. This may be useful if bad data collects are identified from a diagnostic calculated on the final spectrum produced by the data collection.

Antaris IGS: Instrument status information is added to the current spectrum

The instrument status information (information about the current state of the spectrometer) is attached to the current spectrum after it's collected.

Measurement information from quantitative and measurement only TQ Analyst methods is added to the current spectrum

If the Measure event uses a TQ Analyst quantitative or measurement only method, then the answers from the measurement are attached to the spectrum. They may be viewed from the Information display in OMNIC.

The “Combine Multiple Methods” analysis type is now supported

“Combine Multiple Methods” TQ Analyst methods are supported from RESULT. At this point these can be difficult to create in TQ Analyst, but once a method is presented, it may be predicted. Among other things this allows a variety of Composite component values to be computed from multiple TQ Analyst quantitative and measurement only methods.

Grams PLSplus/IQ measurement methods may be used in “Combine Multiple Methods” analysis types

“Combine Multiple Methods” TQ Analyst methods support the use of Grams PLSplus/IQ methods. This permits the RESULTS of these methods to be used in Composite component value computations – more than are available from RESULT.

Resolved Issues

The sample eject and temperature stabilizing for a liquid cell in RESULT NIR do not work as expected

The Eject step is moved to the beginning of data collect setup. This is where it is expected. Changes made to effectively let the temperature stabilize before data collection.

History: Problem occurred in earlier versions of RESULT.

Scaling problem occurs when a %T spectrum is used for a Correction spectrum in a Collection event

The use of a %T or %R spectrum with the “Transfer correction using scalar spectrum” or “Transfer correction using division by a scalar spectrum” produced a RESULT that was off by a factor of 100. You had to use a transmittance or reflectance spectrum. This is not the common scale for a ratioed spectrum. This is now automatically corrected to give the correction that is expected (not off by a factor of 100).

History: Problem occurred in earlier versions of RESULT .

In the Peak Width at Percent of Maximum ValPro algorithms test, the attribute label say 40% and the comment says 10%

There is a difference between the attribute label, which indicates that the peak width is measured at 40% of the peak maximum, and the comment at the bottom of the report, which indicates at 10% of peak maximum. The correct value, 40%, is changed in the comment text. The answer for the test, the actual peak width, is correct.

History: Problem occurred in earlier versions of ValPro .

RESULT 3 SP7

New Features

Brief descriptions of the new features in RESULT version 3 SP7 are provided below. Additional documentation for RESULT software is available on your analyzer's Documentation CD. These documents have the extension *.PDF and may be opened using Adobe® Reader®. See the Adobe Reader on-line help for information about using Adobe Reader.

Antaris IGS: Restart data collect when bad correlation

For an IGS, restart the data collect when the first two scans do not correlate. Do not assume that the first scan must be correct.

History: Feature added to RESULT 3 SP7

Antaris IGS: Add resistance for a moving, vibrating sample

In the Sample Specification for an IGS collect add a choice to allow the Correlation to be set and allow a setting to handle Rumble (apparent vibration of the sample).

History: Feature added to RESULT 3 SP7

Antaris IGS: Provide meaningful and unique error messages when data collection fails

Generate meaningful messages when a data collection fails. This replaces the 'Bad Scan' message which might occur for several reasons.

History: Feature added to RESULT 3 SP7

Add diagnostic ability to save bad data collect

Allow the ability to archive bad scans during data collection. This is not the default behavior, but may be turned on in a diagnostic mode.

History: Feature added to RESULT 3 SP7

On a workflow error in a loop, display the time of the failure

When an error occurs during a loop event, display the iteration number, but also the time of that the problem occurred.

History: Feature added to RESULT 3 SP7

Resolved Issues

RESULT crashes when an extremely long experiment is run

A memory leak occurred with each read of a method in the Measure event. After many iterations this will cause a crash.

History: Problem created in RESULT version 3 SP6.

Quantitative answers are not correct when the temperature and pressure change in a Sequence run

The temperature and pressure are not applied before measuring a spectrum in the Sequence event. However if the spectrum is measured after the fact, the RESULT is correct and consistent with the temperature and pressure.

History: Problem occurred in earlier versions of RESULT .

RESULT 3 SP6

New Features

Brief descriptions of the new features in RESULT version 3 SP7 are provided below. Additional documentation for RESULT software is available on your analyzer's Documentation CD. These documents have the extension *.PDF and may be opened using Adobe® Reader®. See the Adobe Reader on-line help for information about using Adobe Reader.

RESULT is supported on Windows 7 64-bit

RESULT software is supported on Windows® 7® 64-bit with two exclusions (see Note below). We recommend that you launch setup.exe from your installation CD to perform the following operations: Remove Application, Modify Installation and Repair Installation. If you initiate these actions from Programs and Features, you risk receiving multiple messages about installing/uninstalling each application or add-in option.

Note: Antaris Target systems are not supported with Microsoft Vista or Microsoft Windows 7 including both 32-bit and 64-bit; also, the Pirouette application is not Vista or Windows 7 compatible.

History: Feature added to RESULT 3 SP6

RESULT CD installer is updated with a new front page

RESULT CD installer has a new front page dialog. On the dialog there are three installation options: RESULT Software or RESULT IGS Software, Release Notes and TQ Tutorial Module. Under the button for "TQ Tutorial Module", there is a note of "Required TQ Tutorial Module Installation".

History: Feature added to RESULT 3 SP6

TQ tutorial is updated with new ToolBook from SumTotal Systems Inc.

TQ tutorials are updated with the new version of ToolBook from SumTotal. Due to some conflicts of versioning between new ToolBook and RESULT, the installation of this module cannot be incorporated into RESULT module installations, and it has to be manually installed from RESULT installer front page. The installation of this TQ Tutorial Module is required for proper functioning of TQ Analyst.

History: Feature added to RESULT 3 SP6

RESULT User Guide PDF files are updated on Documentation CD

All the RESULT user guide PDF files are updated. The following are major areas of updates:

- **RESULT supported Microsoft Windows®_ versioning information is updated_**
- **Versioning information on currently supported PLSplus/IQ™ is removed from RESULT manual, and any updates for future release will be exposed in RESULT Release Notes. The currently supported versions are ^ PLSplus/IQ™ ^method development software for GRAMS/32® AI versions 6.0 through 8.0 __ from Thermo Galactic Corp.**
- **Versioning information on currently supported Unscrambler® is removed from RESULT manual, and any updates for future release will be exposed in RESULT Release Notes. The currently supported versions are Unscrambler®_ versions 7.6 through 9.8 method development software from Camo AS._**
- **Versioning information on currently supported Pirouette® is removed from RESULT manual, and any updates for future release will be exposed in RESULT Release Notes. The currently supported version is Pirouette® version 3.04 or 3.11 (required for Windows XP) method development software from InfoMetrix®_, Inc._**

History: Feature added to Result 3 SP6

Integrating Sphere External ValPro is updated to use dark corrected standards

ValPro workflow for Integrating sphere qualification using external standards is updated to use dark corrected standards.

Note:

- **SabIR Probe External ValPro has been using dark corrected standards since RESULT __ 3.0**
- **The ValPro folder on Windows 7 64-bit is C:\Program Files(x86)\RESULT\ValPro__**
- **The ValPro folder on Windows XP and Windows 7 32-bit is C:\Program Files\RESULT\ValPro__**

History: Feature added to Result 3 SP6

Additional RESULTS reported for Unscrambler 9.8 quantitative prediction models

RESULT software now reports the Hotelling T2, Hotelling T2 Limit and ResXValSamp values for prediction models developed in Unscrambler 9.8. To perform on-line predictions in RESULT with Unscrambler models, you must have OLUP installed on the computer. These new RESULTS can be displayed using the Report event in the RESULT software.

History: Feature added in RESULT 3 SP6.

RESULT 3 SP5

New Features

Brief descriptions of the new features in RESULT version 3 SP5 are provided below. Additional documentation for RESULT software is available on your analyzer's Language Pack CD. These documents have the extension *.PDF and may be opened using Adobe® Reader®. See the Adobe Reader on-line help for information about using Adobe Reader.

Unscrambler method protection

Protected Unscrambler method (.upp) files are a packaged (protected) private file format defined to run with a specific instrument or data from that instrument. When using the protected Unscrambler method for simulation, the method will only give RESULTS when the simulated .spa was collected from the same instrument as the protected Unscrambler method was specified for. When collecting from an instrument, the method will only give RESULTS when the collecting instrument is the instrument specified for the protected Unscrambler method.

History: Feature added to RESULT 3 SP5.

Clear event allows clearing of most recent workflow RESULTS and workflow errors

The two checkboxes of "Clear all but most recent XX" for RESULTS and workflow errors are combined and replaced with a dropdown box of "Clear options". There are three items in the options dropdown list: Clear all, Retain most recent and Clear most recent. "Clear all" is selected as default. The options dropdown box and the associated edit box are only enabled for clearing workflow RESULTS and workflow errors, and are disabled when clear background is selected.

History: Feature added to RESULT 3 SP5.

Write to Excel event allows hiding Excel run time window and automatically saving Excel file

Two checkboxes are added to the Write to Excel editor: one for "Hide Excel run time window" and one for "Save Excel file automatically". When "Hide Excel run time window" is checked, the Excel window will not be visible during workflow run. When "Save Excel file automatically" is checked, the Excel file specified in Write to Excel will be saved automatically with any new data.

History: Feature added to RESULT 3 SP5.

Count of workflow errors is available to be reported out or used by multiple events

Count of workflow errors will be available to be reported out in Report to Text File, Write to Excel, and RESULT OPC Server. Also this value will be available to Logic Specification so that it can be used in Check, Perform If, and Perform While.

History: Feature added to RESULT 3 SP5.

Repeat event will always generate RESULT that can be used by other events

In older version of RESULT, Repeat only generated workflow RESULT when "Use sampling sequence" was selected. Now, Repeat will always generate RESULT that can be used by other events. The RESULT that the Repeat event is made available for other events is:

1. *Current count of loop iteration, when "Specify number of repetitions" or "Prompt for number of repetitions" is selected.*
2. *Data from sequence table, when "Use sampling sequence" is selected.*

History: Feature added to Result 3 SP5.

Resolved Issues

Offset on Autosampler set incorrectly

In the last release the (zero) offset for the autosampler could no longer be set properly. This prevented the proper centering of a sample.

History: Problem occurred in RESULT version 3 SP4.

Unable to run ValPro on a USB IGS system

ValPro was not available to be run from the RESULT Operation “ValPro” button on a USB IGS system with either the DTGS or MCT detectors. The workaround was to select the workflow as a custom workflow to be run.

History: Problem occurred in RESULT version 3 SP4.

Unable to verify the sample spinner rotation when using a large sample cup

The timeout for waiting for the sample spinner to rotate to the verify position is not necessarily long enough when using a large sample cup.

History: Problem occurred in earlier versions of RESULT.

The standard deviation value from the Calculate event returns an error when using only one measurement

This is technically correct behavior, but the RESULT should not issue an error. The new behavior is to return a zero for the standard deviation of one value. This will allow the value to be used without special first time logic

History: Problem occurred in earlier versions of RESULT.

Fixed problem with viewing Archive Logs with very long file name

RESULT crashes when Logged Archived long named HTML reports are retrieved in Operation. The problem was caused by limited memory allotted for file name, and it has been fixed.

History: Problem occurred in RESULT version 3 SP4 Tracking number: V&V22145

Fixed problem with doing Instrument Alignment twice in a row

When we run Instrument Alignment twice in a row, RESULT will crash to the point that we have to restart the bench and the computer to get communications back up.

History: Problem occurred in RESULT version 3 SP4 Tracking number: V&V21735

RESULT 3 SP 4

New Features

Brief descriptions of the new features in RESULT version 3 SP4 are provided below. Additional documentation for RESULT software is available on your analyzer's Language Pack CD. These documents have the extension *.PDF and may be opened using Adobe® Reader®. See the Adobe Reader on-line help for information about using Adobe Reader.

RESULT is supported on Windows 7

RESULT software is supported on Windows® 7® with two exclusions (see Note below). We recommend that you launch setup.exe from your installation CD to perform the following operations: Remove Application, Modify Installation and Repair Installation. If you initiate these actions from Programs and Features, you risk receiving multiple messages about installing/uninstalling each application or add-in option.

Note: Antaris Target systems are not supported with Microsoft Vista or Microsoft Windows 7; also, the Pirouette application is not Vista or Windows 7 compatible. None of the products are supported in a 64 bit operating system.

History: Feature added to RESULT 3 SP4.

Support for Antaris IGS-USB instrument

This RESULT version supports the new USB based Antaris IGS instrument. A new feature related to this is:

- ***5 Hz collection of 0.5 cm⁻¹ resolution spectra in Sequence collection. This is implemented with a new velocity setting and a new collection type.***

History: Feature added to Result 3 SP4.

Using only one workflow error report during each workflow running

Historically, especially during loop running, once an error occurs in one loop, every following loop will generate a separate error report. If running for a long time, eventually the forever increasing list of error reports will blow up the software. Now, RESULT will keep using one error report for each workflow running, and keep appending new errors to the report, but not generating new reports.

History: Feature added to RESULT 3 SP4.

Clear event in RESULT Integration allows clearing of workflow errors

A new radio button option and checkbox are added to Clear event to allow clearing of workflow errors.

History: Feature added to RESULT 3 SP4.

Preview button in Write to Excel event in RESULT Integration

A new Preview button is added to the editor for user to preview the Excel datasheet with dummy RESULTS.

History: Feature added to RESULT 3 SP4.

RESULT Data Viewer allows merging of Sequence files

RESULT Data Viewer allows merging of two sequence files into a new sequence file

History: Feature added to RESULT 3 SP 4.

Scan Rejection for selected sampling devices

A scan rejection setting has been added to the Integrating Sphere, Dual Integrating Sphere, Fiber probe and multichannel fiber probes sampling device setups. This allows the conventional collect, Normal, setting and the Limited setting for not rejecting scans for samples that change during collection.

History: Feature added to RESULT 3 SP4.

Resolved Issues

Fixed problem with Correction in Collect event

When Correction is setup in Collect event such that a background is not required, the software should skip the collection and saving of the background all together.

History: Problem occurred in RESULT version 3.0. Tracking number: V&V21113.

Fixed problem with Print HTML report after report is displayed in Report event

The delay, and sometimes missing report, problem caused by checking "Print HTML report after report is displayed" in Report event has been fixed.

History: Problem occurred in RESULT version 3.0. Customer reported issue.

RESULT 3 SP 3 Hot Fix 1

New Features

The functions in Target Link Utility are replace by Kinetics Demo

Target Link Utility is not compatible with RESULT 3 SP3 or later versions of RESULT. Kinetics Demo is available from the Start Menu under Thermo RESULT. You can use this application to test your communications link with the Antaris Target, change between USB and wireless communication and specify the IP address of the Antaris Target that you want to communicate with. Detailed instructions for using Kinetics Demo are located at the end of this document.

Note: Antaris Target systems are not supported with Microsoft Vista; also, the Pirouette application is not Vista compatible.

History: Feature added to RESULT 3 SP3 hot fix 1.

Resolved Issues

RESULT CD will not fully uninstall

If you try to uninstall RESULT CD, it will not fully uninstall all parts of the software.

Note: Installation of RESULT 3 SP3 Hot fix 1 will resolve this issue.

History: Problem occurs in RESULT 3 SP 3 and is fixed in RESULT 3 SP 3 Hot fix 1. Tracking number: V&V17497.

Auto correction feature of firmware can be enabled by Align Command with Antaris Target

If you perform an align command on an Antaris Target, it will turn on the auto correction feature of the firmware. This can lead to potential problems due to a bug in the firmware. See firmware release notes above for details.

History: Problem occurs in RESULT 3 SP 3 with Antaris Target Firmware v1.7.6 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17498.

Intermittant positioning errors can occur when using the Autosampler RS or Multipro Autosampler with faster computers.

When checking the position of the autosampler a timing error could intermittently provide incorrect data on the position of the autosampler. The software would then request the autosampler to move to an incorrect position based on the bad data. After the move the position was rechecked so an error would always be reported to the user and no data could be collected at the incorrect position. The timing on the DELL 960 computers intermittently exposed this problem.

History: Problem occurs in RESULT 3 SP 3 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17499.

Instrument Check does not show all reports on Antaris IGS instruments.

The instrument check command only produces the 100% line spectrum and not the single beam and interferogram spectra.

Recommendation: Check the single beam and interferogram performance with Quick Collect. Upgrade to RESULT 3 SP 3 Hot Fix 1.

History Problem occurs in RESULT 3 SP 3 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17610.

Unable to retain a custom spectral range in Antaris Target collect specifications.

The software allows you to set a custom spectral range on Antaris Target collect specifications, but then restores the default use standard range setting when you leave the settings window.

Recommendation: Upgrade to RESULT 3 SP 3 Hot Fix 1.

History Problem occurs in RESULT 3 SP 3 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17611.

Known Issues – Improved with this release

Intermittent Validation Wheel and Attenuator Wheel positioning errors.

When requesting the validation wheel or attenuator wheel to move the command will occasionally be rejected by the instrument RESULTing in an error. This error is reported to the user and no data is collected at incorrect wheel positions.

Improvements: *Changes were made to significantly reduce the frequency of this issue.*

Recommendation: *If you see this error, repeat your measurement.*

History Problem occurs in RESULT 3 SP 3 and the frequency is significantly reduced in RESULT 3 SP 3 HotFix 1. _ Tracking number: V&V17500._

Known Issues

Modify installation does not update bench model in RESULT Integration or RESULT Operation

Without this in the path, the user gets a message about missing file UnscEMSCTrans.dll. This is true on both Windows XP and Windows Vista.

Workaround: Change the bench model in the Options dialog of RESULT Integration and RESULT Operation.

History: Problem occurred in all versions of RESULT. Added to release notes in December 2009. Tracking number: V&V17612

Known Issues – From previous updates

Unscrambler v9.8 requires settings in system path to run

Without this in the path, the user gets a message about missing file UnscEMSCTrans.dll. This is true on both Windows XP and Windows Vista.

Workaround: OLUP requires c:\program files\olup (Unscrambler online predictor). OLUC requires c:\program files\oluc (Unscrambler online classifier). If you have OLUP installed, add the path to OLUP to the system path. If you have OLUC installed, add the path to OLUC to the system path. If you have both installed, add both paths to the system path.

History: Problem occurred in all versions of RESULT. Added to release notes in August 2009. Tracking number: V&V16958

Addendum: Using Kinetics Demo in place of Target Link Utility

Kinetics Demo is a diagnostic utility for your Antaris Target. It replaces the Target Link Utility. This program can be used to change between USB and Wireless communications. The program can also be used to perform simple diagnostics on your communications link and on the Target instrument itself. This addendum provides you with the necessary information to perform these tasks.

Kinetics Demo is installed into the Thermo RESULT group in the start menu and not installed on the desktop.

Verifying Communications Link and Changing Communications Settings

Launch Kinetics Demo

To Launch Kinetics Demo select the Kinetics Demo Icon in the Thermo RESULT group in the start menu.

When you first launch Kinetics Demo, if there is an error in the communications link (USB or Wireless) the Yellow Box you see below will appear and not go away. The message will be indicative of the error and type of link (in this case Wireless Ethernet).

To Check or Change the USB/Wireless Settings

1. **Click on the Setup Button. The Scan Setup Dialog will appear__**
2. **Select the Setup Comm, Etc. Menu, then Mouse over the Setup Comm Port Submenu (the Sub Menu will appear).**
3. **The first two items in the Submenu will be USB and TCP/IP. The currently selected protocol type will have a check mark in front of the menu item.**
4. **Select USB for USB Communications, Select TCP/IP for Wireless**

Communications.

For Wireless Communications only

1. **The IP Address of the Target will be displayed after the words TCP/IP. Verify that the IP Address is correct__**

To change the address

1. **Select the TCP/IP Menu Item, the following dialog will appear**
2. **Our documented configuration uses a Fixed IP Address, so make sure the radio button for Use Fixed IP Address is selected and then enter the correct IP address into the New IP Address Field.**
3. **Click OK to accept the changes.**
4. **Click OK to Close the Setup Dialog. A new link will automatically be setup. Wait a few seconds to verify that the communications link is successful, indicated by not seeing a yellow box on the lower right below the column of buttons. If you still have __a communications error, check your cabling**

and the wireless access setup procedure.

Performing a correct power cycle on your Antaris Target

For successful operation of an Antaris Target you need to leave the Target powered off for 30 seconds before turning the unit back on. In addition, you must wait at least 90 seconds for the Target to complete all of its initialization steps. Until all initialization steps are complete, you will not be able to acquire spectral data from the Target.

You can observe the initialization sequence of the instrument and get a better feel for the time it takes for the instrument to fully communicate by Launching Kinetics Demo shortly after Power On.

1. ***Wait to make sure that no yellow box stays on screen.***
2. ***Click repeatedly on the Scan Single Beam ___button on the right side of the screen. You will get an error message until the system is properly initialized. A spectrum will appear as soon as the initialization is complete.***

If you still see errors 90 seconds after power up, review your communications settings. If they seem correct and all devices are powered up and cables are properly connected, record the error code displayed on the screen.

Gathering information to resolve communication issues

A communications error in RESULT can be caused by many things. These steps should help resolve the issue as efficiently as possible. By following these steps you will be able to resolve many issues on your own for those steps that direct you to send information to Thermo Fisher Scientific, contact Thermo Fisher through your normal service channels and be prepared to provide the requested information. This will help us quickly diagnose and resolve your problem.

I'm trying to communicate by USB

1. ***Verify that the USB cable is connected. Verify that the system is configured for USB communications (see Verifying Communications Link and Changing Communications Settings in this document)_.***
2. ***Have you performed a power cycle recently? Was the system off at least 30 seconds before being turned on? Did you wait at least 90 seconds before trying to communicate? If you are unsure whether a proper power cycle was done, perform a proper power cycle on the instrument as described in the Performing a correct power cycle in this addendum.***
3. ***Is there a yellow box on the Kinetics Demo screen? If so, record the text in the yellow box.***
4. ***If there is not a yellow box on screen then click on the Scan Single Beam button. Does a spectrum appear? If so things are working fine. If not record the error message information.***
5. ***If an error message occurred in the previous step - Click on Setup and Select Get Diagnostics from the Diagnostics Menu. A diagnostics file is saved to disk. The filename is displayed at the top of the dialog. Send this file and the recorded information to Thermo Fisher Scientific_.***

I'm trying to communicate by Wireless

1. ***Verify that the wireless access point is powered on and that all cables are connected.***

2. **Verify that the wireless access point is properly configured to communicate with the Target. Use the “Testing communications with the analyzer” step in the Engenius Wireless Setup for Antaris Target manual. If it fails this test, repeat the steps for setting up communications as described in the Wireless Setup manual. If this step fails contact Thermo Fisher service, a service representative can help walk you through the wireless access point troubleshooting information included in this addendum.**
3. **Verify that the Target is configured for Wireless communications and the proper IP address is set (see Verifying Communications Link and Changing Communications Settings in this document)**
4. **Have you performed a power cycle recently? Was the system off at least 30 seconds before being turned on? Did you wait at least 90 seconds before trying to communicate? If you are unsure whether a proper power cycle was done, perform a proper power cycle on the instrument as described in the Performing a correct power cycle in this addendum.**
5. **Is there a yellow box on the Kinetics Demo screen? If so record the text in the yellow box.**
6. **If there is not a yellow box on screen click on the Scan Single Beam button. Does a spectrum appear? If so things are working fine. If not record the error message information.**
7. **If an error message occurred in the previous step. Click on Setup and Select Get Diagnostics from the Diagnostics Menu. A diagnostics file is saved to disk. The filename is displayed at the top of the dialog. Send this file and the recorded information to Thermo Fisher Scientific_._**

Troubleshooting problems setting up the wireless access point

1. **Select run from the start menu and then type CMD and click OK. This will bring up a command window.**

Type ipconfig /all followed by the enter key.

This will produce information similar to the following example. Look for information on the D-LINK Ethernet adapter and verify that the information is similar. For our standard configuration the ip address will be 192.168.0.1. If you have another device on this address, you will have a conflict with the standard configuration and will need to change the IP address of that device or of the D-LINK Adapter. If you change the IP address of the D-LINK adapter make sure it does not conflict with the IP address of the wireless access point (typically 192.168.0.2) or the IP address of any Antaris Target that you will connect to this computer._

Example ipconfig command:

```

`Windows IP Configuration`
`Host Name . . . . . : USMAD-BETATST1`
`Primary Dns Suffix . . . . . :`
`Node Type . . . . . : Peer-Peer`
`IP Routing Enabled. . . . . : No`
`WINS Proxy Enabled. . . . . : No`
`DNS Suffix Search List. . . . . : amer.example.com.`

```

`Ethernet adapter Local Area Connection:`**`Connection-specific DNS Suffix . : amer.example.com.`****`Description : Broadcom NetXtreme 57xx Gigabit Controller`****`Physical Address. : 00-19-B9-03-44-57`****`Dhcp Enabled. : Yes`****`Autoconfiguration Enabled : Yes`****`IP Address. : 10.209.34.74`****`Subnet Mask : 255.255.254.0`****`IP Address. _ : fe80::219:b9ff:fe03:4457%4` _****`Default Gateway : 10.209.34.1`****`DHCP Server : 10.209.32.60`****`DNS Servers : 10.209.32.60`****` 10.209.32.8`****` 10.0.1.15`****` fec0:0:0:ffff::1%1`****` fec0:0:0:ffff::2%1`****` fec0:0:0:ffff::3%1`****`Primary WINS Server : 10.209.32.60`****`Secondary WINS Server : 10.209.32.8`****`Lease Obtained. : Monday, November 16, 2009 3:22:25 PM`****`Lease Expires : Thursday, November 19, 2009 3:22:25 PM`****`Eth` _`ernet adapter Local Area Connection WAP-SETUP:` _****`Connection-specific DNS Suffix . :`****`Description : D-Link DUB-E100 USB 2.0 Fast Ethernet Adapter`****`Physical Address. : 00-80-C8-39-BA-A0`****`Dhcp Enabled. : No`****`IP Address. : 192.168.0.1`****`Subnet Mask : 255.255.255.0`**

`Default Gateway :`

1. **Verify that you can talk to the D-LINK adapter by typing ping 192.168.0.1 followed by the enter key (if you changed the IP address of the D-LINK adapter in the step above use that IP address instead). If the IP Address is correct and the device is configured and working properly you will see the following response**

Reply from 192.168.0.1: bytes=32 time<1ms TTL=127

If you don't see this response Contact Thermo Fisher Scientific for further assistance in resolving the problem.

1. **Verify that you can talk to the Wireless access point by typing ping 192.168.0.2_ followed by the enter key (if you changed the IP address of the wireless adapter use that IP address instead). If the IP Address is correct and the device is configured and working properly you will see the following response_**

Reply from 192.168.0.2: bytes=32 time<1ms TTL=127

If you don't see this response verify the following connections. Correct any that are wrong.

1. **Confirm that the Ethernet connection labeled Network on the POE connects to the D-Link.**
2. **Confirm the Ethernet connection labeled AP/Bridge on the POE connects to the Engenius.**
3. **Follow the power cord from the POE to where it's plugged in. Confirm that the green light on at the littl__e rectangular block at the plug**
4. **Look at the rectangular block, confirm that you see a P/N or other text that reads "ES18U48-P1J". If you don'__t see this P/N you probably have the wrong power supply plugged into the POE. Find the proper Power supply and connect it to the POE.**
5. **Look at the POE, confirm that the red PWR light is on.**

Try the ping command again after correcting any cabling issues.

If you still don't see this response after correcting any cabling issues, your wireless access point may be configured for another IP address or it may have failed.

1. **Power off any Antaris Target units and then. Double click on the pingsearch.bat utility in c:\program files\RESULT. It will take a while for it to analyze all IP addresses between 1 and 255. When it's complete it will show you the connected IP addresses.**

In this example you see 2 addresses. The D-Link utility on 192.168.0.1 and 192.168.0.5. The 192.168.0.5 might be the wireless adapter. Follow the instructions for setting up the engenius using this address instead of 192.168.0.2.

Reply from 192.168.0.1: bytes=32 time<1ms TTL=128

Reply from 192.168.0.5_ : bytes=32 time=1ms TTL=255_

If you don't find the wireless access point, the wireless access point has failed and needs to be replaced.

RESULT 3 SP 3

New Features

Brief descriptions of the new features in RESULT version 3 SP3 are provided below. Additional documentation for RESULT software is available on your analyzer's Language Pack CD. These documents have the extension *.PDF and may be opened using Adobe® Reader®. See the Adobe Reader on-line help for information about using Adobe Reader.

RESULT is supported on Vista

RESULT software is supported on Windows® Vista® with two exclusions (see Note below). We recommend that you launch setup.exe from your installation CD to perform the following operations: Remove Application, Modify Installation and Repair Installation. If you initiate these actions from Programs and Features, you risk receiving multiple messages about installing/uninstalling each application or add-in option.

Note: Antaris Target systems are not supported with Microsoft Vista; also, the Pirouette application is not Vista compatible.

History: Feature added to RESULT 3 SP3.

Maintenance menu in RESULT Integration

Maintenance menu was only available in the RESULT Operation application. We added a Maintenance menu to RESULT Integration with a limited set of commands including: Test Sample, Test Background, Test Measurement, Instrument Status, Align Instrument and Instrument Check.

History: Feature added to RESULT 3 SP3.

New features added to Archive event

We added the following features to the Archive event in RESULT Integration software:

- ***Added tips on how to set up folder locations properly below the Folder text box.***
- ***When Report Archiving Information is selected in the Archive event, a new column labeled OPC Tag Index appears in the table. Use the column to specify the listing order of archiving information for the OPC server.***
- ***Added Use Double Signature check box to File Format group. Feature is enabled only when Require Digital Signature check box is selected. At runtime, if Use Double Signature is selected, users must sign archived files twice.***
- ***Added Append Other Text RESULTS check box and Setup button to File Name group. Clicking Setup displays a dialog for selecting text RESULTS generated by other Result events. All selected text RESULTS are used to form the file name for archived data.***

History: Feature added to Result 3 SP3.

New OPC feature added to Request Specification

We added a Get Input From OPC Client check box to the Request specification. When this check box is selected, an OPC Tag Index column appears in the table. This column defines which OPC tag (RESULT.Workflow.RequestInputEvent.InputField) each request item should read the data from at runtime.

History: Feature added to RESULT 3 SP3.

Encoding type in Report to Text File

We added an Encoding Type drop down list box to the Report to Text File event. The list box provides two options for encoding text files created by this event: Unicode and ANSI.

History: Feature added to RESULT 3 SP3.

More event types allowed under Collect Sequence

Added the following items to the list of events that can be used with a Collect Sequence event: Read from IO, Write to IO, Read from Excel and Write to Excel.

History: Feature added to RESULT 3 SP3.

New Report Header Item RESULT available for non-Report events

Before, information like Operator Name, Date, and Instrument Serial Number could only be added to a report through a Report Header section. Now, a Report Header Item can be added to Report To Text File and Write To Excel events. The RESULT is not associated with any RESULT events.

History: Feature added to RESULT 3 SP3.

New Write To Excel event in RESULT Integration

Write To Excel events can be used to report data generated by other RESULT events to an Excel spreadsheet. Also allows some math and statistical functions for floating point and integer data.

History: Feature added to RESULT 3 SP3.

New Read From Excel event in RESULT Integration

Read From Excel events can be used to read data from a specific cell in an Excel spreadsheet. The data is then available for use by other RESULT events.

History: Feature added to RESULT 3 SP3.

Simulation enabled for Target collect

Simulation collect is now enabled in both Collect and Collect Sequence events with Blend Analyzer Sample and Background specifications.

History: Feature added to RESULT 3 SP3.

New Prevent Workflows From Running If Unsigned policy added to RESULT and Security Administration

This feature appears in the RESULT Options dialog box in RESULT Operation software and in the policy list for RESULT Operation in Security Administration software. When the feature is selected, RESULT Operation allows the user to run only workflows that are signed.

History: Feature added to RESULT 3 SP3.

New Automatically Grant RESULT Administrative Privilege To OPC Client added to RESULT and Security Administration

This feature appears in the RESULT Options dialog box in RESULT Operation software and in the policy list for RESULT Operation in Security Administration software. When the feature is selected, RESULT Operation allows an OPC Client to select and run workflows that are not managed by RESULT Operation.

History: Feature added to RESULT 3 SP3.

Configure Standard settings are saved to separate cfg files for RESULT Integration and RESULT Operation

In previous versions of RESULT software, the settings for Configure Standards were not saved. RESULT now uses .cfg files to save these settings. For RESULT Integration, the file name is RESULTIntegratorStandardOptions.cfg. For RESULT Operation, the file name is RESULTOperatorStandardOptions.cfg. Both files are saved in the following path: RESULT Data\Config\.

History: Feature added to RESULT 3 SP 3.

Variable background frequency

We added a Custom option to the Background Frequency drop down list box in the Collect, Collect Multi-Channel and Collect Dual Tablet events. When this option is selected, an Interval (min) edit box appears below Background Frequency. Use Interval to specify in minutes how often to collect a new background.

History: Feature added to RESULT 3 SP 3.

Valpro installation automatically detected by RESULT

We removed the Valpro Installed checkbox from the RESULT Options dialog for RESULT Integration and RESULT Operation. At startup, both applications automatically check a registry key and Valpro file folder to determine whether Valpro is installed.

History: Feature added to RESULT 3 SP3.

New checkbox in Measure specification for Unscrambler method

The checkbox can be used to indicate that the Unscrambler method requires the spectrum to be reversed from high frequency to low frequency.

History: Feature added to RESULT 3 SP 3.

Indication of active Specification items in Details view of RESULT Integration

All specifications in the current workflow now appear in the Details view of RESULT Integration. Active specifications are listed in red text; inactive specifications are in black text.

History: Feature added to RESULT 3 SP3.

Derivative view for spectrum in Reports

We added a Pre-Processing Filter column to the table in a Spectrum Item specification. Use it to define the type of pre-processing prior to display. The drop down list is populated according to the TQ Analyst method defined in the corresponding Measure event.

History: Feature added to RESULT 3 SP3.

Optimize Gain enabled in Multipro Autosampler Specification

The Optimize Gain button is now enabled and implemented for Autosampler Tablet specifications and Autosampler SoftGel specifications.

History: Feature added to RESULT 3 SP3.

Automatic alignment before Valpro test

We added a Perform System Alignment Before ValPro Test check box to the Valpro Options dialog box in RESULT Operation. When this checkbox is selected, the system will automatically perform a system alignment before it runs a ValPro test. If the alignment fails, an error message appears and the ValPro test will not run.

History: Feature added to RESULT 3 SP3.

Behavior changed for RESULT software running.

RESULT now allows users to open multiple instances of RESULT Integration but only one instance of RESULT Operation.

History: Feature added to RESULT 3 SP3.

Sample temperature reported to spectrum file header.

RESULT now records the sample temperature in the spectrum header.

History: Feature added to RESULT 3 SP3.

Stamp relevant info into Sequence data file.

The Report To Spectrum event now works the same way with spectrum (.SPA) and sequence (.CNC) data files. This allows you to stamp sequence data files with information from a Request event (e.g., batch number, material name, etc.) like you can spectral files. The stamped information appears above the existing header section of a .CNC file. The CNC file can be opened through notepad or Excel.

History: Feature added to RESULT 3 SP3.

Enhancement in RESULT OPC Server

We added the following tags to the RESULT OPC Server:

- ***RESULT.BenchStatus:*** *Corresponds to the Instrument Status in RESULT Operation. If the Instrument Status is a green check mark_, the tag will be turned ON; if Instrument Status is a red X, the tag will be turned OFF._*
- ***RESULT.HMILockoutStatus:*** *This tag works with RESULT Operation only. When the tag is turned ON, all the menus and buttons in RESULT Operation will be disabled and only the __ OPC client can select, start and stop a workflow.*
- ***RESULT.Workflow.RunContinuously:*** *When this tag is turned ON, RESULT automatically restarts_ the workflow after it finishes running._*

Message box functions: *These tags allow message boxes answerable by an OPC client.*

- *RESULT.Workflow.MessageBoxStatus*
- *RESULT.Workflow.MessageBoxCaption*
- *RESULT.Workflow.MessageBoxText*
- *RESULT.Workflow.MessageBoxOKYesButton*
- *RESULT.Workflow.MessageBoxNoButton*
- *RESULT.Workflow.MessageBoxCancelButton*

Operator Request dialog runtime functions: These tags allow prompts for repeat and other operator requests answerable by an OPC client.

- *RESULT.Worflow.OperatorRequest.NumberRequests*
- *RESULT.Worflow.OperatorRequest.AcceptButtonStatus*
- *RESULT.Worflow.OperatorRequest.ResetButtonStatus*
- *RESULT.Worflow.OperatorRequest.LoadFromOPC*
- *RESULT.Worflow.Opera__torRequest.Request01.Question*
- *RESULT.Worflow.OperatorRequest.Request01.Answer*
- *RESULT.Worflow.OperatorRequest.Request01.DataType*
- *RESULT.Worflow.OperatorRequest.Request01.Required*

Calculate RESULTS from Report to OPC: Calculate RESULTS can now be added to Report to OPC event.

- *RESULT.Worflow.CalculateEvent.NumberCalculateRESULTS*
- *RESULT.Worflow.CalculateEvent.ReportToOPCEventName*
- *RESULT.Worflow.CalculateEvent.Calculate01.AttributeName*
- *RESULT.Worflow.CalculateEvent.Calculate01.DataRESULT*
- *RESULT.Worflow.CalculateEvent.Calculate01.DataType*
- *RESULT.Worflow.CalculateEvent.Calcualte01.CalculateEventName*

History: Feature added to Result 3 SP3.

Automatically open/close transmission door.

We added two checkboxes to the Transmission Module sample specification: Eject Holder Before Collect and Eject Holder After Collect.

History: Feature added to RESULT 3 SP3.

Heated transmission cell temperature showed in workflow running status window

We added a real-time Cell Temperature status to the workflow status window (it appears in the lower left corner of the Run Time Test window in RESULT Integration and in the main window of RESULT Operation). The status information appears each time a Collect event executes.

History: Feature added to RESULT 3 SP3.

Add spectrum header information to the JCAMP-DX COMMENTS field

The JCAMP-DX format supports a subset of the data collection parameters that are available for a Thermo spectrum file. It adds many of the remaining parameters into the COMMENTS field when you write a JCAMP-DX file. It also adds the ability to interpret these values when a JCAMP-DX file is read.

History: Feature added to RESULT 3 SP3.

Report to Spectrum event saves information into the JCAMP-DX file format

The information from a Report to Spectrum event will be written to a JCAMP-DX file in the COMMENTS section. In the JCAMP-DX spectrum each RESULT will be on a single line preceded by “!” and then the name of the value followed by a “:”.

History: Feature added to RESULT 3 SP3.

Resolved Issues- New in August 2009 Release Notes

Time stamping of files in RESULT

Spectral files collected in RESULT and saved with the date/time in the file name were labeled inconsistently depending on the clock setting in Windows. A new time stamp format has been implemented throughout RESULT. The format is:

yyyy-mm-dd hhmmss GMT+/-hhmm

History: Problem occurred in RESULT version 3.0. Added to release notes in August 2009. Tracking number: V&V16509

Revision date of Measure Method Summary in Report Header is off by 1 month

The date that showed up in the Measure Method Summary in Header table in the Report event was 1 month too old.

History: Problem occurred in all of versions of RESULT. Added to release notes in August 2009. Tracking number: V&V15020

RESULT Thermo Admin feature not complete.

RESULT did not properly add log entries to the Windows Event Viewer. RESULT now adds log entries to the Windows Event Viewer for user log on, log off and log on failed. This works in RESULT Integration and RESULT Operation.

History: Problem occurred in RESULT version 3.0. Added to release notes in August 2009. Tracking number: V&V13320

Report to Text File generated files with junk characters.

The text file generated by a Report To Text File event could not open cleanly in WordPad and the file contained some junk characters. The text file opened normally in Notepad. The problem was caused by an ambiguous encoding type when the file is created by RESULT. RESULT now allows you to select the encoding type (ANSI or UNICODE) in the Report to Text File event. The default setting is UNICODE.

History: Problem occurred in RESULT version 3.0. Added to release notes in August 2009. Tracking number: V&V16006

Value retrieved from the OPTO22 becomes 0

If a workflow contained a Read from IO event, the value reported out immediately after this event was correct. But, if the workflow then used the value in a Measure event and reported it again, the value become 0.

History: Problem occurred in RESULT 3.0. Added to release notes in August 2009. Tracking number: V&V16820

Report does not display correct measured values from a Calculate event

One specific workflow in question has 3 components that are measured twice, and then a Calculate event is used to do some statistics. In Calculate, "Store raw values with calculated values" is checked. Then, a Report is used to display the measured values and statistics of the Calculate. In the final generated HTML report, only the first component correctly gives the two measured values, the average and other statistics. The other components give incorrect measured values and statistics. WE corrected this in the Calculate event.

History: Problem occurred in RESULT 3.0. Added to release notes in August 2009. Tracking number: V&V15158

RESULT Operation generates error if folder to Archive doesnt exist

When saving a file to a folder in Archive, if the folder doesn't exist, RESULT Integration will automatically create the folder and the file is saved correctly. But in RESULT Operation, it generates an error the first time you run it. Additionally, in RESULT Operation, if the file has not been created, it not only creates the file, it creates an additional file without the first character. The fix is in Archive event.

History: Problem occurred in RESULT 3.0. Added to release notes in August 2009. Tracking number: V&V16820

RESULT Data View fails to save a second sequence file

In RESULT Data View, when a user opens one sequence file and then saves them all as .SPA files, this works fine. But if they do this again with another sequence file, the operation fails (the spectra files from the 2nd sequence file do not save to the selected directory and it does not use the typed-in base name). Instead the spectra from the 2nd sequence are saved into the folder that contains the spectra files from the 1st sequence file and uses the same filenames and overwrites the spectra from the 1st sequence.

History: Problem occurred in RESULT 3.0. Added to release notes in August 2009. Tracking number: V&V16133

Known Issues – New in December 2009 release notes

RESULT CD will not fully uninstall

If you try to uninstall RESULT CD, it will not fully uninstall all parts of the software.

Recommendation: Perform an over install if you just want to reinstall RESULT 3 SP3. You must use the Microsoft Uninstall utility to fully remove the software from the PC.

History: Problem occurs in RESULT 3 SP 3 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17497.

Auto correction feature of firmware can be enabled by Align Command with Antaris Target

If you perform an align command on an Antaris Target, it will turn on the auto correction feature of the firmware. This can lead to potential problems due to a bug in the firmware. See firmware release notes above for details.

Recommendation: Do not use the align command on an Antaris Target. Turn off the “Automatically align before running ValPro” option in the ValPro options dialog (this is off by default). The Align command performs a manual calibration of the Target. This operation is only required every 6-9 months. Upgrade to RESULT 3 SP 3 Hotfix 1 so preventive maintenance alignments can be performed. If upgrade is not feasible, work with your field service engineer who can perform this maintenance procedure with field service utilities and RESULT 3 SP 3.

History: Problem occurs in RESULT 3 SP 3 with Antaris Target Firmware v1.7.6 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17498.

Intermittent positioning errors can occur when using the Autosampler RS or Multipro Autosampler with faster computers.

When checking the position of the autosampler a timing error could intermittently provide incorrect data on the position of the autosampler. The software would then request the autosampler to move to an incorrect position based on the bad data. After the move the position was rechecked so an error would always be reported to the user and no data could be collected at the incorrect position. The timing on the DELL 960 computers intermittently exposed this problem.

Recommendation: If you see this error, repeat your measurement.

History: Problem occurs in RESULT 3 SP 3 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17499.

Intermittent Validation Wheel and Attenuator Wheel positioning errors.

When requesting the validation wheel or attenuator wheel to move the command will occasionally be rejected by the instrument RESULTing in an error. This error is reported to the user and no data is collected at incorrect wheel positions. The timing on the DELL 960 computers intermittently exposed this problem.

Recommendation: If you see this error, repeat your measurement.

History: Problem occurs in RESULT 3 SP 3 and the frequency is significantly reduced in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17500.

Instrument Check does not show all reports on Antaris IGS instruments.

The instrument check command only produces the 100% line spectrum and not the single beam and interferogram spectra.

Recommendation: Check the single beam and interferogram performance with Quick Collect. Upgrade to RESULT 3 SP 3 Hot Fix 1.

History Problem occurs in RESULT 3 SP 3 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17610

Unable to retain a custom spectral range in Antaris Target collect specifications.

The software allows you to set a custom spectral range on Antaris Target collect specifications, but then restores the default use standard range setting when you leave the settings window.

Recommendation: Upgrade to RESULT 3 SP 3 Hot Fix 1.

History Problem occurs in RESULT 3 SP 3 and is fixed in RESULT 3 SP 3 HotFix 1. Tracking number: V&V17611

Known Issues- From previous updates

Unscrambler v9.8 requires settings in system path to run

Without this in the path, the user gets a message about missing file UnscEMSCTrans.dll. This is true on both Windows XP and Windows Vista.

Workaround: OLUP requires c:\program files\olup (Unscrambler online predictor). OLUC requires c:\program files\oluc (Unscrambler online classifier). If you have OLUP installed, add the path to OLUP to the system path. If you have OLUC installed, add the path to OLUC to the system path. If you have both installed, add both paths to the system path.

History: Problem occurred in all versions of RESULT. Added to release notes in August 2009. Tracking number: V&V16958

RESULT 3.0 Service Pack B

New Features

Brief descriptions of the new features in RESULT version 3.0 Service Pack B are provided below. Service Pack A was only distributed to Antaris Target Customers. All changes in RESULT version 3.0 and in Service Pack A are also included in Service Pack B. Additional documentation for RESULT software is available in the documents folder (or the English\Documents folder) of your analyzer's Language Pack CD. These documents have the extension *.PDF and may be opened using Adobe® Reader®. See the Adobe Reader on-line help for information about using Adobe Reader.

Prompt for Gain in Instrument Check on Antaris MX and EX

A prompt for Gain will appear on Antaris MX or EX spectrometers on channels 1-4. The initial setting for gain in the prompt should be used if the fiber optic shunt is connected. A gain of 1 should be used if the SabIR Probe is connected. If other custom probes are connected, use the gain appropriate for the probe attached to the channel.

History: Feature added to RESULT version 3.0 Service Pack B.

Process event available for use in Collect Sequence event groups

The Process event is now available for use in a Collect Sequence event group.

History: Feature added to RESULT version 3.0 Service Pack B.

Support the Retain All Spectra option from the Collect Sequence event

Add support for Retain All Spectra from Collect Sequence.

History: Feature added to RESULT version 3.0 Service Pack B.

Show the file signature status when you open a workflow

The current state of the file signature is displayed when you open a workflow.

History: Feature added to RESULT version 3.0 Service Pack B.

Class name is available from the Report to Text event.

For a classification Measure method, it is now possible to report the Class Name from the Report to Text event.

History: Feature added to RESULT version 3.0 Service Pack B.

Add the ability to report acceptance limits from a TQ Analyst quantitative method

Add the lower acceptance limit and the upper acceptance limit as values that may be reported about a TQ Analyst quantitative method.

History: Feature added to RESULT version 3.0 Service Pack B.

Support the MX Plus Automated Tablet Sample Handler

Add support for the MX Plus Automated Tablet Sample Handler.

History: Feature added to RESULT version 3.0 Service Pack B.

Known Issues- New in April 2008 Release Notes

Measure Event using a classification method may hang when accessed from a network drive.

On some networks, a measure event may hang when the workflow is running if the measure event uses a classification method stored on a network drive.

Recommendation: Place the workflow and method on a local drive.

History: Problem occurred in RESULT version 3.0. Added to release notes in November 2007. Tracking number: V&V3066

Unable to predict with a PLSplus/IQ method when the method was created using spectra from a non-Antaris instrument.

Spectra created on a different instrument do not have the controls that are present on an Antaris instrument. Thus data spacing and spectral endpoints may not be compatible with data collected on an Antaris. This may cause an incompatibility between a PLSplus/IQ model and an Antaris spectrum. The solution is to adjust the Antaris spectrum to be compatible with the PLSplus/IQ model.

History: Problem occurred in all versions of RESULT. Added to release notes in February 2008.

The Antaris autosampler does not accurately reposition itself when moved from different positions.

The Antaris autosampler may return to a position off by a step or two depending on the distance and direction of approach to a target position. Hysteresis correction was activated for the movement.

History: Problem occurred in all versions of RESULT. Added to release notes in April 2008.

The Antaris autosampler will not go back to the Home position if the starting position is too far from home.

The time delay for waiting for the autosampler was not long enough. The delay was increased to insure that the autosampler will be able to reach the Home position.

History: Problem occurred in all versions of RESULT. Added to release notes in April 2008.

The Instrument Check command does not always work properly for an Antaris MX.

The channel and gain settings were coordinated for the Instrument Check command for an Antaris MX instrument.

History: Problem occurred in RESULT version 3.0. Added to release notes in April 2008.

The Unscrambler option does not give the same answer as when the Unscrambler UDI software is used.

The Unscrambler OMNIC UDI dll assumes that the spectral data are presented in descending spectral order. The RESULT Unscrambler option assumes that the spectral data are presented in ascending spectral order. Thus the two packages do not give the same RESULT. A registry key "CAMORreverseSpectrum" is provided so that when it is set it forces the RESULT Unscrambler option to reverse the order of the spectral data.

History: Problem occurred in RESULT version 3.0. Added to release notes in April 2008.

In the Process and Measure commands, an error is returned when you calculate the variance of one spectrum.

The variance spectrum for one spectrum is set to an all zero spectrum.

History: Problem occurred in RESULT version 3.0. Added to release notes in April 2008.

Problem may occur when the type of data read from an Opto22 device is changed.

The data type is not set properly for all types of data when reading a data value on an Opto22 device.

History: Problem occurred in Result version 3.0. Added to release notes in April 2008_._

Question and Answers - New in April 2008 Release Notes

Why can't I measure spectra using a Pirouette method?

RESULT cannot access Pirouette method files that were saved as read-only.

Recommendation: Turn off the Read-Only property of your method file(s) and then rerun the workflow.

History: Describes operation in RESULT version 1.0-3.0B. Added to release notes in October 2007. Tracking number: V&V02733.

RESULT 3.0 Service Pack A

New Features

Brief descriptions of the new features in RESULT version 3.0 Service Pack A are provided below. This service pack is designed for Antaris Target Blend Analyzers and has been initially released on this model only. In the future this service pack may be released on other Antaris models. Additional documentation for RESULT software is available in the documents folder (or the English\Documents folder) of your analyzer's Language Pack CD. These documents have the extension *.PDF and may be opened using Adobe® Reader®. See the Adobe Reader on-line help for information about using Adobe Reader.

More events available for use in Collect Sequence event groups

The following events are now available for use in a Collect Sequence event group: Measure events, Check events, Calculate events, Store events, Clear events and Write To IO events. Previously, only Measure events could be added to a Collect Sequence group.

History: Feature added to RESULT version 3.0 Service Pack A.

Automatic Full Scale option added to Sequence Display

When using the Sequence tab to display trends in collected data, you can easily configure the software to display the data full scale in both the spectral pane and each component pane. To configure a workflow to display component data with the Y-axis scaled to fill the pane, select the Run Sequence event. For each component you want the software to autoscale, set both the Min Y Value and Max Y Value in the Component Display group to 0.00.

To configure a workflow to display spectral data with the X-axis automatically scaled to fill the pane, set both the Starting and Ending Spectrum X Values to 0.00. To autoscale the Y-axis of the spectral display, set both the Minimum and Maximum Spectrum Y Values to 0.00.

History: Feature added to RESULT version 3.0 Service Pack A

Option to restrict sequence display to most recent measurements

An option is now available on the Run Sequence event to restrict the data displayed on the Sequence tab to the most recent measurements.

History: Feature added to RESULT version 3.0 Service Pack A

Option to view sequence data in units of time or data points

An option is now available on the Run Sequence event to control whether the X axes for the component panes are displayed in units of time or data points.

History: Feature added to RESULT version 3.0 Service Pack A

Option to stop events in a Collect Sequence group based on a condition

The Collect Sequence event now has an option to associate a logic specification with the event. The logic specification can be used to stop the events in the Collect Sequence group when the logical condition is met.

History: Feature added to RESULT version 3.0 Service Pack A

Option to apply corrections to sequence spectra

The Collect Sequence event now supports the same set of corrections as the Collect event. For more information, see Correct Sample Spectrum and Correction Specifications in your *RESULT User's Guide*.

History: Feature added to RESULT version 3.0 Service Pack A

New display options for RESULT Data View

RESULT Data View now supports additional display options, such as data point, scatter and line display and lets you select the data point markers.

History: Feature added to RESULT version 3.0 Service Pack A

Automatic Full Scale option added to trend chart display

When using the Trend tab to display trends in measured data, you can easily configure the software to display the data full scale in each component pane. To configure a workflow to display component data with the Y-axis scaled to fill the pane, select the Trend tab and choose Display Setup. (If you can't open the Display Setup dialog box, ask your RESULT Administrator to give you access by opening the Manage User's dialog box, selecting your name and selecting Access Trend Tab Setup Option.) For each component you want the software to autoscale, set both the Y Min and Y Max values in the Log Settings group to 0.00.

History: Feature added to RESULT version 3.0 Service Pack A

Known Issues- New in Nov 2006 Release Notes

ValPro algorithms test may fail on some international versions of Windows

If the operating system's program files directory is not named C:\Program Files, the ValPro algorithms test will fail because the workflow is not able to find key input files that are installed in the RESULT\ValPro subdirectory of the system's program files directory. This can occur on some international versions of Windows.

Recommendation: Create the following directory on the computer: C:\Program Files\{subject}\ValPro. Copy the following files from the RESULT\ValPro directory under your Operating System program files directory to the directory you just created:

TQInputY.txt

TQInputZ.txt

IS Bkg.spa

TxTransVsFiber.spa

History: Problem occurred in RESULT version 3.0. Added to release notes in November 2006. Tracking number: V&V9545

Autosampler specifications are not available for Dual Tablet event

The Dual Tablet event does not support the autosampler specifications for automating sample handling. This restricts some of the background handling options that are available when automating sample handling.

Recommendation: Use the Position Autosampler event to automate sample handling. If you wish to collect a background from the reference position at the start of your tray of samples, add a Position Autosampler event before your loop that moves to the background position and set your background handling to Once Per Workflow Run.

History: Problem occurred in RESULT version 3.0. Added to release notes in November 2006. Tracking number: V&V9451 and V&V9452

RESULT 3.0 Hot Fix 1

Resolved Issues

A brief description of the problems handled in the hot fix are provided below.

The size of the security token buffer was increased

The size of the security token buffer needed to be expanded since a customer had a problem when their local security buffer exceeded 8000 bytes. The problem prevented them from logging into the system in a secure environment.

History: The size of the buffer has always been 8000, but it is a best idea to increase to 65535. This is corrected in RESULT 3 SP10 Hot Fix 1, but a version for RESULT 3.0 was also done. This change does NOT exist in any version of RESULT software between RESULT 3.0 and RESULT 3 SP10 HF1. The only upgrade path that includes this change is to jump directly to the service pack 10 hot fix. If you attempt to load this version of software over the top of an existing version of software, then it will appear that you have to install the software two times. The first install will remove the previous version and the second install will actually load the new version of RESULT 3.0 Hot Fix 1.

Special installation instructions: If you attempt to load this version of software over the top of an existing version of software, then it will appear that you have to install the software two times. The first "install" will remove (delete) the previous version and the second install will actually load the new version of RESULT 3.0 Hot Fix 1.

RESULT 3.0

New Features

Brief descriptions of the new features in RESULT version 3.0 for both Antaris NIR and Antaris IGS are provided below. Additional documentation for RESULT software is available in the documents folder (or the English\Documents folder) of your analyzer's Language Pack CD. These documents have the extension *.PDF and may be opened using Adobe® Reader®. See the Adobe Reader on-line help for information about using Adobe Reader.

Support for new instrument models

RESULT now supports the Antaris II, Antaris MX, Antaris EX and Antaris Target Blend Analyzer along with the Antaris NIR, Antaris IGS and Antaris Multiplexer.

History: Feature added to RESULT version 3.0.

Report To Text event

This event allows information from workflow events to be appended to a text file.

History: Feature added to RESULT version 3.0.

Read From I/O event

This event allows information from workflow events to be read from digital or analog I/O lines.

History: Feature added to RESULT version 3.0.

Write To I/O event

This event allows information from workflow events to be written to digital or analog I/O lines.

History: Feature added to RESULT version 3.0.

Load Spectrum event

This event allows a spectrum to be loaded into a workflow from a computer disk so the spectrum can be used by other workflow events such as a Measure event.

History: Feature added to RESULT version 3.0.

Collect Dual Tablet event

This event allows simultaneous collection of transmission and reflection sample data using an Antaris II spectrometer with a tablet analyzer...

History: Feature added to RESULT version 3.0.

Collect Multi-Channel event

This event allows simultaneous collection from multiple fiber optic channels using an Antaris MX or Antaris EX.

History: Feature added to RESULT version 3.0.

Collection events support sample corrections

All collection events can now be linked to a correction specification. The correction specification can be used to define a sample correction. Typical sample corrections include dark background corrections, transfer corrections, and spectral processing with a background spectrum stored in a spectral file.

History: Feature added to RESULT version 3.0.

Fiber optic background specifications support alternative beampaths

On an Antaris or Antaris II system, backgrounds can now be collected from the transmission or integrating sphere beam path in addition to the fiber optic beam path. Typically, a background from an alternative beam path would be used in conjunction with a transfer correction (see “Collection events now support sample corrections” above). The transfer correction allows background collection at a convenient location while maintaining spectral quality by removing artifacts from the final spectrum that are due solely to the alternative beam path used for the background collection.

History: Feature added to RESULT version 3.0.

Spectral header information is available for use in a workflow

The header information from a collection RESULT (spectrum) can now be added to other events or specifications such as a table item specification for a sample report. The spectral header information includes key header attributes such as the spectrum title, the date and time of collection and the resolution. The spectrum file name is also available if the spectrum has been archived before the spectral header information is used by another event in the workflow.

History: Feature added to RESULT version 3.0.

Measure event supports composite measurement specification

The composite measurement specification can be used to produce calculated RESULTS using RESULTS from other events. The composite measurement specification supports a large number of mathematical operators (e.g., + Add, - Subtract) and functions (e.g., AVG Average, MAX Maximum) to use for creating calculated RESULTS.

History: Feature added to RESULT version 3.0.

Calculate event supports additional statistical measurements

The calculate event supports the addition of first and second derivative measurements.

History: Feature added to RESULT version 3.0.

Running workflows continuously feature added

Both RESULT Integration and RESULT Operation provide support for running workflows continuously. The feature is available in the Run Time Test window of RESULT Integration and in the Manage Workflows dialog box in RESULT Operation.

History: Feature added to RESULT version 3.0.

Preview Section and Preview Report features added

The Table and Summary Item Specifications support a Preview Section button. This button shows a preview of the current layout for the selected section in the report without having to run the workflow. Similarly, the Report Item Specification includes a Preview Report button which shows the formatting for all the sections in the

current report.

History: Feature added to RESULT version 3.0.

New formatting options for table sections in reports

The Table Item specification now supports additional text formatting control features such as text alignment, style and color. The specification also supports adding heading, cell, line and table breaks to the table to control the layout of cells within the table. The specification also supports an option for displaying all data types in the same row or column. In prior versions of RESULT, different data types were always displayed in different rows or columns.

History: Feature added to RESULT version 3.0.

New formatting options for summary table sections in reports

The Summary Item specification now supports all the new formatting features of the Table Item specification plus filtering on a pass/fail condition or sorting on a field in the report. The filtering option can be used to produce a summary table that only includes pass or fail RESULTS. The filtering options also allow you to display and/or highlight individual pass or fail RESULTS. The sorting options include an option for placing duplicates in separate tables. This option can be used with classification RESULTS to place the members of different classes in different tables. This provides you with statistical information about the individual classes.

History: Feature added to RESULT version 3.0.

Perform-While event supports Repeat At Least Once option

A setting has been added to the Perform-While event that forces the loop to execute at least once regardless of the state of the conditional test. This setting is useful when the value of the conditional test is initialized inside the Perform-While loop.

History: Feature added to RESULT version 3.0.

Repeat event and Configure Standards dialog box support user-defined columns in sampling sequence files

Sampling sequence files now support user defined columns. Information from the additional columns can be used by other events and specifications such as a Report To Spectrum event or Table Item specification.

History: Feature added to RESULT version 3.0.

Store event supports new RESULT types and selection of individual RESULTS

Previously the Store event only supported RESULTS from Measure events. The Store event now supports RESULTS from other events. The Store event also supports the selection of individual values (data types or attributes) from a workflow RESULT. For example, you can select a specific component concentration value produced by a measure event without having to select all the component values produced by that event. In previous versions of RESULT, the Store event selected all the available values for a workflow RESULT.

History: Feature added to RESULT version 3.0.

Logical test specification supports using other RESULTS as high or low limit values

Previously, the logical test specification supported entered values for high and low limits. Now the logical test specification supports entered values and values produced by other events in the workflow.

History: Feature added to RESULT version 3.0.

Add To Spectrum event supports spectral history

The Add To Spectrum event can be used to add information to the history of a spectrum. The information is stored in the spectral file header.

History: Feature added to RESULT version 3.0

Header Item specification supports Measure Method Information

Measure Method information can be added to a heading section in a sample report. This information displays key attributes such as the file name and revision number of all TQ Analyst methods included in the workflow.

History: Feature added to RESULT version 3.0.

RESULT Operation includes Trend tab for displaying stored measurement RESULTS

The Trend tab is an optional tab in RESULT Operation. It can be used to display live or historical trend charts of stored measurements. Any measurement stored to the database by a Store event in a workflow can be viewed on the Trend tab. The Trend tab also supports tabular display of the measured values.

History: Feature added to RESULT version 3.0.

RESULT Operation and RESULT Integration include Industrial Automation Control Features

RESULT Integration and Operation can be configured to provide status information to an Opto22 I/O controller. This status information can be used to link status to digital output lines. For example a digital line can be configured to turn on whenever a workflow is running. These packages can also be configured to allow the Opto22 I/O controller to control workflows. Control features include starting workflows, stopping workflows, and acknowledging a Start or Stop prompt from a StartStop event. For example a digital input line can be configured to start a workflow.

History: Feature added to RESULT version 3.0.

RESULT Operation and RESULT Integration support Thermo Security Admin Server

If Thermo Client Services are installed and Thermo Security Admin Server (our security administration software) is installed and properly configured, basic user policies can be administered using Thermo Admin Server. Thermo Admin Server can run on the same computer as RESULT software or on a different computer on the same domain.

History: Feature added to RESULT version 3.0.

Known Issues- New in Nov 2006 Release Notes

ValPro algorithms test may fail on some international versions of Windows

If the operating system's program files directory is not named C:\Program Files, the ValPro algorithms test will fail because the workflow is not able to find key input files that are installed in the RESULT\ValPro subdirectory of the system's program files directory. This can occur on some international versions of Windows.

Recommendation: Create the following directory on the computer: C:\Program Files(subject)\ValPro. Copy the following files from the RESULT\ValPro directory under your Operating System program files directory to the directory you just created:

TQInputY.txt

TQInputZ.txt

IS Bkg.spa

TxTransVsFiber.spa

History: Problem occurred in RESULT version 3.0. Added to release notes in November 2006. Tracking number: V&V9545

Autosampler specifications are not available for Dual Tablet event

The Dual Tablet event does not support the autosampler specifications for automating sample handling. This restricts some of the background handling options that are available when automating sample handling.

Recommendation: Use the Position Autosampler event to automate sample handling. If you wish to collect a background from the reference position at the start of your tray of samples, add a Position Autosampler event before your loop that moves to the background position and set your background handling to Once Per Workflow Run.

History: Problem occurred in RESULT version 3.0. Added to release notes in November 2006. Tracking number: V&V9451 and V&V9452

New Questions and Answers

Why doesn't RESULT software recognize a blank password?

RESULT software honors the local security policy for blank passwords. If the local security policy is set to disable blank passwords, RESULT will not allow a user to logon with a blank password even if that is the current setting for the user's password.

Recommendation: Use the Local Security Policy application in the Administrative Tools folder within the Windows Control Panel to set the Local Policies Security Options For Accounts: Limit local Use Of Blank Passwords To Console Login Only to Disabled if you want to allow blank passwords...

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in June 2006 Tracking number: V&V4356.

Why can't a local user log on to RESULT software?

RESULT software honors the local security policy for all accounts. If the Local Security Policy Network Access: Sharing And Security Model For Local Accounts is set to Guest Only – Local Accounts Authenticate As Guests, RESULT will not allow a user to logon even if the logged on user has a valid account and enters a valid password.

Recommendation: Use the Local Security Policy application in the Administrative Tools folder within the Windows Control Panel to set the Local Policies Security Options For Network Access: Sharing And Security Model For Local Accounts to Classic – Local Users Authenticate As Themselves, if you want to use local user accounts. Alternatively, require all users to use network logins when running RESULT software.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in June 2006. Tracking number: V&V4356.

Why doesn't RESULT software report an F-Test Value for my PLSPlus/IQ method?

RESULT software provides the user with access to an F-Ratio RESULT from PLSPlus/IQ methods and not an F-Test value. RESULT calculates the F-Ratio from the two values from the PLSPlus/IQ method, including the F-Test value.

Recommendation: Develop your reports and limit checks around the F-Ratio value.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in June 2006. Tracking number: V&V6953.

Why is a background collected on the first standard collected after I select the Collect Standards command?

If you have a collect event set to collect a background every 4 hours or so, collect standards will still collect a background on the first standard you run with each Collect Standards command. This occurs because a new internal workflow is generated to support the collect standards command and this workflow doesn't have the same identifier for the Background Frequency as the associated workflow. Because of this, the software can't properly find an existing background. The background frequency will be honored for all standards run with the same Collect Standards command.

Recommendation: In RESULT Integration set up the sampling sequence using Configure Standards to run your standards as a set or keep pressing the Go button to collect all the standards in the set. In RESULT Operation, set up a sampling sequence using Configure Standards to run your standards as a set. If you do one of these things, you will only collect an additional background on your first standard.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in June 2006. Tracking number: V&V6953.

Why do non-printing characters and spaces between characters in words appear in text files generated by a Report To Text event?

The Report To Text event writes characters using the UNICODE character set and not the ANSI character set. If you create a text file using a program such as Notepad using ANSI characters, the Unicode characters appended to the file by RESULT will have spaces between characters and additional non-printing characters may appear.

Recommendation: If you need to edit the file before RESULT appends data to the file, use Notepad to edit the file and then save the file using the UNICODE file type. To save the file using the UNICODE file type, use the Save As command in Notepad. If RESULT creates the text file, you may edit the file in Notepad and it will

automatically be saved with the UNICODE type.

History: Describes operation in RESULT version 3.0. Added to release notes in June 2006. Tracking number: V&V8806.

Questions and Answers from prior versions

Why does my sample cup spinner still start spinning before the data collection sample prompt is displayed?

Why does the integrating sphere flag open before the data collect sample prompt is displayed?

If you select to Preview data collection from the Operator Prompt dialog, then the sample cup spinner will start spinning before the prompt is shown and the integrating sphere flag will open before the prompt is shown. This is done so that the data collect can be previewed under actual data collection conditions.

Recommendation: If you do not select Preview data collection from the Operator Prompt dialog, then the operator prompt will appear before the sample cup starts spinning or before the integrating sphere opens.

History: Describes operation in RESULT versions 2.1-3.0. Added to release notes in February 2005.

Why can't I select optimize gain from the sample specification of my Multipro?

The Optimize Gain button on the sample specifications for the Autosampler – Tablet Transmission Module and for the Autosampler – SoftGel Transmission Module is grayed. This is done for a technical reason in the software.

Recommendation: The gain and screen setting may be determined by using the Quick Collect command. The Optimize Gain button on this dialog is not grayed and is available. Run the command and copy the gain and screen setting to the sample specifications.

History: Describes operation in RESULT versions 1.2 – 3.0. Added to release notes in June 2004. Tracking number: V&V04445.

Why does my report look OK when I get workflow errors?

Consider a workflow where five samples are run in a loop. During sample 2 there is an air bubble that causes a workflow error that states “interferogram peak too large.” However in the report the RESULTS from sample 1 are used for sample 2. There is no indication in the report that there was a problem with the second sample. The RESULTS for sample 2 are incorrect.

Recommendation: Add error status to the report so that the report indicates whether the workflow was error free at the time the report was generated.

History: Describes operation in RESULT versions 1.2 – 3.0. Added to release notes in June 2004. Tracking number: V&V03742.

Why do I get a DNS error sometimes?

At the end of a workflow the following error was reported: “Internet Explorer cannot open the Internet site file: C:{subject} Data\Images\report.htm. Operation aborted.” Clicking OK to this message generated the “Cannot find server or DNS error.”

Recommendation: RESULT software writes a temporary copy of the report to the file report.htm in the Images directory. This directory is typically C:\{subject}\Data\Images. The user must have write permission to this file in order to view reports as they are created by a RESULT workflow.

History: Describes operation in RESULT versions 1.2 – 3.0. Added to release notes in June 2004. Tracking number: V&V04040.

Why can't I view the service log?

The operator is unable to view the contents of the service log.

Recommendation: In order to view any of the logs, the operator must have read access to the RESULT database (*.mdb) file.

History: Describes operation in RESULT versions 1.0 – 3.0. Added to release notes in June 2004. Tracking number: V&V03989.

Why do I have a problem predicting with a Pirouette measurement method?

Pirouette is open and then RESULT Integrator is opened. If you browse through a workflow with a Pirouette measure event, then you get a message that only one copy of Pirouette may be open at a time. RESULT Integration closes after the warning message.

Recommendation: This is a known feature of Pirouette. Close RESULT before running Pirouette and close Pirouette before running RESULT.

History: Describes operation in RESULT versions 1.0 – 3.0. Added to release notes in June 2004. Tracking number: V&V03535.

Why do I get errors when I write to the RESULT database?

A RESULT user must have read/write privileges to the RESULT database file in order to properly add or view entries in the database.

Recommendation: Insure that all RESULT users have read/write privileges to the RESULT database. The file is typically located in c:\{subject}\Data\config and is named RESULT.mdb.

To check the file privileges using FAT32 file systems, right-click the database file in Windows Explorer. From the popup menu, select Properties. In the Properties dialog box, verify that the Read-Only check box is cleared.

On NTFS file systems, the file security properties are located on the Security tab, which some users may not be able to access. If your computer uses the NTFS file system, have your Windows administrator give you read/write privileges for the RESULT database folder and file.

History: Describes operation in RESULT versions 1.0 – 3.0. Added to release notes in May 2002. Tracking number: V&V03592.

Why doesn't the Configure System dialog box appear when I select Configure System from the Administrative menu in RESULT Operation?

A RESULT user must have read/write privileges to the RESULT database folder and file in order to view or change settings in the Configure System dialog box.

Recommendation: Have your Windows administrator give you read/write privileges for the RESULT database

folder and file. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

History: Describes operation in RESULT versions 1.0 – 3.0. Added to release notes in May 2002. Tracking number: V&V03593.

Why does my computer take a long time to start RESULT software?

You are operating a computer running the Windows NT operating system as a local workstation (network cable is unplugged), but it is configured for networking.

Recommendation: Configure the networking options on your computer according to the recommendations in *Installing Your Software*.

History: Describes operation in RESULT versions 1.0 – 3.0. Added to release notes in May 2002. Tracking number: V&V03594.

Why can't I measure spectra using a PLSplus/IQ method?

RESULT cannot access PLSplus/IQ method files that were saved as read-only.

Recommendation: Turn off the Read-Only property of your method file(s) and then rerun the workflow.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in October 2001. Tracking number: V&V02732.

Why can't I run my workflow after my verification workflow runs successfully?

A verification workflow must store a workflow status RESULT in the RESULT database. If your verification workflow does not store a passing workflow status RESULT, you will not be allowed to run the associated workflow.

Recommendation: At the end of your verification workflow, add a check event named "Workflow status" and link it to a logic specification defining the desired pass/fail condition. Make sure the check event has the Store Pass/Fail RESULT To Database check box selected and the logical test specification has the Logical Test Is Always False If Workflow Errors Have Been Detected check box selected. See "Check events" and "Logical test specifications" in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in April 2001. Tracking number: V&V02204.

Why isn't the Print option enabled when I right-click on a graphic image, such as a spectrum in a displayed report?

RESULT uses the same engine as Internet Explorer for displaying and printing reports. When you right-click on a graphic image, the software disables the Print option and enables menu items that are specific to graphic images.

Recommendation: To print a report displayed in RESULT software, right click on a portion of the report that doesn't include a graphic image. Then select a print option from the popup menu.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in April 2001. Tracking number: V&V01920.

How do I monitor unauthorized attempts to log on to RESULT?

RESULT software uses the event logging services of the Windows operating system to track unauthorized attempts to log on to RESULT.

Recommendation: To configure RESULT to track unauthorized attempts to log on or to digitally sign files, configure the Windows event logging service to log unauthorized logon attempts. The event logging service works the same way in RESULT as it does in Windows. For example, you can configure Windows to disable a user account if that user makes too many invalid attempts to log on. The account will be disabled if the user attempts to log on to Windows or RESULT software. See “Windows security features” in the “Software Administration” section of your *Antaris User’s Guide* for more information.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in January 2001. Tracking number: V&V01603.

Why do my transmission spectra collected using the three-position sample tube holder have an offset baseline?

Baseline offsets occur when the operator uses different aperture settings to collect the sample and background spectra. When using the software’s default settings to collect transmission spectra using the three-position sample tube holder, the software measures background spectra through the center opening in the sample tube holder which does not have an aperture. If you install an aperture in the sample holder position used to measure a liquid sample, the RESULTing spectrum will have an offset baseline.

Recommendation: If you want to measure a liquid sample using an aperture, install an aperture in both the front and back positions of the sample tube holder and then place the sample tube in one of those positions (front is easiest). Set the Sample Position list box on the sample specification associated with your collection event to match the location of the sample (Front Sample Compartment or Rear Sample Compartment). Set the Position list box on the associated background specification to the other position (Front Sample Compartment or Rear Sample Compartment) and then run the workflow. See the “Sample specifications” and “Background specifications” chapters in the “RESULT Integration Software” section of your *Antaris User’s Guide* for more information about the Sample Position and Background Position parameters.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in January 2001. Tracking number: V&V01387.

Why do some spectral files cause a workflow error when I use them to run my workflow in simulation mode while others do not?

The Collect Simulation Spectrum dialog box (displayed by choosing New Sample For Simulation on the sample specification) allows you to create or select the spectra that will be used for simulated runs of a workflow. The Collect Associated Background Spectrum check box in the Collect Simulation Spectrum dialog box specifies whether a new simulation sample spectrum will include a corresponding background spectrum. This is true whether you collect the simulation sample or select an existing spectral file. If Collect Associated Background Spectrum is selected and you select a simulation spectrum that contains only sample data such as a Single Beam or Interferogram file (by choosing From File in the Collect Simulation Spectrum dialog), when you close the dialog box, the software will not add the spectrum to the Samples For Simulation list box on the sample specification.

Recommendation: If you want to run the workflow in simulation mode using a sample spectrum and its corresponding background spectrum, select a spectral file that contains both a sample and a background interferogram. Most spectral files contain both a sample and a background interferogram. Spectra that are collected with Data Format (located on the collection event) set to Interferogram or Single Beam contain only a sample interferogram.

If you want to run the workflow in simulation mode using an interferogram or single-beam spectrum (Data Format is set to Interferogram or Single Beam), clear the Collect Associated Background Spectrum check box before selecting the simulation spectrum.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in January 2001. Tracking number: V&V01518.

When RESULT is configured to give me access to menus, why don't the menus appear in the RESULT Operation main window?

RESULT Operation does not provide proper access privileges to users when the computer or domain name contains a space. Microsoft strongly discourages using spaces when entering computer and domain names in their Windows operating system because Windows does not handle the space correctly in all situations. The Windows operating system presents a warning after a user enters a computer name that contains a space.

Recommendation: Remove the space from your computer or domain name in Windows and then restart the RESULT Operation application. You should also remove any spaces from the user names defined in RESULT Operation software.

History: Problem occurs in RESULT version 1.0-3.0. Added to release notes in January 2001. Tracking number: V&V01566.

Why don't displayed items remain expanded or collapsed when I switch between the workflow tree and the specification tree?

If you expand or collapse the items displayed in the workflow navigation frame in the RESULT Integration main window and then switch back and forth between the Workflow tab and the Details tab, the software does not retain the previous view. For example, if you select the Workflow tab, select Expand from the toolbar to expand the displayed workflow, switch to the Details tab, and then switch back to the Workflow tab (or vice versa), the view is no longer expanded. Choose Expand again to expand the displayed items.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in October 2000. Tracking number: V&V00690.

Why does my workflow produce a measurement error after I recreate my collection event?

Some collection and measurement event parameters are interdependent. If you delete a collection event whose RESULT spectrum is used by a subsequent measurement event, and then create another collection event, add its RESULT spectrum to the measurement event and rerun the workflow, the workflow may produce a measurement error due to inconsistent parameter settings between the collection event and the measurement event or its associated TQ Analyst method.

Recommendation: Use the workflow error text to determine which parameters are inconsistent with the measurement event and then change the collection event parameters to fix the error.

Tip: The workflow wizard will automatically make your collection parameters consistent if you create a measurement event that uses an existing TQ Analyst method when you run the wizard.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in October 2000. Tracking number: V&V01060.

After I update my TQ Analyst method, why don't the changes appear on the measurement specification?

If you change a TQ Analyst method that is linked to a measurement specification in the current workflow, the measurement specification won't reflect the change until you select another event or specification and then reselect the measurement specification. Let's say, for example, you are running RESULT Integration and you select a measurement specification that is linked to a TQ Analyst quantitative method and decide to add another component to that method. Then you start TQ Analyst software, add the component and save the method. When you return to RESULT Integration, the new component doesn't appear in the list of measurements on the measurement specification.

Recommendation: Select another item in the workflow navigation frame, such as the measurement event or another measurement specification, and then reselect the previous measurement specification.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in October 2000. Tracking number: V&V01044.

Why does the software report a Fit value of 0.0 for all of my spectra?

The software reports a fit value of 0.0 whenever the spectral range for the collection event doesn't cover the full range of the standards in the associated TQ Analyst method (for example, when the spectral range on the sample specification is 4000 -10000 cm^{-1} and the method standards range from 3800 – 12000 cm^{-1}). If your spectral range is set appropriately, you might see a low fit value but you are unlikely to see a fit value of 0.0, which is the lowest possible fit value. When the spectral ranges of the samples and standards are inconsistent, the software reports a fit value of 0.0 even for spectra that are very similar.

Recommendation: To achieve an appropriate reading for the fit value, change the spectral range for the collection event (located on its associated sample specification) to cover the full range of the standards. In the example above, you would need to change the spectral range for the collection event to 3800-12000 cm^{-1} .

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in October 2000. Tracking number: V&V01214.

What do the validation wheel dates in my instrument status report mean?

When you view Instrument Status under the Maintenance menu in RESULT Operation software, the start date displayed for the validation wheel is the date on which the wheel was calibrated; not the date it was installed.

Recommendation: Use the validation wheel installation date to determine when to re-qualify the validation wheel. That date is noted in the Validation Wheel Standard booklet provided at installation.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in January 2000. Tracking number: V&V01657.

Why aren't my standards added to the method when I use the Build TQ Analyst Method command?

The Build TQ Analyst Method command provides two buttons for defining the method standards: a Browse button and a Select button. The Browse button sets the directory and path that will be used to add standards to the new method; the Select button allows you to specify a base name for adding a group of standards to the method by selecting a representative spectral data file.

Recommendation: Make sure the path points to the same location as the spectral data file you select as your representative standard.

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in October 2001. Tracking number: V&V02652.

RESULT 2.1 Service Pack C

Service Pack C has been added to RESULT v2.1 to correct a problem with OPC operation.

Resolved Issues

The OPC Server stops producing data after two or three hours.

After the OPC Server has been running for two to three hours, it stops producing data. This is confirmed by the fact that the Client shows Bad Data Values for all tags. Disconnecting and reconnecting to the OPC Server does not fix the problem. However after restarting the Client the communication is OK for another two to three hours.

History: Problem was reported in RESULT version 2.1B and was fixed in RESULT version 2.1C. Added to release notes in April 2006. Tracking number: CST07363.

Instrument communication problems are found after initializing the instrument .dst files.

During instrument setup, initializing the memories on the instrument causes occasional communication problems with the instrument.

History: Problem was reported in RESULT version 2.1B and early versions. Problem was fixed in RESULT version 2.1C. Added to release notes in April 2006.

RESULT 2.1 Service Pack B

Service Pack B has been added to RESULT v2.1 to correct a problem where external linearity standards (linearity standards not on the validation wheel) are not measured properly in ValPro. Other changes as outlined below have been added to correct critical problems.

New Features

Brief descriptions of the new feature in RESULT version 2.1B is provided below.

The Unscrambler Add-In module supports methods developed in version 9.2 of the Unscrambler.

When version 9.2 of the Unscrambler On-line Predictor and Classifier were released, it was not possible to open Unscrambler methods from those routines. It is now possible to open methods created in version 9.2 while continuing to support earlier versions of the On-line Predictor and Classifier.

History: Feature added to RESULT version 2.1B.

Resolved Issues

QC Compare method reports the incorrect class name from a Measure event.

The class number for a QC Compare method when accessed from RESULT software is found in the library. In older versions of RESULT if the library was created from a non-classification method, then the class number was not in the library. In older versions the class number could not be updated from TQ Analyst. If this combination of events occurred, then an incorrect class number and class name were reported. The fix is to read the class number from the method and not from the library. In that case there are no possible conflicts.

History: Problem was reported in RESULT version 1.3A and may have been present in earlier versions. Problem was fixed in RESULT version 2.1B. Added to release notes in February 2006.

The list of users who are allowed to use RESULT Operation software is lost.

About once every month or two on a few systems, when RESULT Operation is run, the list of users is lost. The only alternative is to reenter the set of users.

History: Problem was reported in RESULT version 1.3A and may have been present in earlier versions. Problem was fixed in RESULT version 2.1B. Added to release notes in September 2005.

When you run the ValPro Transmission module qualification using external standards or Integrating sphere qualification using external standards, the linearity test is likely to fail.

Rather than using the values assigned for the external linearity standards, the values for the validation wheel are being used. This causes the linearity test to report incorrect values.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1B. Added to release notes in September 2005.

The incorrect pressure value is reported when a spectrum collected on an Antaris IGS is measured in a workflow.

When a gas spectrum is collected on an Antaris IGS, the pressure value is saved in torr when it should be saved in hPa. When the spectrum is measured, the measurement assumes that the value is in hPa and therefore the incorrect answer is reported.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1B. Added to release notes in September 2005.

The ideal gas law correction of gas samples gives incorrect RESULTS.

The ideal gas law defines how changes in the temperature and pressure will affect how concentrations are reported. This correction was done backwards. That is, if the pressure value when the measurement is made is lower than the reference value, then the concentration should be increased to scale to the reference conditions. Instead in past versions, this would cause the concentration value to decrease.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1B. Added to release notes in September 2005.

Using the Request item to enter multiple classes does not work properly.

Using the Request item to enter multiple class values does not work properly. This feature is supposed to work with an automated loop of data collections to predict if classes match.

History: Problem occurred in RESULT version 2.1. Problem was fixed in RESULT version 2.1B. Added to release notes in September 2005.

Data collection fails when the autosampler is used to measure many reflectance samples.

Data collection on an Antaris with an autosampler sometimes fails during a multi-hour experiment.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1B. Added to release notes in September 2005.

RESULT 2.1 Service Pack A

Service Pack A has been added to RESULT v2.1 to correct a problem in setting up data collection parameters on an Antaris NIR spectrometer.

Resolved Issues

The number of ADC bits is indeterminate and defaults to 16 bits for an Antaris NIR spectrometer

The number of ADC bits is not set properly for an Antaris NIR data collection. Several data collection values are set incorrectly and therefore assume default values. This is caused by an incorrect initialization step in the communication between RESULT software and the optical bench.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1A. Added to release notes in January 2005.

Algorithm Verification fails in French or German

The Algorithm Verification workflow that is run from ValPro fails when the regional settings are set to French or German. This is a decimal point separator problem in a text file that is used for two of the algorithm tests.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1A. Added to release notes in February 2005.

The sample cup is spinning before the sample collect prompt is shown

If you have a workflow that performs a data collect with the sample cup spinning and there is a prompt before the sample is collected, then the sample cup starts spinning before the prompt is shown.

Comment: If you have selected Preview data collection in the operator prompt, then the sample cup will be spinning before the prompt is displayed. This is necessary in order to preview the appearance of the spectrum under actual data collection conditions_._

History: Problem occurred in Result version 2.0. Problem was fixed in Result version 2.1A. Added to

release notes in February 2005.

Cannot set up a series of categories to match for an autosampler carousel

Frequently you want to test a carousel load of samples to see if they belong to a particular class of compounds. However each sample in the carousel may belong to a different category. It is not possible to set up this experiment.

History: Problem occurred in all versions of RESULT. Problem was fixed in RESULT version 2.1A. Added to release notes in February 2005.

Test Sample, Test Background and Test Measure do not function for the autosampler or multiplexer

The Test Sample, Test Background and Test Measure menu commands in RESULT Operation produce an error when the collect is associated with an autosampler or with the multiplexer.

History: Problem occurred in earlier versions of RESULT. Problem was fixed in RESULT version 2.1A. Added to release notes in February 2005.

Upper left corner of RESULT Operation window displays spurious text during a long experiment

After an extended period of time running a workflow in RESULT Operation, the upper left corner of the Operation window displays spurious text.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1A. Added to release notes in February 2005.

Only first measure RESULT is returned by OPC

For a qualitative (classification) TQ Analyst method, only the first RESULT is output to OPC. Subsequent expected values are not output to OPC.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1A. Added to release notes in February 2005.

Autosampler no longer responds after the motor stalls

For certain situations if the autosampler motor stalls, the autosampler will continue to spin or it will no longer respond.

Comment: The problem that was fixed occurred when the autosampler was moving to the Home position.

Comment: After the stall is cleared, the autosampler performs a hardware command to find its zero position. If this step is stalled, then the motor will continue to run attempting to find its zero.

History: Problem occurred in RESULT version 2.0. Problem was fixed in RESULT version 2.1A. Added to release notes in February 2005.

Questions and Answers

Why does my sample cup spinner still start spinning before the data collection sample prompt is displayed?

Why does the integrating sphere flag open before the data collect sample prompt is displayed?

If you select to Preview data collection from the Operator Prompt dialog, then the sample cup spinner will start spinning before the prompt is shown and the integrating sphere flag will open before the prompt is shown. This is done so that the data collect can be previewed under actual data collection conditions.

Recommendation: If you do not select Preview data collection from the Operator Prompt dialog, then the operator prompt will appear before the sample cup starts spinning or before the integrating sphere opens.

History: Describes operation in RESULT versions 2.1 and corrects a problem that was seen in RESULT 2.0. Added to release notes in February 2005.

Known Issues

The list of users who may use RESULT Operation software occasionally is lost

About once every month or two on a few systems, when RESULT Operation is run, the list of users is lost. The only alternative is to reenter the set of users.

History: Problem was reported in RESULT version 1.3A and may have been present in earlier versions. Added to release notes in September 2005.

When you run the ValPro Transmission module qualification using external standards or Integrating sphere qualification using external standards, the linearity test is likely to fail.

Rather than using the values assigned for the external linearity standards, the values for the validation wheel are being used. This causes the linearity test to report incorrect values.

History: Problem occurred in RESULT version 2.0. Added to release notes in September 2005.

RESULT 2.1

New Features

Brief descriptions of the new features in RESULT version 2.1 are provided below. Since RESULT version 2.0 was not released for Antaris NIR, more new features that affect the near infrared product are listed under RESULT version 2.0.

Stop button for Start/Stop event always generates workflow error

When you press the Stop button produced by a Start/Stop event in a workflow created in RESULT 2.0, the software always generates a workflow error. In RESULT 2.1, a check box has been added to the Stop specification to allow the user to specify whether a workflow error should be generated when the Stop button is

pressed.

History: Feature added to RESULT version 2.1. Request documented as tracking number ENH06204.

Resolved Issues

Time stamp not initialized in RESULT

The time stamp for the OPC historical data interface is not initialized. As a RESULT, users cannot use the trend chart features in Iconic GraphWorx to view the component concentration data produced in RESULT software.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06104.

Display settings not saved in RESULT Data View

When using the RESULT Data View application, the software does not save the defined display settings for the displayed components.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1 which includes features to assign a display settings file to a sequence data set. Added to release notes in October 2004. Tracking number: V&V06105.

RESULT Data View saves data incorrectly

When using the Save Sequence As feature in the RESULT Data View application, the software saves the data incorrectly.

History: *This problem was reported in Result version 2.0; it was resolved in Result version 2.1. Added to release notes in October 2004. Tracking number: V&V06106(part 1)_._*

Component names in RESULT Data View are case sensitive

When using the Result Data View application, the comparison of default component names with current component names is case sensitive.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06106(part 4).

Date/time stamp in report heading shows incorrect time

When creating workflow reports in RESULT Integration software that include a Heading Item specification that is set up to add a date/time stamp (Current Date/Time) to the report heading, the software reports the time stamp incorrectly.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06107.

RESULT Data View cannot open sequence concentration file that is in text format

If you use Microsoft® Excel® to open a sequence concentration (*.cnc) file and then save the data as a text file, you cannot open the text file in the RESULT Data View application.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06108.

Collecting a large number of scans causes scans to be lost if the data collection buffer overflows

If you collect enough scans to cause the data collection buffer to overflow, the software saves the overflow but fails to use it when processing the data. This is not a problem if the number of scans is low enough that the data collection buffer does not overflow.

History: This problem was reported in RESULT version 1.3a, but was present in all previous versions; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06109.

Sequence data collection causes RESULT Operation to freeze

When running RESULT Operation, the “In Progress” status bar sometimes causes the software to lock up, especially during sequence data collection.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06110.

Autosampler Position setting automatically resets in RESULT Integration

When setting up a position autosampler event in a workflow in RESULT Integration, if you set Autosampler Position to Next Position In Sampling Sequence, reset to Prompt For Position Number and then select another event in the workflow, when you return to the position autosampler event, Autosampler Position is reset to Next Position In Sampling Sequence.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06111.

Add Spectrum Title setting in archive event causes spectrum archive to fail

When setting up an archive event to save spectral data in RESULT Integration, if you select Add Spectrum Title, the software adds the spectrum title to the file name but the title includes the date and time which includes a colon (“:”). The colon causes the archive event to fail because it is not a legal character for a Windows file name.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06112.

Single beam not allowed as simulation spectrum in RESULT Integration

When attaching a simulation spectrum to a workflow in RESULT Integration, the software does not allow you to use a single beam spectrum as a simulation sample.

History: This problem was reported in RESULT version 2.0 but has been present in older versions; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06114.

Changing Windows password causes error in RESULT Operation

After changing the password in Windows XP, when you attempt to start RESULT Operation, you get the message 'The dwFlags parameter is CRYPT_NEWKEYSET, but the key container already exists'.

History: This problem was reported in RESULT version 1.3a; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06041.

Collect/process/measure event sequence causes RESULT to quit when collecting standards

If a RESULT workflow contains a collect event that is positioned in a loop and the loop is followed by a process event (to compute a mean spectrum) and then a measure event (to measure the mean spectrum), the workflow causes RESULT to quit if you use the workflow to collect standards.

Comment: A Collect Standards action no longer causes Result to quit, but this type of workflow still cannot be used to collect standards. Collect Standards accesses the collect event attached to a specific measure event. However, in this case the measure event is attached to a process event instead of a collect event.

History: This problem was reported in Result version 2.0; it was resolved in Result version 2.1. Added to release notes in October 2004. Tracking number: V&V06167.

Preview Data Collect doesn't show a spectrum after software restart

If you restart the computer, start RESULT software and then run a workflow that contains a sequence or other data collection with a request event with the Preview Data Collect feature enabled, the preview window does not show a spectrum the first time you run the workflow.

History: This problem was reported in RESULT version 2.0; it was resolved in RESULT version 2.1. Added to release notes in October 2004. Tracking number: V&V06239.

Unable to add a Start/Stop event to workflows created in version 1.x of RESULT

If you open a workflow that was created in version 1.x of RESULT, you are unable to access the Start or Stop specification to configure the Start/Stop event.

History: This problem was reported in RESULT version 1.3a; it was resolved in RESULT version 2.1. Added to release notes in November 2004. Tracking number: V&V06244.

Known Issues

The list of users who may use RESULT Operation software occasionally is lost

About once every month or two on a few systems, when RESULT Operation is run, the list of users is lost. The only alternative is to reenter the set of users.

History: Problem was reported in RESULT version 1.3A and may have been present in earlier versions. Added to release notes in September 2005.

When you run the ValPro Transmission module qualification using external standards or Integrating sphere qualification using external standards, the linearity test is likely to fail.

Rather than using the values assigned for the external linearity standards, the values for the validation wheel are being used. This causes the linearity test to report incorrect values.

History: Problem occurred in RESULT version 2.0. Added to release notes in September 2005.

The number of ADC bits is indeterminate and defaults to 16 bits for an Antaris NIR spectrometer

The number of ADC bits is not set properly for an Antaris NIR data collection. Several data collection values are set incorrectly and therefore assume default values. This may make it difficult to attain the expected signal-to-noise on the optical bench.

History: Problem occurred in RESULT version 2.1. Added to release notes in January 2005.

Upper left corner of RESULT Operation window displays spurious text during a long experiment

After an extended period of time running a workflow in RESULT Operation, the upper left corner of the Operation window displays spurious text.

History: Problem occurred in RESULT version 2.0. Added to release notes in February 2005.

Algorithm Verification fails in French or German

The Algorithm Verification workflow that is run from ValPro fails when the regional settings are set to French or German. This is a decimal point separator problem in a text file that is used for two of the algorithm tests.

History: Problem occurred in RESULT version 2.0. Added to release notes in February 2005.

The sample cup is spinning before the sample collect prompt is shown

If you have a workflow that performs a data collect with the sample cup spinning and there is a prompt before the sample is collected, then the sample cup starts spinning before the prompt is shown.

History: Problem occurred in RESULT version 2.0. Added to release notes in February 2005.

RESULT 2.0

New Features

Brief descriptions of the new features in RESULT version 2.0 for both Antaris NIR and Antaris IGS are provided below. NOTE HOWEVER THAT RESULT version 2.0 WAS NOT RELEASED FOR ANTRAIIS NIR. Additional documentation for RESULT software is available in the documents folder (or the English\Documents folder) of your analyzer's Language Pack CD. These documents have the extension *.PDF and may be opened using Adobe Reader. See the Adobe® on-line help for information about using Adobe Reader.

Start / Stop Event

An event is added to allow a prompt before a set of workflow steps is performed. This event also allows a set of workflow steps to be stopped by the person using the workflow before each of the steps have been completed.

History: Feature added to RESULT version 2.0.

Report to Spectrum Event

This event allows information from workflow events to be added to the title or to the comments associated with the collected spectrum.

History: Feature added to RESULT version 2.0.

Report to OPC Event

This event allows information from workflow events to be reported by the RESULT OPC Server to OPC clients. This event is only present when the OPC Add-in is installed.

History: Feature added to RESULT version 2.0.

Run Sequence Event

This event allows you to collect, process and perform measurements on a series of spectra at regular intervals over a specified period of time. This event is only present when the Sequence Add-in is installed.

History: Feature added to RESULT version 2.0.

Collect Sequence Event

This event sets up the data collect used by a sequence event. The event can only be selected to be part of a sequence. This event is only present when the Sequence Add-in is installed.

History: Feature added to RESULT version 2.0.

RESULT Data View Application

This standalone program is installed by the Sequence Add-in. It allows for the post-analysis review and processing of the RESULTS of a sequence collect. This application is only present when the Sequence Add-in is installed.

History: Feature added to RESULT version 2.0.

RESULT OPC Test Client

This standalone program is useful to demonstrate the features of the RESULT OPC server. It may also be used to verify the information that is being provided by the server to OPC Clients. This application is only present when the RESULT OPC Test Client is installed is installed.

History: Feature added to RESULT version 2.0.

Specify input from a file in the Request Event

In addition to allowing the manual entry of prompted request information, this information may be read from a file. The file may be used to supply default values for the fields in which case the entries must be confirmed by the operator or the file may be used to configure the workflow so that no operator intervention is necessary.

History: Feature added to RESULT version 2.0.

Define bar code options in the Request Specification

Manual data entry of requested fields may be entered from a bar code. The field delimiter and the end of data option may be defined to optimize bar code input by the operator.

History: Feature added to RESULT version 2.0.

Read Request Event information from OPC

Request fields may be controlled and read from the OPC client. If set up in the client, this will automatically enter the request information. The OPC client can control whether operator confirmation of the request fields is required. This event is only present when the OPC Server Add-in is installed.

History: Feature added to RESULT version 2.0.

New background frequency options in the Collect Event

The three new options are Every 7 days, Every 30 days and No expiration.

History: Feature added to RESULT version 2.0.

Define TQ Analyst Classify Multiple Measurement Specification

Classification measurements can be performed against multiple TQ Analyst methods. The specification can be configured to classify against all methods or against a specific method that matches a text value.

History: Feature added to RESULT version 2.0.

Define Compare Text Check logical test specification in the Check Event

This specification will return a logical RESULT based on the comparison of two text string RESULTS.

History: Feature added to RESULT version 2.0.

Generate a text report from the Report Event

Add an option to the Report Event so that a text version of the HTML report may be created.

History: Feature added to RESULT version 2.0.

Two new report section specifications in the Report Specification

Sequence Component, to report the RESULTS for a particular component during a sequence run, and Sequence Summary, to report summary information about a sequence run, have been added to the list of possible sections that may be shown in a report. These specifications are only present when the Sequence Add-in is installed.

History: Feature added to RESULT version 2.0.

Add spectrum title to the file name in the Archive Event

The spectrum title, especially the title from a sampling sequence, may be appended to the file name for a spectrum or report that will be archived. The index is now a separate option from the date and time in the file name.

History: Feature added to RESULT version 2.0.

Sampling sequence file may be predefined in a Repeat Event

The information that is used in a sampling sequence is read from a file. It is now possible to predefine the file that will be used. The contents of the file will be automatically entered into the sampling sequence table. The workflow can be configured to require operator confirmation of the sampling information or proceed without operator intervention.

History: Feature added to RESULT version 2.0.

Add spectrum title to the file name in the Configure Standards command

The spectrum title, especially the title from a sampling sequence, may be appended to the file name for a standard spectrum that will be collected. The index is now a separate option from the date and time in the file name.

History: Feature added to RESULT version 2.0.

New Features for Antaris IGS

Brief descriptions of the new features in RESULT version 2.0 for the Antaris IGS are provided below. If you need more information, see the *Antaris User's Guide*. The current version is included as a portable document format (*.PDF) file named *Antaris User's Guide.pdf* on your RESULT language pack CD.

Configure Temperature/Pressure Event

This is an event used by the Antaris IGS to define how the temperature and pressure of the gas sample will be determined.

History: Feature added to RESULT version 2.0.

Add Gas Cell Sample and Background Specifications

For Antaris IGS, new sample and background specifications are available to define data collection settings for a gas cell sample.

History: Feature added to RESULT version 2.0.

Add Antaris IGS Validation Wheel Sample and Background Specifications

For Antaris IGS, new sample and background specifications are available to define data collection settings for the Antaris IGS validation wheel.

History: Feature added to RESULT version 2.0.

Quick Collect command may be run for Gas cell and Instrument paths for Antaris IGS

The Quick Collect command may be run for the Gas cell and Instrument paths on an Antaris IGS.

History: Feature added to RESULT version 2.0.

Show gas cell information is an option in Instrument Status

The Show gas cell option is added to the Report options list in the Instrument Status command that is available in RESULT Operation.

History: Feature added to RESULT version 2.0.

Resolved Issues

Operator input lost from reports

If the operator does not fill in a required field and then uses the mouse to fill in the field and presses the Accept key an error will appear. If the operator uses the mouse to fill in missing fields and not the tab key to advance through fields some entered values will not be properly recorded by the request event. If these fields are displayed in a report the wrong values may be reported.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04588.

Wrong reported values for full spectrum check

When you report the “Full spectrum check” warning for the Best Class Match, the values for “Full spectrum check” and “Full spectrum check value” are correct. However the values for the Second Best Class Match (and subsequent matches) are incorrect. They should be the same as the values for the best class match.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04564.

Autosampler reflectance simulation fails

When running a workflow for the Autosampler RS that uses an external background reference, the workflow will give an error when run in simulation mode. The error message that is displayed has no content.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03744.

No error message when save fails with illegal Standard titles

In Configure Standards, choose prompt for sample title and on the Save tab, choose to use the sample title. If a character that is illegal for use in Windows filenames such as the “:” character is entered into the title prompt, the file is not saved and there is no error message.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03769.

Forbidden characters allowed in filenames

If a file name is entered with a character that is illegal for use in Windows filenames, such as the “:” character, RESULT does not save the spectrum and does not report an error.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04041.

Quick collect problem with 2 collects, one background

In Quick Collect using the integrating sphere, set to collect at least 2 spectra, but with one background. The background and first spectrum collect fine. Before the second spectrum, the flag flips shut and the collection is unsuccessful. The error states that the interferogram peak cannot be found.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03755.

Border thickness setting is incorrect in export to text report

Regardless of the actual setting in the workflow, the border in a Report Item specification is always reported as 'Thick' when exporting a workflow as *.htm or *.txt

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03734.

Archiving spectra with prompt

If you attempt to archive a spectrum or report with "prompt for file name", there is no warning if you are overwriting a file. Also if a spectrum or report is archived as read only, a workflow error occurs and there is no opportunity to save the data as a different name.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03665.

Instrument status does not display information on MultiPro Autosampler installed

The Instrument Status report does not display information about the installation and version number of the MultiPro autosampler software option.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03431.

Measurement log – y axis units

If you are monitoring a peak location at 5402 cm⁻¹ and you set the y display limits to 5400 to 5404 cm⁻¹, you will see no numbers on the y axis. It appears that the space allowed for the y axis is not wide enough for the number of digits required.

Comment: The problem has been alleviated, but there are some restrictions. For numbers greater than 99, but less than 999, the smallest range of y axis values is 0.05. For numbers greater than 999, but less than 100,000, the smallest range of y axis values is 0.5.

History: This problem was reported in RESULT version 1.1; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V02807.

Standard file overwriting

When collecting standards, if you have chosen to select the spectral title as the file name, then you may overwrite a spectrum with the same name. The user is not given a warning that the file is overwritten.

Comment: A warning message was added in RESULT 2.0.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04453.

New Questions and Answers

Why can't I select optimize gain from the sample specification of my Multipro?

The Optimize Gain button on the sample specifications for the Autosampler – Tablet Transmission Module and for the Autosampler – SoftGel Transmission Module is grayed. This is done for a technical reason in the software.

Recommendation: The gain and screen setting may be determined by using the Quick Collect command. The Optimize Gain button on this dialog is not grayed and is available. Run the command and copy the gain and screen setting to the sample specifications.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V04445.

Why does my report look OK when I get workflow errors?

Consider a workflow where five samples are run in a loop. During sample 2 there is an air bubble that causes a workflow error that states “interferogram peak too large.” However in the report the RESULTS from sample 1 are used for sample 2. There is no indication in the report that there was a problem with the second sample. The RESULTS for sample 2 are incorrect.

Recommendation: Add error status to the report so that the report indicates whether the workflow was error free at the time the report was generated.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V03742.

Why do I get a DNS error sometimes?

At the end of a workflow the following error was reported: “Internet Explorer cannot open the Internet site file: C:{subject} Data\Images\report.htm. Operation aborted.” Clicking OK to this message generated the “Cannot find server or DNS error.”

Recommendation: RESULT software writes a temporary copy of the report to the file report.htm in the Images directory. This directory is typically C:{subject} Data\Images. The user must have write permission to this file in order to view reports as they are created by a RESULT workflow.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V04040.

Why can't I view the service log?

The operator is unable to view the contents of the service log.

Recommendation: In order to view any of the logs, the operator must have read access to the RESULT database (*.mdb) file.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03989.

Why do I have a problem predicting with a Pirouette measurement method?

Pirouette is open and then RESULT Integrator is opened. If you browse through a workflow with a Pirouette measure event, then you get a message that only one copy of Pirouette may be open at a time. RESULT Integration closes after the warning message.

Recommendation: This is a known feature of Pirouette. Close RESULT before running Pirouette and close Pirouette before running RESULT.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03535.

Why doesn't RESULT software does not recognize a blank password?

RESULT software honors the local security policy for blank passwords. If the local security policy is set to disable blank passwords, RESULT will not allow a user to login with a blank password even if that is the current setting for the user's password.

Recommendation: Use the Local Security Policy application in the Administrative Tools folder within control panel to set the Local Policies Security Options for Accounts: Limit local use of blank passwords to console login only to Disabled if you want to allow blank passwords..

History: Describes operation in RESULT version 1.0-3.0. Added to release notes in June 2003. Tracking number: V&V4356.

Questions and Answers from prior versions

Why do I get errors when I write to the RESULT database?

A RESULT user must have read/write privileges to the RESULT database file in order to properly add or view entries in the database.

Recommendation: Insure that all RESULT users have read/write privileges to the RESULT database. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

To check the file privileges using FAT32 file systems, right-click the database file in Windows Explorer. From the popup menu, select Properties. In the Properties dialog box, verify that the Read-Only check box is cleared.

On NTFS file systems, the file security properties are located on the Security tab, which some users may not be able to access. If your computer uses the NTFS file system, have your Windows administrator give you read/write privileges for the RESULT database folder and file.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03592.

Why doesn't the Configure System dialog box appear when I select Configure System from the Administrative menu in RESULT Operation?

A RESULT user must have read/write privileges to the RESULT database folder and file in order to view or change settings in the Configure System dialog box.

Recommendation: Have your Windows administrator give you read/write privileges for the RESULT database folder and file. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03593.

Why does my computer take a long time to start RESULT software?

You are operating a computer running the Windows NT operating system as a local workstation (network cable is unplugged), but it is configured for networking.

Recommendation: Configure the networking options on your computer according to the recommendations in *Installing Your Software*.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03594.

Why can't I measure spectra using a PLSplus/IQ method?

RESULT cannot access PLSplus/IQ method files that were saved as read-only.

Recommendation: Turn off the Read-Only property of your method file(s) and then rerun the workflow.

History: Describes operation in RESULT version 1.1. Added to release notes in October 2001. Tracking number: V&V02732.

Why can't I run my workflow after my verification workflow runs successfully?

A verification workflow must store a workflow status RESULT in the RESULT database. If your verification workflow does not store a passing workflow status RESULT, you will not be allowed to run the associated workflow.

Recommendation: At the end of your verification workflow, add a check event named "Workflow status" and link it to a logic specification defining the desired pass/fail condition. Make sure the check event has the Store Pass/Fail RESULT To Database check box selected and the logical test specification has the Logical Test Is Always False If Workflow Errors Have Been Detected check box selected. See "Check events" and "Logical test specifications" in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V02204.

Why isn't the Print option enabled when I right-click on a graphic image, such as a spectrum in a displayed report?

RESULT uses the same engine as Internet Explorer for displaying and printing reports. When you right-click on a graphic image, the software disables the Print option and enables menu items that are specific to graphic images.

Recommendation: To print a report displayed in RESULT software, right click on a portion of the report that doesn't include a graphic image. Then select a print option from the popup menu.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V01920.

How do I monitor unauthorized attempts to log on to RESULT?

RESULT software uses the event logging services of the Windows operating system to track unauthorized attempts to log on to RESULT.

Recommendation: To configure RESULT to track unauthorized attempts to log on or to digitally sign files, configure the Windows event logging service to log unauthorized logon attempts. The event logging service works the same way in RESULT as it does in Windows. For example, you can configure Windows to disable a user account if that user makes too many invalid attempts to log on. The account will be disabled if the user attempts to log on to Windows or RESULT software. See "Windows security features" in the "Software Administration" section of your *Antaris User's Guide* for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01603.

Why do my transmission spectra collected using the three-position sample tube holder have an offset baseline?

Baseline offsets occur when the operator uses different aperture settings to collect the sample and background spectra. When using the software's default settings to collect transmission spectra using the three-position sample tube holder, the software measures background spectra through the center opening in the sample tube holder which does not have an aperture. If you install an aperture in the sample holder position used to measure a liquid sample, the RESULTing spectrum will have an offset baseline.

Recommendation: If you want to measure a liquid sample using an aperture, install an aperture in both the front and back positions of the sample tube holder and then place the sample tube in one of those positions (front is easiest). Set the Sample Position list box on the sample specification associated with your collection event to match the location of the sample (Front Sample Compartment or Rear Sample Compartment). Set the Position list box on the associated background specification to the other position (Front Sample Compartment or Rear Sample Compartment) and then run the workflow. See the "Sample specifications" and "Background specifications" chapters in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information about the Sample Position and Background Position parameters.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01387.

Why do some spectral files cause a workflow error when I use them to run my workflow in simulation mode while others do not?

The Collect Simulation Spectrum dialog box (displayed by choosing New Sample For Simulation on the sample specification) allows you to create or select the spectra that will be used for simulated runs of a workflow. The Collect Associated Background Spectrum check box in the Collect Simulation Spectrum dialog box specifies whether a new simulation sample spectrum will include a corresponding background spectrum. This is true whether you collect the simulation sample or select an existing spectral file. If Collect Associated Background Spectrum is selected and you select a simulation spectrum that contains only sample data such as a Single Beam or Interferogram file (by choosing From File in the Collect Simulation Spectrum dialog), when you close the dialog box, the software will not add the spectrum to the Samples For Simulation list box on the sample specification.

Recommendation: If you want to run the workflow in simulation mode using a sample spectrum and its corresponding background spectrum, select a spectral file that contains both a sample and a background interferogram. Most spectral files contain both a sample and a background interferogram. Spectra that are collected with Data Format (located on the collection event) set to Interferogram or Single Beam contain only a sample interferogram.

If you want to run the workflow in simulation mode using an interferogram or single-beam spectrum (Data Format is set to Interferogram or Single Beam), clear the Collect Associated Background Spectrum check box before selecting the simulation spectrum.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01518.

When RESULT is configured to give me access to menus, why don't the menus appear in the RESULT Operation main window?

RESULT Operation does not provide proper access privileges to users when the computer or domain name contains a space. Microsoft strongly discourages using spaces when entering computer and domain names in their Windows operating system because Windows does not handle the space correctly in all situations. The Windows operating system presents a warning after a user enters a computer name that contains a space.

Recommendation: Remove the space from your computer or domain name in Windows and then restart the RESULT Operation application. You should also remove any spaces from the user names defined in RESULT Operation software.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01566.

Why don't displayed items remain expanded or collapsed when I switch between the workflow tree and the specification tree?

If you expand or collapse the items displayed in the workflow navigation frame in the RESULT Integration main window and then switch back and forth between the Workflow tab and the Details tab, the software does not retain the previous view. For example, if you select the Workflow tab, select Expand from the toolbar to expand the displayed workflow, switch to the Details tab, and then switch back to the Workflow tab (or vice versa), the view is no longer expanded. Choose Expand again to expand the displayed items.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V00690.

Why does my workflow produce a measurement error after I recreate my collection event?

Some collection and measurement event parameters are interdependent. If you delete a collection event whose RESULT spectrum is used by a subsequent measurement event, and then create another collection event, add its RESULT spectrum to the measurement event and rerun the workflow, the workflow may produce a measurement error due to inconsistent parameter settings between the collection event and the measurement event or its associated TQ Analyst method.

Recommendation: Use the workflow error text to determine which parameters are inconsistent with the measurement event and then change the collection event parameters to fix the error.

Tip: The workflow wizard will automatically make your collection parameters consistent if you create a measurement event that uses an existing TQ Analyst method when you run the wizard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01060.

After I update my TQ Analyst method, why don't the changes appear on the measurement specification?

If you change a TQ Analyst method that is linked to a measurement specification in the current workflow, the measurement specification won't reflect the change until you select another event or specification and then reselect the measurement specification. Let's say, for example, you are running RESULT Integration and you select a measurement specification that is linked to a TQ Analyst quantitative method and decide to add another component to that method. Then you start TQ Analyst software, add the component and save the method. When you return to RESULT Integration, the new component doesn't appear in the list of measurements on the measurement specification.

Recommendation: Select another item in the workflow navigation frame, such as the measurement event or another measurement specification, and then reselect the previous measurement specification.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01044.

Why does the software report a Fit value of 0.0 for all of my spectra?

The software reports a fit value of 0.0 whenever the spectral range for the collection event doesn't cover the full range of the standards in the associated TQ Analyst method (for example, when the spectral range on the sample specification is 4000 -10000 cm^{-1} and the method standards range from 3800 – 12000 cm^{-1}). If your spectral range is set appropriately, you might see a low fit value but you are unlikely to see a fit value of 0.0, which is the lowest possible fit value. When the spectral ranges of the samples and standards are inconsistent, the software reports a fit value of 0.0 even for spectra that are very similar.

Recommendation: To achieve an appropriate reading for the fit value, change the spectral range for the collection event (located on its associated sample specification) to cover the full range of the standards. In the example above, you would need to change the spectral range for the collection event to 3800-12000 cm^{-1} .

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01214.

What do the validation wheel dates in my instrument status report mean?

When you view Instrument Status under the Maintenance menu in RESULT Operation software, the start date displayed for the validation wheel is the date on which the wheel was calibrated; not the date it was installed.

Recommendation: Use the validation wheel installation date to determine when to re-qualify the validation wheel. That date is noted in the Validation Wheel Standard booklet provided at installation.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2000. Tracking number: V&V01657.

Why aren't my standards added to the method when I use the Build TQ Analyst Method command?

The Build TQ Analyst Method command provides two buttons for defining the method standards: a Browse button and a Select button. The Browse button sets the directory and path that will be used to add standards to the new method; the Select button allows you to specify a base name for adding a group of standards to the method by selecting a representative spectral data file.

Recommendation: Make sure the path points to the same location as the spectral data file you select as your representative standard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02652.

Known Issues

The list of users who may use RESULT Operation software occasionally is lost

About once every month or two on a few systems, when RESULT Operation is run, the list of users is lost. The only alternative is to reenter the set of users.

History: Problem was reported in RESULT version 1.3A and may have been present in earlier versions. Added to release notes in September 2005.

When you run the ValPro Transmission module qualification using external standards or Integrating sphere qualification using external standards, the linearity test is likely to fail.

Rather than using the values assigned for the external linearity standards, the values for the validation wheel are being used. This causes the linearity test to report incorrect values.

History: Problem occurred in RESULT version 2.0. Added to release notes in September 2005.

RESULT 1.3 Service Pack A

Service Pack A has been added to RESULT v1.3 to improve the algorithm for positioning the Antaris autosampler accessories, including the Autosampler RS and the MultiPro Autosampler.

Resolved Issues

Autosampler carousel positioning is too slow

If the Windows administrator uses a blank password to log on to Windows 2000 or Windows XP operating system software and then starts RESULT Operation software, RESULT Operation does not accept the blank password.

Comments: The default delay period was shortened to allow faster positioning of the autosampler carousels.

History: Problem occurred in RESULT version 1.3. Problem was fixed in RESULT version 1.3A. Added to release notes in June 2004.

Autosampler position error during counter-clockwise rotation

When the autosampler was moved counter-clockwise past the zero position a positioning error could occur..

History: Problem occurred in RESULT version 1.3. Problem was fixed in RESULT version 1.3A. Added to release notes in June 2004.

Autosampler positioning does not always follow shortest route

When the autosampler moves from one position to another it does not always rotate in the direction of the shortest distance to the new position

History: Problem occurred in RESULT version 1.3. Problem was fixed in RESULT version 1.3A. Added to release notes in June 2004.

RESULT 1.3

New Features

Brief descriptions of the new features in RESULT version 1.3 are provided below. If you need more information, see the *Antaris Multiplexer User's Guide*. The current version is included as a portable document format (*.PDF) file named *Antaris Multiplexer User's Guide.pdf* on your RESULT language pack CD.

Support for new hardware device

RESULT supports the Nicolet® Antaris® Multiplexer system. To operate the Multiplexer system, RESULT must include the corresponding add-in software option. See *Installing Your Software* for information about installing add-in options with RESULT. To learn how to operate the Multiplexer system from RESULT, see the *Antaris Multiplexer System User's Guide*.

History: Feature added to RESULT version 1.3.

New Multiplexer specifications

When the Multiplexer add-in option is installed, RESULT Integration includes the multiplexer specification, which defines the multiplexer module configuration (6 or 12 channels) and the status of each channel. You must specify this information when you set up a workflow. Multiplexer specifications are linked to position multiplexer events and sample specifications in workflows.

To add a multiplexer specification to a workflow, in the workflow navigation frame in RESULT Integration, choose the Details button. Click the General Specifications group and then choose the Add button on the toolbar. A list of specification templates is displayed. Select the multiplexer specification and then choose OK. See your *Antaris Multiplexer System User's Guide* for more information.

History: Feature added to RESULT version 1.3.

New Position Multiplexer event

When the Multiplexer add-in option for RESULT is installed, RESULT Integration includes a new position multiplexer event. A position multiplexer event instructs the workflow to direct the near-infrared light beam to a specified channel or to the internal reference for data collection or other purposes in a workflow. Position multiplexer events are typically placed at the beginning of a workflow and right before or after a collect event. These events produce a single RESULT containing the current multiplexer channel number. See the *Antaris Multiplexer System User's Guide* for more information.

History: Feature added to RESULT version 1.3.

New Position Multiplexer command

When the Multiplexer add-in option for RESULT is installed, RESULT includes a new Position Multiplexer command, which allows you to specify the multiplexer channel for sample or background collections done without using a workflow. The Position Multiplexer command is available in the Maintenance menu in RESULT Operation software and in the Tools menu in RESULT Integration software. See the *Antaris Multiplexer System User's Guide* for more information.

History: Feature added to RESULT version 1.3.

New sample specification to support the Multiplexer system

When the Multiplexer add-in option for RESULT is installed, RESULT Integration includes a new sample specification for use with multiplexer collect events in a workflow.

_Multiplexer fiber optic module sample specification _– Use this specification to set up data collection with any

fiber optic probe mounted on the Multiplexer module, including the Thermo Scientific SabIR diffuse-reflectance probe. See the *Antaris Multiplexer User's Guide* for more information.

History: Feature added to RESULT version 1.3.

New background specification to support the Multiplexer system

When the Multiplexer add-in option for RESULT is installed, RESULT Integration includes a new background specification for use with multiplexer collect events in a workflow.

_Multiplexer fiber optic module background specification _ – Use this specification to set up background data collection with any fiber optic probe mounted on the Multiplexer module, including the Thermo Scientific SabIR diffuse-reflectance probe. See the *Antaris Multiplexer User's Guide* for more information.

History: Feature added to RESULT version 1.3.

New Clear event

RESULT Integration includes a new Clear event, which allows you to delete background spectra or selected workflow RESULTS that are no longer needed while the workflow is running. The Clear event can be set up to delete the current background spectrum or spectra or to delete the RESULTS produced by the previous collect, measure, process, or report event, or any combination of those RESULTS. When the software encounters a Clear event, it deletes the specified items before continuing.

You can use the clear event to force the software to prompt for a new background spectrum before the current background has expired. The clear event is also useful for preventing a long workflow that produces lots of interim data from filling up the computer's internal memory, and for clearing important workflow RESULTS after they've been saved.

Note: If the Clear event occurs in a repeat loop, the software deletes the specified background or workflow RESULT produced in each iteration of the loop. If the Clear event occurs after a loop, the software deletes the specified items produced in all iterations of the loop, even if the event that produced the RESULTS specified that those RESULTS be retained.

History: Feature added to RESULT version 1.3.

Resolved Issues

Autosampler did not return to zero position

When an autosampler was sent to position zero, it did not take the autosampler offset into account. Therefore the signal measured at position zero was not optimum.

History: This problem occurred in RESULT version 1.2; it was resolved in RESULT version 1.3. Added to release notes in June 2003.

The “between dates” and “before date” audit trail queries gave no RESULTS

When the “between dates” and “before date” Date Options were selected in the Log settings dialog box, no action was taken in the report. When the query was made to the data base, no entries were found

History: This problem occurred in RESULT version 1.2; it was resolved in RESULT version 1.3. Added to release notes in June 2003. Tracking number: V&V03795.

Improved Issues

The Align Instrument feature now handles cases of severe misalignment

The Align Instrument command in the Maintenance menu of RESULT Operation software failed when the instrument was severely out of alignment (i.e., when the endplate positions were bad). The normal workaround for this type of problem was to reset the servo mechanism. However, in this case, it was also necessary to perform the laser alignment step.

History: This problem occurred in RESULT version 1.2; it was resolved in RESULT version 1.3. Added to release notes in June 2003.

Each new workflow now requires a new background spectrum

Workflows set up to collect backgrounds infrequently sometimes continued using the background from a previous workflow instead of collecting a new background. RESULT now requires each workflow to collect a new background.

History: This problem occurred in RESULT version 1.2; it was resolved in RESULT version 1.3. Added to release notes in June 2003.

Question and Answers New in June 2004 Release Notes

Why can't I select optimize gain from the sample specification of my Multipro?

The Optimize Gain button on the sample specifications for the Autosampler – Tablet Transmission Module and for the Autosampler – SoftGel Transmission Module is grayed. This is done for a technical reason in the software.

Recommendation: The gain and screen setting may be determined by using the Quick Collect command. The Optimize Gain button on this dialog is not grayed and is available. Run the command and copy the gain and screen setting to the sample specifications.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V04445.

Why does my report look OK when I get workflow errors?

Consider a workflow where five samples are run in a loop. During sample 2 there is an air bubble that causes a workflow error that states "interferogram peak too large." However in the report the RESULTS from sample 1 are used for sample 2. There is no indication in the report that there was a problem with the second sample. The RESULTS for sample 2 are incorrect.

Recommendation: Add error status to the report so that the report indicates whether the workflow was error free at the time the report was generated.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V03742.

Why do I get a DNS error sometimes?

At the end of a workflow the following error was reported: “Internet Explorer cannot open the Internet site file: C:{subject} Data\Images\report.htm. Operation aborted.” Clicking OK to this message generated the “Cannot find server or DNS error.”

Recommendation: RESULT software writes a temporary copy of the report to the file report.htm in the Images directory. This directory is typically C:{subject} Data\Images. The user must have write permission to this file in order to view reports as they are created by a RESULT workflow.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V04040.

Why can't I view the service log?

The operator is unable to view the contents of the service log.

Recommendation: In order to view any of the logs, the operator must have read access to the RESULT database (*.mdb) file.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03989.

Why do I have a problem predicting with a Pirouette measurement method?

Pirouette is open and then RESULT Integrator is opened. If you browse through a workflow with a Pirouette measure event, then you get a message that only one copy of Pirouette may be open at a time. RESULT Integration closes after the warning message.

Recommendation: This is a known feature of Pirouette. Close RESULT before running Pirouette and close Pirouette before running RESULT.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03535.

Questions and Answers

Why do I get errors when I write to the RESULT database?

A RESULT user must have read/write privileges to the RESULT database file in order to properly add or view entries in the database.

Recommendation: Insure that all RESULT users have read/write privileges to the RESULT database. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

To check the file privileges using FAT32 file systems, right-click the database file in Windows Explorer. From the popup menu, select Properties. In the Properties dialog box, verify that the Read-Only check box is cleared.

On NTFS file systems, the file security properties are located on the Security tab, which some users may not be able to access. If your computer uses the NTFS file system, have your Windows administrator give you read/write privileges for the RESULT database folder and file.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03592.

Why doesn't the Configure System dialog box appear when I select Configure System from the Administrative menu in RESULT Operation?

A RESULT user must have read/write privileges to the RESULT database folder and file in order to view or change settings in the Configure System dialog box.

Recommendation: Have your Windows administrator give you read/write privileges for the RESULT database folder and file. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03593.

Why does my computer take a long time to start RESULT software?

You are operating a computer running the Windows NT operating system as a local workstation (network cable is unplugged), but it is configured for networking.

Recommendation: Configure the networking options on your computer according to the recommendations in *Installing Your Software*.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03594.

Why can't I measure spectra using a PLSplus/IQ method?

RESULT cannot access PLSplus/IQ method files that were saved as read-only.

Recommendation: Turn off the Read-Only property of your method file(s) and then rerun the workflow.

History: Describes operation in RESULT version 1.1. Added to release notes in October 2001. Tracking number: V&V02732.

Why can't I run my workflow after my verification workflow runs successfully?

A verification workflow must store a workflow status RESULT in the RESULT database. If your verification workflow does not store a passing workflow status RESULT, you will not be allowed to run the associated workflow.

Recommendation: At the end of your verification workflow, add a check event named "Workflow status" and link it to a logic specification defining the desired pass/fail condition. Make sure the check event has the Store Pass/Fail RESULT To Database check box selected and the logical test specification has the Logical Test Is Always False If Workflow Errors Have Been Detected check box selected. See "Check events" and "Logical test specifications" in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V02204.

Why isn't the Print option enabled when I right-click on a graphic image, such as a spectrum in a displayed report?

RESULT uses the same engine as Internet Explorer for displaying and printing reports. When you right-click on a graphic image, the software disables the Print option and enables menu items that are specific to graphic images.

Recommendation: To print a report displayed in RESULT software, right click on a portion of the report that doesn't include a graphic image. Then select a print option from the popup menu.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V01920.

How do I monitor unauthorized attempts to log on to RESULT?

RESULT software uses the event logging services of the Windows operating system to track unauthorized attempts to log on to RESULT.

Recommendation: To configure RESULT to track unauthorized attempts to log on or to digitally sign files, configure the Windows event logging service to log unauthorized logon attempts. The event logging service works the same way in RESULT as it does in Windows. For example, you can configure Windows to disable a user account if that user makes too many invalid attempts to log on. The account will be disabled if the user attempts to log on to Windows or RESULT software. See "Windows security features" in the "Software Administration" section of your *Antaris User's Guide* for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01603.

Why do my transmission spectra collected using the three-position sample tube holder have an offset baseline?

Baseline offsets occur when the operator uses different aperture settings to collect the sample and background spectra. When using the software's default settings to collect transmission spectra using the three-position sample tube holder, the software measures background spectra through the center opening in the sample tube holder which does not have an aperture. If you install an aperture in the sample holder position used to measure a liquid sample, the RESULTing spectrum will have an offset baseline.

Recommendation: If you want to measure a liquid sample using an aperture, install an aperture in both the front and back positions of the sample tube holder and then place the sample tube in one of those positions (front is easiest). Set the Sample Position list box on the sample specification associated with your collection event to match the location of the sample (Front Sample Compartment or Rear Sample Compartment). Set the Position list box on the associated background specification to the other position (Front Sample Compartment or Rear Sample Compartment) and then run the workflow. See the "Sample specifications" and "Background specifications" chapters in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information about the Sample Position and Background Position parameters.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01387.

Why do some spectral files cause a workflow error when I use them to run my workflow in simulation mode while others do not?

The Collect Simulation Spectrum dialog box (displayed by choosing New Sample For Simulation on the sample specification) allows you to create or select the spectra that will be used for simulated runs of a workflow. The Collect Associated Background Spectrum check box in the Collect Simulation Spectrum dialog box specifies whether a new simulation sample spectrum will include a corresponding background spectrum. This is true whether you collect the simulation sample or select an existing spectral file. If Collect Associated Background Spectrum is selected and you select a simulation spectrum that contains only sample data such as a Single Beam or Interferogram file (by choosing From File in the Collect Simulation Spectrum dialog), when you close the dialog box, the software will not add the spectrum to the Samples For Simulation list box on the sample specification.

Recommendation: If you want to run the workflow in simulation mode using a sample spectrum and its corresponding background spectrum, select a spectral file that contains both a sample and a background interferogram. Most spectral files contain both a sample and a background interferogram. Spectra that are collected with Data Format (located on the collection event) set to Interferogram or Single Beam contain only a sample interferogram.

If you want to run the workflow in simulation mode using an interferogram or single-beam spectrum (Data Format is set to Interferogram or Single Beam), clear the Collect Associated Background Spectrum check box before selecting the simulation spectrum.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01518.

When RESULT is configured to give me access to menus, why don't the menus appear in the RESULT Operation main window?

RESULT Operation does not provide proper access privileges to users when the computer or domain name contains a space. Microsoft strongly discourages using spaces when entering computer and domain names in their Windows operating system because Windows does not handle the space correctly in all situations. The Windows operating system presents a warning after a user enters a computer name that contains a space.

Recommendation: Remove the space from your computer or domain name in Windows and then restart the RESULT Operation application. You should also remove any spaces from the user names defined in RESULT Operation software.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01566.

Why don't displayed items remain expanded or collapsed when I switch between the workflow tree and the specification tree?

If you expand or collapse the items displayed in the workflow navigation frame in the RESULT Integration main window and then switch back and forth between the Workflow tab and the Details tab, the software does not retain the previous view. For example, if you select the Workflow tab, select Expand from the toolbar to expand the displayed workflow, switch to the Details tab, and then switch back to the Workflow tab (or vice versa), the view is no longer expanded. Choose Expand again to expand the displayed items.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V00690.

Why does my workflow produce a measurement error after I recreate my collection event?

Some collection and measurement event parameters are interdependent. If you delete a collection event whose RESULT spectrum is used by a subsequent measurement event, and then create another collection event, add its RESULT spectrum to the measurement event and rerun the workflow, the workflow may produce a measurement error due to inconsistent parameter settings between the collection event and the measurement event or its associated TQ Analyst method.

Recommendation: Use the workflow error text to determine which parameters are inconsistent with the measurement event and then change the collection event parameters to fix the error.

Tip: The workflow wizard will automatically make your collection parameters consistent if you create a measurement event that uses an existing TQ Analyst method when you run the wizard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01060.

After I update my TQ Analyst method, why don't the changes appear on the measurement specification?

If you change a TQ Analyst method that is linked to a measurement specification in the current workflow, the measurement specification won't reflect the change until you select another event or specification and then reselect the measurement specification. Let's say, for example, you are running RESULT Integration and you select a measurement specification that is linked to a TQ Analyst quantitative method and decide to add another component to that method. Then you start TQ Analyst software, add the component and save the method. When you return to RESULT Integration, the new component doesn't appear in the list of measurements on the measurement specification.

Recommendation: Select another item in the workflow navigation frame, such as the measurement event or another measurement specification, and then reselect the previous measurement specification.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01044.

Why does the software report a Fit value of 0.0 for all of my spectra?

The software reports a fit value of 0.0 whenever the spectral range for the collection event doesn't cover the full range of the standards in the associated TQ Analyst method (for example, when the spectral range on the sample specification is 4000 -10000 cm^{-1} and the method standards range from 3800 – 12000 cm^{-1}). If your spectral range is set appropriately, you might see a low fit value but you are unlikely to see a fit value of 0.0, which is the lowest possible fit value. When the spectral ranges of the samples and standards are inconsistent, the software reports a fit value of 0.0 even for spectra that are very similar.

Recommendation: To achieve an appropriate reading for the fit value, change the spectral range for the collection event (located on its associated sample specification) to cover the full range of the standards. In the example above, you would need to change the spectral range for the collection event to 3800-12000 cm^{-1} .

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01214.

What do the validation wheel dates in my instrument status report mean?

When you view Instrument Status under the Maintenance menu in RESULT Operation software, the start date displayed for the validation wheel is the date on which the wheel was calibrated; not the date it was installed.

Recommendation: Use the validation wheel installation date to determine when to re-qualify the validation wheel. That date is noted in the Validation Wheel Standard booklet provided at installation.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2000. Tracking number: V&V01657.

Why aren't my standards added to the method when I use the Build TQ Analyst Method command?

The Build TQ Analyst Method command provides two buttons for defining the method standards: a Browse button and a Select button. The Browse button sets the directory and path that will be used to add standards to the new method; the Select button allows you to specify a base name for adding a group of standards to the method by selecting a representative spectral data file.

Recommendation: Make sure the path points to the same location as the spectral data file you select as your representative standard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02652.

Known Issues New in June 2004 Release Notes

Autosampler carousel positioning is too slow

If the Windows administrator uses a blank password to log on to Windows 2000 or Windows XP operating system software and then starts RESULT Operation software, RESULT Operation does not accept the blank password.

Comments: The default delay period was shortened to allow faster positioning of the autosampler carousels.

History: Problem occurred in RESULT version 1.3. Problem was fixed in RESULT version 1.3A. Added to release notes in June 2004.

Autosampler position error during counter-clockwise rotation

When the autosampler was moved counter-clockwise past the zero position a positioning error could occur..

History: Problem occurred in RESULT version 1.3. Problem was fixed in RESULT version 1.3A. Added to release notes in June 2004.

Autosampler positioning does not always follow shortest route

When the autosampler moves from one position to another it does not always rotate in the direction of the shortest distance to the new position

History: Problem occurred in RESULT version 1.3. Problem was fixed in RESULT version 1.3A. Added to release notes in June 2004.

Operator input lost from reports

If the operator does not fill in a required field and then uses the mouse to fill in the field and presses the Accept key an error will appear. If the operator uses the mouse to fill in missing fields and not the tab key to advance through fields some entered values will not be properly recorded by the request event. If these fields are displayed in a report the wrong values may be reported.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04588.

Wrong reported values for full spectrum check

When you report the “Full spectrum check” warning for the Best Class Match, the values for “Full spectrum check” and “Full spectrum check value” are correct. However the values for the Second Best Class Match (and subsequent matches) are incorrect. They should be the same as the values for the best class match.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04564.

Autosampler reflectance simulation fails

When running a workflow for the Autosampler RS that uses an external background reference, the workflow will give an error when run in simulation mode. The error message that is displayed has no content.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03744.

No error message when save fails with illegal Standard titles

In Configure Standards, choose prompt for sample title and on the Save tab, choose to use the sample title. If an character that is illegal for use in Windows filenames such as the “:” character is entered into the title prompt, the file is not saved and there is no error message.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03769.

Forbidden characters allowed in filenames

If a file name is entered with a character that is illegal for use in Windows filenames, such as the “:” character, RESULT does not save the spectrum and does not report an error.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04041.

Quick collect problem with 2 collects, one background

In Quick Collect using the integrating sphere, set to collect at least 2 spectra, but with one background. The background and first spectrum collect fine. Before the second spectrum, the flag flips shut and the collection is unsuccessful. The error states that the interferogram peak cannot be found.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03755.

Border thickness setting is incorrect in export to text report

Regardless of the actual setting in the workflow, the border in a Report Item specification is always reported as ‘Thick’ when exporting a workflow as *.htm or *.txt

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03734.

Archiving spectra with prompt

If you attempt to archive a spectrum or report with “prompt for file name”, there is no warning if you are overwriting a file. Also if a spectrum or report is archived as read only, a workflow error occurs and there is no opportunity to save the data as a different name.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03665.

Instrument status does not display information on MultiPro Autosampler installed

The Instrument Status report does not display information about the installation and version number of the MultiPro autosampler software option.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03431.

Measurement log – y axis units

If you are monitoring a peak location at 5402 cm⁻¹ and you set the y display limits to 5400 to 5404 cm⁻¹, you will see no numbers on the y axis. It appears that the space allowed for the y axis is not wide enough for the number of digits required.

Comment: The problem has been alleviated, but there are some restrictions. For numbers greater than 99, but less than 999, the smallest range of y axis values is 0.05. For numbers greater than 999, but less than 100,000, the smallest range of y axis values is 0.5.

History: This problem was reported in RESULT version 1.1; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V02807.

Standard file overwriting

When collecting standards, if you have chosen to select the spectral title as the file name, then you may overwrite a spectrum with the same name. The user is not given a warning that the file is overwritten.

Comment: A warning message was added in RESULT 2.0.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04453.

Known Issues

The list of users who may use RESULT Operation software occasionally is lost

About once every month or two on a few systems, when RESULT Operation is run, the list of users is lost. The only alternative is to reenter the set of users.

History: Problem was reported in RESULT version 1.3A and may have been present in earlier versions. Added to release notes in September 2005.

RESULT software does not recognize a blank password

If the Windows administrator uses a blank password to log on to Windows 2000 or Windows XP operating system software and then starts RESULT Operation software, RESULT Operation does not accept the blank password.

Recommendation: Make sure the Windows administrator uses a standard password to log on to Windows 2000 and Windows XP operating system software.

History: Problem occurred in RESULT version 1.3. Added to release notes in June 2003. Tracking number: V&V4356.

RESULT 1.2

New Features

Brief descriptions of the new features in RESULT version 1.2 are provided below. If you need more information, see the Product Updates section of your Antaris User's Guide. The current version of the Product Updates section is included as a portable document format (*.PDF) file named *Antaris Update* on your RESULT language pack CD.

Support for Windows XP

RESULT is now compatible with the Microsoft® Windows® XP operating system software.

History: Feature added to RESULT version 1.2.

Support for new hardware devices

RESULT supports two new hardware devices, the Sample Cup Spinner and MultiPro Autosampler accessories for Antaris® systems. To operate the MultiPro autosampler, RESULT must include the corresponding add-in software option. See *Installing Your Software* for information about installing add-in options with RESULT. To learn how to operate one of these hardware devices from RESULT, see the documentation that came with the device.

History: Feature added to RESULT version 1.2.

Updated autosampler specifications

When the MultiPro Autosampler or Autosampler RS add-in option is installed, RESULT Integration includes the autosampler specification. To add an autosampler specification to a workflow, in the workflow navigation frame in RESULT Integration, choose the Details button. Click the General Specifications group and then choose the Add button on the toolbar. A list of specification templates is displayed. Select the autosampler specification and then choose OK. See your autosampler user's manual for more information.

History: Feature added to RESULT version 1.2.

New sample specifications to support the MultiPro Autosampler

When the MultiPro Autosampler add-in option for RESULT is installed, RESULT Integration includes two new sample specifications for use with MultiPro Autosampler collect events in a workflow.

Autosampler tablet transmission module sample specification – Use this specification to set up transmission data collection with a tablet transmission module mounted on the MultiPro Autosampler. (This sample specification does not have a unique background specification; it is compatible with the Antaris tablet transmission module background specification.)

Autosampler softgel transmission module sample specification – Use this specification to set up transmission data collection with a softgel transmission module mounted on the MultiPro Autosampler. (This sample specification does not have a unique background specification; it is compatible with the Antaris softgel transmission module background specification.)

Use the Autosampler integrating sphere sample and background specifications to set up diffuse reflection sample and background collections using any autosampler and the Antaris integrating sphere sampling

module.

See the *MultiPro Autosampler* user's manual for more information.

History: Feature added to RESULT version 1.2.

Sample Cup Spinner list box added to integrating sphere sample specification

The integrating sphere sample specification in RESULT Integration includes a Sample Cup Spinner list box for setting up data collection with the Sample Cup Spinner accessory for Antaris systems. See the *Sample Cup Spinner* user's manual for more information.

History: Feature added to RESULT version 1.2.

Compatible with Pirouette® method development software

RESULT is compatible with Pirouette® version 3.04 method development software from InfoMetrix®, Inc. See “Using Third-Party Methods with RESULT” in your *Antaris Update* for more information.

History: Feature added to RESULT version 1.2.

New workflow status indicator in RESULT Operation

RESULT Operation now provides information about the status of the Antaris system. The status indicator is a green bar that appears at the top left corner of the RESULT Operation main window. When a workflow or other process is selected and running, the status indicator reads “In progress.” After the workflow or other process is completed, the status indicator disappears.

History: Feature added to RESULT version 1.2.

New workflow events in RESULT Integration

The Add button on the RESULT Integration toolbar now offers two new events: process events and run exe events. Run exe events allow you to run an executable program from a RESULT workflow. See “Run Exe Events” in your *Antaris Update* for more information.

In workflows that produce multiple spectra from a single collect event, such as the spectra collected from an autosampler, a process event allows you to use the collection RESULTS to calculate a mean spectrum, a variance spectrum, or a subtraction spectrum. You can also calculate a subtraction RESULT from the spectra generated by two different collect events. See “Process Events” in your *Antaris Update* for details.

History: Feature added to RESULT version 1.2.

Former “set position” event renamed “position autosampler”

In RESULT Integration, the set position event was renamed Position Autosampler and features were added to accommodate a variety of autosamplers and sampling stations. See “Position Autosampler Events” in your *Antaris Update* for more information.

History: Feature added to RESULT version 1.2.

New sampling sequence feature in repeat events and Configure Standards dialog box

Repeat events added to workflows in RESULT Integration can now be configured to prompt the operator to enter a sampling sequence at run time. This is useful for running an autosampler or for running a series of samples manually without requiring the operator to enter information about each sample. You can also specify a sampling sequence for collecting standards.

The sampling sequence must specify a sample name and identification (ID) number, or position number if using an autosampler, for each sample. When collecting standards, the component concentrations (or class index number) should also be included. The information may be entered manually or imported from a text file. See “Using a sampling sequence with RESULT Software” in your *Antaris Update* for more information.

History: Feature added to RESULT version 1.2.

New file naming options for archiving data

Events that allow archiving of data in RESULT Integration now provide options for naming files with user-specified sample titles or a user-specified base name and a date stamp in addition to a globally unique identifier (GUID). The date stamp includes the current month, day, time and year in GMT (Greenwich Mean Time) format plus a three-digit index number. See “New File Naming Options for Archive Events” in your *Antaris Update* for details and examples.

History: Feature added to RESULT version 1.2.

New “Show Spectra” feature in Run Time Test window

When running workflows in RESULT Integration, the software allows you to view the spectral data or the sample report during data collection. (Previous versions of RESULT showed only the sample report.) See “Viewing collected spectra while running workflows in RESULT Integration” in your *Antaris Update* for more information.

History: Feature added to RESULT version 1.2.

Redefined Configure Standards dialog box

The Configure Standards dialog box in RESULT Integration was updated to accommodate the collection of multiple standards using an autosampler. To display the dialog box, open the Tools menu and then choose Configure Standards. See “Configure Standards dialog box” in your *Antaris Update* for details.

History: Feature added to RESULT version 1.2.

New Import Standards feature in Build TQ Analyst Method dialog box

The Build TQ Analyst Method dialog box in RESULT Integration was updated to allow the user to easily create a TQ Analyst quantitative method that contains selected standards directly from RESULT Integration software. To display the dialog box, open the Tools menu and then choose Build TQ Analyst Method. See “Building a TQ Analyst method with imported standards” in your *Antaris Update* for more information.

History: Feature added to RESULT version 1.2.

Former “Save” features renamed “Save As”

In RESULT Integration, the Save Workflow command in the File menu was renamed Save As Workflow. The Save button on the toolbar was also changed to Save As. The new names are more consistent with the behavior of these features.

History: Feature added to RESULT version 1.2.

Changed a measurement RESULT for QC Compare methods

When setting up a workflow that collects and measures a spectrum based on a QC Compare Search TQ Analyst method, the measure event produces several data types including the match index number which can be used by other events in the workflow such as report events and check events. In previous versions of RESULT, the match index provided the index number of the *library spectrum* that best matched the spectrum that was measured. RESULT now reports the match index as the index number of the *class* that best matches the measured spectrum.

History: Feature added to RESULT version 1.2.

Resolved Issues

Problem with background frequency setting in RESULT Operation

When you specify a background frequency of "Every hour" you collect one background and are never again requested to collect another background. This only is a problem in RESULT Operation software. (Also if you set "Every 4 hours", you are asked for a new background every one hour.)

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in September 2002. Tracking number: V&V03631.

Could not add classes to a TQ Analyst method after using the method in RESULT

After creating a TQ Analyst qualitative (classification) method, linking the method to a workflow in RESULT Integration software and running the workflow, if you then opened the method in TQ Analyst, added classes, saved the method and then ran the workflow, RESULT failed to recognize the additional classes.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V02817.

Could not report both the match value and name of the best matched class in a summary table

If a workflow that was linked to a qualitative (classification) method was set up to report both the match value and name of the best matched class in a summary table, RESULT reported one or the other but not both. The reported item was the attribute that was listed first in the workflow measurement specification. Any item that appeared second or third in the list of attributes was not reported.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in September 2002. Tracking number: V&V02889.

Previous archive log report was not cleared in RESULT Operation

After querying the RESULT database for archived items in RESULT Operation software, if you then queried for a subset of the original list and the subset produced no entries, RESULT did not display the new list of items but instead retained the list from the first query.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V03090.

Could not set up a Perform If operation based on best matched class

When setting up a workflow that is linked to a qualitative (classification) method in RESULT Integration software, it was not possible to create a Perform If event with the logic dependent upon the best matched class. RESULT now provides a Match Index data type for all measure events linked to a classification method. The Match Index gives the index number of the class that best matches the measured spectrum.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: ENH03188.

The x-axis limits displayed in a sample report were incorrect when the report included two spectra that had different x-axis limits

If a workflow set up a sample report that included two spectra that had different x-axis limits such as a transmission spectrum collected with a tablet analyzer module and a diffuse-reflection spectrum collected with the integrating sphere module and used the default x-axis limits, the software used the x-axis limits of the first spectrum to set up the display and then overlaid the second spectrum using the same X-axis limits. This changed the locations of the peaks in the second spectrum. RESULT still uses the x-axis limits of the first spectrum to set up the display and then overlays the second spectrum, but it places the second spectrum in its proper location on the x-axis.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V03326.

The button that opens the door to the Antaris transmission module did not respond after a workflow was stopped in RESULT Operation

When running a workflow in RESULT Operation, if the operator interrupted the workflow by choosing the Stop button in the software, the button to open the transmission module door on the front of the Antaris instrument no longer worked. The operator had to turn the power switch for the instrument off and back on before the button would operate.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V03499.

The Build TQ Analyst Method command in RESULT Integration saved the method files in the wrong location

If you used the Build TQ Analyst Method command in RESULT Integration software to create an analytical method, the software saved the method files using the path for storing workflows and methods specified in RESULT Operation rather than the path for storing workflows and method specified in RESULT Integration.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V03549.

RESULT failed to copy certain concentration values into TQ Analyst

After using RESULT software to collect standards for a quantitative method, if you imported the standards into TQ Analyst, any component concentration values greater than 1000 that were entered in RESULT were not copied to TQ Analyst.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V03596.

When the background specification in a workflow was set to collect twice as many background scans as sample scans, RESULT also collected twice as many sample scans

When setting up a workflow in RESULT Integration, if you set Number Of Background Scans on the background specification to Twice As Many Scans As For Samples, the workflow collected twice as many background scans as sample scans but it also doubled the number of sample scans.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V03650.

Tablet analyzer workflows did not terminate when the incorrect style tablet analyzer was installed on the Antaris instrument

If you install the standard tablet analyzer on the Antaris instrument and then run a workflow that is set up for the softgel tablet analyzer, RESULT displays a dialog box with the message "Connect standard tablet analyzer to Antaris and then press Acknowledge." If you pressed the Acknowledge button on the instrument without installing the correct tablet analyzer, the workflow continued running. This was corrected so that the workflow will not run when the sample and background specifications do not match the tablet analyzer installed on the instrument.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V03692.

Improved Issues

RESULT required the operator to enter the expected class during each iteration of a loop even when the expected class never changed

When setting up a workflow in RESULT Integration software, if you created a loop that compared a classification RESULT to a particular class, the software required the operator to specify the expected class during each iteration of the loop. RESULT now allows you to define the expected class one time and use it for all the measurements in a loop. There are two ways to set this up. If the expected class is known and never changes, you can define it by setting Class Check on the Report tab in your TQ Analyst method. If the RESULT operator must define the expected class while running the workflow, create a loop that contains the collect and measure event sequence. Then place a request event before the loop. In the request event parameters, select the Prompt For Expected Class check box and then select the associated measure event in the Measure Event drop down list box. The measure event will generate a pass or fail RESULT that compares the measured class to the expected class. To access the comparison RESULT, for example to add that RESULT to a sample report, select the measure event when Data Type is set to Class Check.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: CST03283.

Resizing the archive log window cleared some information from the window

After querying the RESULT database for archived items in RESULT Operation software, RESULT displayed the Date/Time, File Name and Data Type columns in the archive log window. If you then resized the window to make it wider, the File Name and Data Type columns disappeared.

Improvement: RESULT displays all items correctly after the archive log window is resized.

History: This problem occurred in RESULT version 1.1a; it was improved in RESULT version 1.2. Added to

release notes in November 2002. Tracking number: V&V03099.

Removing the SabIR probe from the holster during background collection now causes RESULT to display an error message if the workflow is set up to collect background data from the internal Spectralon® reference

When running a workflow set up to collect data using the SabIR fiber optic probe, if the background specification is configured to collect background data using the probe's internal Spectralon reference, the probe must be placed in the holster for background collections. If you removed the probe from the holster while background collection was in progress, RESULT continued collecting the background data.

Improvement: RESULT stops collecting the background data and displays a message asking the operator to place the probe back in the holster.

History: This problem occurred in RESULT version 1.1a; it was resolved in RESULT version 1.2. Added to release notes in November 2002. Tracking number: V&V03640.

Questions and Answers New in June 2004 Release Notes

Why can't I select optimize gain from the sample specification of my Multipro?

The Optimize Gain button on the sample specifications for the Autosampler – Tablet Transmission Module and for the Autosampler – SoftGel Transmission Module is grayed. This is done for a technical reason in the software.

Recommendation: The gain and screen setting may be determined by using the Quick Collect command. The Optimize Gain button on this dialog is not grayed and is available. Run the command and copy the gain and screen setting to the sample specifications.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V04445.

Why does my report look OK when I get workflow errors?

Consider a workflow where five samples are run in a loop. During sample 2 there is an air bubble that causes a workflow error that states "interferogram peak too large." However in the report the RESULTS from sample 1 are used for sample 2. There is no indication in the report that there was a problem with the second sample. The RESULTS for sample 2 are incorrect.

Recommendation: Add error status to the report so that the report indicates whether the workflow was error free at the time the report was generated.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V03742.

Why do I get a DNS error sometimes?

At the end of a workflow the following error was reported: "Internet Explorer cannot open the Internet site file: C:{subject} Data\Images\report.htm. Operation aborted." Clicking OK to this message generated the "Cannot find server or DNS error."

Recommendation: RESULT software writes a temporary copy of the report to the file report.htm in the Images directory. This directory is typically C:{subject} Data\Images. The user must have write permission to this file in order to view reports as they are created by a RESULT workflow.

History: Describes operation in RESULT versions 1.2 – 2.0. Added to release notes in June 2004. Tracking number: V&V04040.

Why can't I view the service log?

The operator is unable to view the contents of the service log.

Recommendation: In order to view any of the logs, the operator must have read access to the RESULT database (*.mdb) file.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03989.

Why do I have a problem predicting with a Pirouette measurement method?

Pirouette is open and then RESULT Integrator is opened. If you browse through a workflow with a Pirouette measure event, then you get a message that only one copy of Pirouette may be open at a time. RESULT Integration closes after the warning message.

Recommendation: This is a known feature of Pirouette. Close RESULT before running Pirouette and close Pirouette before running RESULT.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03535.

Questions and Answers

Why do I get errors when I write to the RESULT database?

A RESULT user must have read/write privileges to the RESULT database file in order to properly add or view entries in the database.

Recommendation: Insure that all RESULT users have read/write privileges to the RESULT database. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

To check the file privileges using FAT32 file systems, right-click the database file in Windows Explorer. From the popup menu, select Properties. In the Properties dialog box, verify that the Read-Only check box is cleared.

On NTFS file systems, the file security properties are located on the Security tab, which some users may not be able to access. If your computer uses the NTFS file system, have your Windows administrator give you read/write privileges for the RESULT database folder and file.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03592.

Why doesn't the Configure System dialog box appear when I select Configure System from the Administrative menu in RESULT Operation?

A RESULT user must have read/write privileges to the RESULT database folder and file in order to view or change settings in the Configure System dialog box.

Recommendation: Have your Windows administrator give you read/write privileges for the RESULT database folder and file. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03593.

Why does my computer take a long time to start RESULT software?

You are operating a computer running the Windows NT operating system as a local workstation (network cable is unplugged), but it is configured for networking.

Recommendation: Configure the networking options on your computer according to the recommendations in *Installing Your Software*.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03594.

Why can't I measure spectra using a PLSplus/IQ method?

RESULT cannot access PLSplus/IQ method files that were saved as read-only.

Recommendation: Turn off the Read-Only property of your method file(s) and then rerun the workflow.

History: Describes operation in RESULT version 1.1. Added to release notes in October 2001. Tracking number: V&V02732.

Why can't I run my workflow after my verification workflow runs successfully?

A verification workflow must store a workflow status RESULT in the RESULT database. If your verification workflow does not store a passing workflow status RESULT, you will not be allowed to run the associated workflow.

Recommendation: At the end of your verification workflow, add a check event named "Workflow status" and link it to a logic specification defining the desired pass/fail condition. Make sure the check event has the Store Pass/Fail RESULT To Database check box selected and the logical test specification has the Logical Test Is Always False If Workflow Errors Have Been Detected check box selected. See "Check events" and "Logical test specifications" in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V02204.

Why isn't the Print option enabled when I right-click on a graphic image, such as a spectrum in a displayed report?

RESULT uses the same engine as Internet Explorer for displaying and printing reports. When you right-click on a graphic image, the software disables the Print option and enables menu items that are specific to graphic images.

Recommendation: To print a report displayed in RESULT software, right click on a portion of the report that doesn't include a graphic image. Then select a print option from the popup menu.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V01920.

How do I monitor unauthorized attempts to log on to RESULT?

RESULT software uses the event logging services of the Windows operating system to track unauthorized attempts to log on to RESULT.

Recommendation: To configure RESULT to track unauthorized attempts to log on or to digitally sign files, configure the Windows event logging service to log unauthorized logon attempts. The event logging service works the same way in RESULT as it does in Windows. For example, you can configure Windows to disable a user account if that user makes too many invalid attempts to log on. The account will be disabled if the user attempts to log on to Windows or RESULT software. See “Windows security features” in the “Software Administration” section of your *Antaris User’s Guide* for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01603.

Why do my transmission spectra collected using the three-position sample tube holder have an offset baseline?

Baseline offsets occur when the operator uses different aperture settings to collect the sample and background spectra. When using the software’s default settings to collect transmission spectra using the three-position sample tube holder, the software measures background spectra through the center opening in the sample tube holder which does not have an aperture. If you install an aperture in the sample holder position used to measure a liquid sample, the RESULTing spectrum will have an offset baseline.

Recommendation: If you want to measure a liquid sample using an aperture, install an aperture in both the front and back positions of the sample tube holder and then place the sample tube in one of those positions (front is easiest). Set the Sample Position list box on the sample specification associated with your collection event to match the location of the sample (Front Sample Compartment or Rear Sample Compartment). Set the Position list box on the associated background specification to the other position (Front Sample Compartment or Rear Sample Compartment) and then run the workflow. See the “Sample specifications” and “Background specifications” chapters in the “RESULT Integration Software” section of your *Antaris User’s Guide* for more information about the Sample Position and Background Position parameters.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01387.

Why do some spectral files cause a workflow error when I use them to run my workflow in simulation mode while others do not?

The Collect Simulation Spectrum dialog box (displayed by choosing New Sample For Simulation on the sample specification) allows you to create or select the spectra that will be used for simulated runs of a workflow. The Collect Associated Background Spectrum check box in the Collect Simulation Spectrum dialog box specifies whether a new simulation sample spectrum will include a corresponding background spectrum. This is true whether you collect the simulation sample or select an existing spectral file. If Collect Associated Background Spectrum is selected and you select a simulation spectrum that contains only sample data such as a Single Beam or Interferogram file (by choosing From File in the Collect Simulation Spectrum dialog), when you close the dialog box, the software will not add the spectrum to the Samples For Simulation list box on the sample specification.

Recommendation: If you want to run the workflow in simulation mode using a sample spectrum and its corresponding background spectrum, select a spectral file that contains both a sample and a background interferogram. Most spectral files contain both a sample and a background interferogram. Spectra that are collected with Data Format (located on the collection event) set to Interferogram or Single Beam contain only a sample interferogram.

If you want to run the workflow in simulation mode using an interferogram or single-beam spectrum (Data Format is set to Interferogram or Single Beam), clear the Collect Associated Background Spectrum check box before selecting the simulation spectrum.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01518.

When RESULT is configured to give me access to menus, why don't the menus appear in the RESULT Operation main window?

RESULT Operation does not provide proper access privileges to users when the computer or domain name contains a space. Microsoft strongly discourages using spaces when entering computer and domain names in their Windows operating system because Windows does not handle the space correctly in all situations. The Windows operating system presents a warning after a user enters a computer name that contains a space.

Recommendation: Remove the space from your computer or domain name in Windows and then restart the RESULT Operation application. You should also remove any spaces from the user names defined in RESULT Operation software.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01566.

Why don't displayed items remain expanded or collapsed when I switch between the workflow tree and the specification tree?

If you expand or collapse the items displayed in the workflow navigation frame in the RESULT Integration main window and then switch back and forth between the Workflow tab and the Details tab, the software does not retain the previous view. For example, if you select the Workflow tab, select Expand from the toolbar to expand the displayed workflow, switch to the Details tab, and then switch back to the Workflow tab (or vice versa), the view is no longer expanded. Choose Expand again to expand the displayed items.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V00690.

Why does my workflow produce a measurement error after I recreate my collection event?

Some collection and measurement event parameters are interdependent. If you delete a collection event whose RESULT spectrum is used by a subsequent measurement event, and then create another collection event, add its RESULT spectrum to the measurement event and rerun the workflow, the workflow may produce a measurement error due to inconsistent parameter settings between the collection event and the measurement event or its associated TQ Analyst method.

Recommendation: Use the workflow error text to determine which parameters are inconsistent with the measurement event and then change the collection event parameters to fix the error.

Tip: The workflow wizard will automatically make your collection parameters consistent if you create a measurement event that uses an existing TQ Analyst method when you run the wizard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01060.

After I update my TQ Analyst method, why don't the changes appear on the measurement specification?

If you change a TQ Analyst method that is linked to a measurement specification in the current workflow, the measurement specification won't reflect the change until you select another event or specification and then reselect the measurement specification. Let's say, for example, you are running RESULT Integration and you select a measurement specification that is linked to a TQ Analyst quantitative method and decide to add another component to that method. Then you start TQ Analyst software, add the component and save the method. When you return to RESULT Integration, the new component doesn't appear in the list of measurements on the measurement specification.

Recommendation: Select another item in the workflow navigation frame, such as the measurement event or another measurement specification, and then reselect the previous measurement specification.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01044.

Why does the software report a Fit value of 0.0 for all of my spectra?

The software reports a fit value of 0.0 whenever the spectral range for the collection event doesn't cover the full range of the standards in the associated TQ Analyst method (for example, when the spectral range on the sample specification is 4000 -10000 cm^{-1} and the method standards range from 3800 – 12000 cm^{-1}). If your spectral range is set appropriately, you might see a low fit value but you are unlikely to see a fit value of 0.0, which is the lowest possible fit value. When the spectral ranges of the samples and standards are inconsistent, the software reports a fit value of 0.0 even for spectra that are very similar.

Recommendation: To achieve an appropriate reading for the fit value, change the spectral range for the collection event (located on its associated sample specification) to cover the full range of the standards. In the example above, you would need to change the spectral range for the collection event to 3800-12000 cm^{-1} .

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01214.

What do the validation wheel dates in my instrument status report mean?

When you view Instrument Status under the Maintenance menu in RESULT Operation software, the start date displayed for the validation wheel is the date on which the wheel was calibrated; not the date it was installed.

Recommendation: Use the validation wheel installation date to determine when to re-qualify the validation wheel. That date is noted in the Validation Wheel Standard booklet provided at installation.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2000. Tracking number: V&V01657.

Why aren't my standards added to the method when I use the Build TQ Analyst Method command?

The Build TQ Analyst Method command provides two buttons for defining the method standards: a Browse button and a Select button. The Browse button sets the directory and path that will be used to add standards to the new method; the Select button allows you to specify a base name for adding a group of standards to the method by selecting a representative spectral data file.

Recommendation: Make sure the path points to the same location as the spectral data file you select as your representative standard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02652.

Known Issues New in June 2004 Release Notes

Operator input lost from reports

If the operator does not fill in a required field and then uses the mouse to fill in the field and presses the Accept key an error will appear. If the operator uses the mouse to fill in missing fields and not the tab key to advance through fields some entered values will not be properly recorded by the request event. If these fields are displayed in a report the wrong values may be reported.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04588.

Wrong reported values for full spectrum check

When you report the "Full spectrum check" warning for the Best Class Match, the values for "Full spectrum check" and "Full spectrum check value" are correct. However the values for the Second Best Class Match (and subsequent matches) are incorrect. They should be the same as the values for the best class match.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04564.

Autosampler reflectance simulation fails

When running a workflow for the Autosampler RS that uses an external background reference, the workflow will give an error when run in simulation mode. The error message that is displayed has no content.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03744.

No error message when save fails with illegal Standard titles

In Configure Standards, choose prompt for sample title and on the Save tab, choose to use the sample title. If an character that is illegal for use in Windows filenames such as the ":" character is entered into the title prompt, the file is not saved and there is no error message.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03769.

Forbidden characters allowed in filenames

If a file name is entered with a character that is illegal for use in Windows filenames, such as the ":" character, RESULT does not save the spectrum and does not report an error.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04041.

Quick collect problem with 2 collects, one background

In Quick Collect using the integrating sphere, set to collect at least 2 spectra, but with one background. The background and first spectrum collect fine. Before the second spectrum, the flag flips shut and the collection is unsuccessful. The error states that the interferogram peak cannot be found.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03755.

Border thickness setting is incorrect in export to text report

Regardless of the actual setting in the workflow, the border in a Report Item specification is always reported as 'Thick' when exporting a workflow as *.htm or *.txt

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03734.

Archiving spectra with prompt

If you attempt to archive a spectrum or report with "prompt for file name", there is no warning if you are overwriting a file. Also if a spectrum or report is archived as read only, a workflow error occurs and there is no opportunity to save the data as a different name.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03665.

Instrument status does not display information on MultiPro Autosampler installed

The Instrument Status report does not display information about the installation and version number of the MultiPro autosampler software option.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V03431.

Measurement log – y axis units

If you are monitoring a peak location at 5402 cm⁻¹ and you set the y display limits to 5400 to 5404 cm⁻¹, you will see no numbers on the y axis. It appears that the space allowed for the y axis is not wide enough for the number of digits required.

Comment: The problem has been alleviated, but there are some restrictions. For numbers greater than 99, but less than 999, the smallest range of y axis values is 0.05. For numbers greater than 999, but less than 100,000, the smallest range of y axis values is 0.5.

History: This problem was reported in RESULT version 1.1; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V02807.

Standard file overwriting

When collecting standards, if you have chosen to select the spectral title as the file name, then you may overwrite a spectrum with the same name. The user is not given a warning that the file is overwritten.

Comment: A warning message was added in RESULT 2.0.

History: This problem was reported in RESULT version 1.2; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V04453.

RESULT software does not recognize a blank password

If the cursor is left highlighting the measure event in a given workflow and Build TQ method is selected, the checkbox for automatically link new method to measure event is checked, the new method will not be linked to the measure event. The cursor must be left on a different event.

Recommendation: Leave the cursor on a an event other than the linked measure event, before selecting the Build TQ Method command from the menu.

History: Problem occurred in RESULT version 1.2-2.0. Added to release notes in June 2004. Tracking number: V&V3636.

Known Issues

RESULT software does not operate correctly when Windows 2000 standby mode is enabled

Many Windows 2000 computers support Advanced Power Management. These computers can be set up to enter standby mode after a period of inactivity in order to save power. The device driver used by RESULT software is not currently compatible with standby mode. If the computer enters standby mode when RESULT is running, or if it tries to communicate with the Antaris instrument after leaving standby mode, RESULT stops running.

Recommendation: Disable Standby Mode in the Power Options dialog box of Windows software for all RESULT users. To access the Power Options dialog box, right-click on the Windows desktop and then select Properties. The Display Properties dialog box appears. Select the Screen Saver tab. On the Screen Saver tab, choose the Power button. In the RESULTing dialog box, select the Power Schemes tab. On the Power Schemes tab, set the Turn Off Monitor list box to Never and the Turn Off Hard Disks list box to Never. Choose OK to close the dialog box. Choose OK again to close the Display Properties dialog box.

History: Problem occurred in RESULT version 1.1. Added to release notes in May 2002. Tracking number: V&V03591.

Tables don't print correctly when using Internet Explorer 5.5 and HP LaserJet 8000 DN printer driver

If you have Internet Explorer version 5.5 loaded on your computer, you may have problems printing tables in reports generated in RESULT software when using the HP LaserJet 8000 DN printer. The printer may fail to print a row in a table that crosses a page boundary.

Recommendation: Install Internet Explorer version 4.0 or 5.0.

History: Problem occurred in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01255. This problem was reported to Microsoft and is tracked by Microsoft incident SRZ000816000156.

New background not collected automatically after collection parameters are changed

In RESULT Integration software, when the user changes a setting in a collection event that has Background Frequency set to Once Every Hour or Once Every Four Hours and then either tests the workflow or collects a standard, the software does not collect a new background (or prompt the operator to do so) until the specified background frequency period has elapsed.

Recommendation: Set Background Frequency to Before Every Sample and then either test the workflow or collect a standard. This forces the software to collect a new background before collecting the first sample or standard. Then you are free to use other Background Frequency settings.

History: Problem occurred in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01434.

Sample prompt is missing when collecting simulation spectra for tablet analyzers

In RESULT Integration software, when the user collects a simulation spectrum for the tablet analyzer with the Collect Associated Background Spectrum check box selected, sample collection begins immediately following background collection. The software does not allow time for or prompt the user to insert the sample.

Recommendation: Use the tablet analyzer to collect and save the sample and background spectra that will be used for simulated runs of your workflow. Then display the sample specification and choose New in the Samples For Simulation group. In the RESULTing dialog box, use the From File button to add the sample and background files to your workflow.

History: Problem occurred in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02649.

RESULT 1.1

New Features

Brief descriptions of the new features in RESULT version 1.1 are provided below. If you need more information, see the Product Updates section of your Antaris User's Guide. The current version of the Product Updates section is included as a portable document format (*.PDF) file named *Antaris Updates* on your RESULT language pack CD.

Support for Windows 2000

RESULT is now compatible with the Microsoft® Windows® 2000 operating system software.

History: Feature added to RESULT version 1.1.

Back and Next commands added to RESULT Integration toolbar and Edit menu

We added Back and Next commands to the toolbar and Edit menu of RESULT Integration to help you easily navigate between screens in the open workflow. The Back command returns to the previous screen. After you use the Back command, the Next command becomes available in the software. Use the Next button to return to screen that was displayed the last time you pressed the Back button.

History: Feature added to RESULT version 1.1.

Reset command added to RESULT Integration toolbar and Edit menu

We added a Reset command to the toolbar and Edit menu of RESULT Integration. After editing the parameter settings for a workflow event or specification displayed in RESULT Integration software, you can use the Reset command to restore those parameters to the settings displayed when you first selected that workflow event or specification.

History: Feature added to RESULT version 1.1.

Export command added to RESULT Integration File menu

We added an Export command to the RESULT Integration File menu to allow you to export workflows or the simulation spectra attached to a workflow in various formats.

History: Feature added to RESULT version 1.1.

Optimize Gain button added to Quick Collect dialog box

We added the Optimize Gain feature to Quick Collect in RESULT Operation and RESULT Integration. Use Optimize Gain to see the Gain and attenuation wheel settings the software recommends for the current sample. Optimize Gain is most useful for tablets and gel-cap or softgel samples measured using the tablet analyzer sampling module.

History: Feature added to RESULT version 1.1.

RESULT version number added to instrument status report

The current version number for RESULT software now appears in the instrument status report. To view the instrument status report, choose Instrument Status from the Maintenance menu of RESULT Operation software.

History: Feature added to RESULT version 1.1.

RESULT add-in options added to instrument status report

Information about add-in options now appears in the instrument status report. For example, if you installed any add-in options for RESULT, such as the option for the Autosampler RS, those options will be listed in the instrument status report. To view the instrument status report, choose Instrument Status from the Maintenance menu of RESULT Operation software.

History: Feature added to RESULT version 1.1.

Antaris RTS System added to configuration options

You may now configure RESULT Integration and RESULT Operation software for the Antaris Reflection Transmission Sampling (RTS) system. The RTS option appears in the Model drop-down list in the RESULT Integration Options dialog box (choose Options from the Edit menu in the RESULT Integration main window) and in the RESULT Options dialog box in RESULT Operation (choose RESULT Options from the Administration menu in the RESULT Operation main window).

History: Feature added to RESULT version 1.1.

Option to back up configuration information for optional hardware devices added to Update Instrument Information dialog box

The Update Instrument Information dialog box in RESULT Operation now allows you to create backup files that contain configuration information for optional hardware devices, such as the Autosampler RS. To display the dialog box, open the Service menu in the RESULT Operation main window and then choose Update Instrument Information. The software saves hardware configuration files in the same directory where it stores software configuration files.

History: Feature added to RESULT version 1.1.

Instrument Check can now be used with all instrument models

The Instrument Check diagnostic now works with all Antaris instrument models (previously available on all models except the Antaris Fiber Optic and Solid Sampling systems). Instrument Check uses the main analyzer transmission detector to produce a series of spectra for diagnostic purposes. When compared to previous instrument check spectra, these tests are helpful in determining whether a problem exists with your instrument. The Instrument Check feature is available from the Maintenance menu in the RESULT Operation main window.

History: Feature added to RESULT version 1.1.

Unicode HTML added to Report Format options in RESULT Integration

The Archive event now provides two options for Report Format: standard HTML and Unicode HTML. Report Format defines the format for reports archived by a workflow. You may prefer the Unicode HTML format if your report contains text from double-byte character sets, such as Kanji.

History: Feature added to RESULT version 1.1.

Improved RESULT Align Instrument function

The Align Instrument function in RESULT Operation selected a good optical alignment for the Antaris FT-NIR analyzer but failed to find the optimum optical alignment for that system. We implemented a modified alignment routine that ensures the instrument always reaches the best possible optical alignment.

History: Improvement added to RESULT 1.1

Resolved Issues New in June 2004 Release Notes

Measurement log – y axis units

If you are monitoring a peak location at 5402 cm⁻¹ and you set the y display limits to 5400 to 5404 cm⁻¹, you will see no numbers on the y axis. It appears that the space allowed for the y axis is not wide enough for the number of digits required.

Comment: The problem has been alleviated, but there are some restrictions. For numbers greater than 99, but less than 999, the smallest range of y axis values is 0.05. For numbers greater than 999, but less than 100,000, the smallest range of y axis values is 0.5.

History: This problem was reported in RESULT version 1.1; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V02807.

Resolved Issues

Collection error occurred when using a custom spectral range with the computer locale set to use a comma as the decimal separator character

When a comma was used for the number separator instead of a period, (standard setting for European computer configurations), the software incorrectly translated the spectral range settings to numeric values. This caused a collection error in the workflow.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2001. Tracking number: V&V02566.

Holding down the Shift key while dropping a workflow item sometimes caused the dropped item to be inaccessible

If you held down the Shift key while you dragged and then dropped a workflow item onto the topmost item in the open workflow, when you ran the workflow, the dropped item would not execute and would disappear if you switched between the Details tab and the Workflow tab.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2001. Tracking number: V&V02389.

Peak Location measurement did not always produce a RESULT for all spectral resolutions

The peak location measurement requires three data points to determine the peak location. If you changed the resolution so that the specified region no longer contained three data points, the measurement did not produce a RESULT. RESULT now ensures that the selected regions contain at least three data points for all of the resolution settings used with the method.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2001. Tracking number: V&V01676.

QC Compare methods reported incorrect class names for the second, third, etc. best matches

If you set up a QC Compare method to report the class name for the second, third, etc. best matched spectrum, the software reported the correct class name for the best matched spectrum but not for the second, third, etc. best matches. The class names reported for the second, third, etc. best matches were the same as for the best match.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2001. Tracking number: V&V02340.

Spectra collected at 2 cm⁻¹ resolution contained channeling effects

The apodization function used by RESULT software contained an error that caused channeling in spectra produced from single-sided interferograms. RESULT is configured to collect single-sided interferograms only when the Resolution parameter on the sample specification is set to 2 cm⁻¹.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in January 2001. Tracking number: V&V01404.

Drag and drop feature of RESULT Integration sometimes placed item in wrong location

When arranging events in a workflow displayed in the workflow navigation frame of the RESULT Integration main window, if you dragged and dropped an item to a lower position in the same event group, the software sometimes placed the item one position below the specified location.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in January 2001. Tracking number: V&V01420.

Alignment sometimes failed after using the standard tablet analyzer module

If you used the standard tablet analyzer sampling module to collect a spectrum and then aligned the instrument in RESULT Operation software, the alignment sometimes failed. The failure occurred because the software did not always reset the velocity to the correct value for the main transmission detector before starting the

alignment procedure.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in January 2001. Tracking number: V&V01499.

Cycle Through Simulation Samples check box was unavailable when it should have been available

The Cycle Through Simulation Samples check box on the sample specification was unavailable in the software even though the Samples For Simulation drop-down list contained multiple simulation spectra.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in January 2001. Tracking number: V&V01518.

Digitally signing a file produced an error message

After the operator digitally signed a file, certain computers sometimes reported an error similar to the following:

"The Registry entry for the key container could not be opened and may not exist. Confirm software installation."

The error occurred whether the file was signed in RESULT Integration or RESULT Operation software.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in January 2001. Tracking number: V&V01574.

Running RESULT on a computer without ATL.DLL produced an error message

Version 1.0 of RESULT software depends on the file ATL.DLL. The file is typically present on most computers. If the file was not available, the software displayed an error message similar to the following:

"The dynamic link library ATL.DLL could not be found in the specified path."

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in January 2001. Tracking number: V&V01609.

Unassigned Alt key combinations caused RESULT Integration to stop responding

In RESULT Integration software, Alt key combinations that are associated with menu items and tool bar buttons worked correctly, but unassigned Alt key combinations, such as Alt+R and Alt+Q, sometimes caused the application to stop responding. The problem occurred only when the Alt key combination was used while the cursor was located in an edit field or check box in the display area of RESULT Integration. It did not occur when the cursor was in the menu, toolbar, or workflow navigation frame.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2000. Tracking number: V&V01375.

Data collection sometimes failed when using the integrating sphere with Gain set to 4 or 8

When using the Antaris integrating sphere sampling module with Gain set to 4 or 8 and a Background Frequency setting other than Before Every Sample, you could usually collect an initial spectrum but every subsequent collection either produced bad spectra or generated a workflow error that related to a peak location problem.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to

release notes in October 2000. Tracking number: V&V01386.

Optimize Gain sometimes suggested inappropriate attenuation setting for transmission module

When using the transmission sampling module, the Optimize Gain feature sometimes recommended the B Screen and Empty attenuation wheel settings, which are not appropriate for use with the transmission module.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2000. Tracking number: V&V01403.

Y-axis limits for spectra plotted in absorbance units did not accept negative numbers

The Y-axis limits for spectral plots in Absorbance units were restricted to positive numbers. This made it difficult to plot a 100% line in Absorbance using fixed Y-axis limits.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2000. Tracking number: V&V01436.

Manage Workflows dialog box allowed duplicate copies of the same workflow

In RESULT Operation software, the Manage Workflows dialog box allowed the user to add the same workflow multiple times and to select different options for each entry. When the user tried to select and then run the workflow by choosing Select Workflow, multiple copies of the workflow appeared in the selection list.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2000. Tracking number: V&V01437.

Page Up and Page Down keys sometimes didn't work

The Page Up and Page Down keys did not function when viewing work instructions using RESULT Operation software.

History: This problem occurred in RESULT version 1.0; it was resolved in RESULT version 1.1. Added to release notes in October 2000. Tracking number: V&V00699.

Improved Issues

Instrument Status Report shows a communication error

The Instrument Status Report sometimes indicates a communication error occurred. Communication errors occur for three reasons: the instrument is powered off, the cable that runs between the computer and the analyzer is disconnected, or the instrument is too busy to reply to a request. To correct the first two cases, reconnect the cable and turn on the instrument. The third case is temporary and will correct itself.

Recommendation: If the Instrument Status Report contains a communication error and the instrument is running with the cable properly connected, then rerun the Instrument Status Report. If the communication error is gone, it was due to a temporary time out caused by multiple simultaneous requests.

Improvement: We significantly reduced the frequency of communication errors.

History: This problem occurred in RESULT version 1.0; it was improved in RESULT version 1.1. Added to release notes in January 2001. Tracking number: V&V01533.

Questions and Answers new in June 2004 Release Notes

Why can't I view the service log?

The operator is unable to view the contents of the service log.

Recommendation: In order to view any of the logs, the operator must have read access to the RESULT database (*.mdb) file.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03989.

Why do I have a problem predicting with a Pirouette measurement method?

Pirouette is open and then RESULT Integrator is opened. If you browse through a workflow with a Pirouette measure event, then you get a message that only one copy of Pirouette may be open at a time. RESULT Integration closes after the warning message.

Recommendation: This is a known feature of Pirouette. Close RESULT before running Pirouette and close Pirouette before running RESULT.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03535.

Questions and Answers from previous updates

Why do I get errors when I write to the RESULT database?

A RESULT user must have read/write privileges to the RESULT database file in order to properly add or view entries in the database.

Recommendation: Insure that all RESULT users have read/write privileges to the RESULT database. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

To check the file privileges using FAT32 file systems, right-click the database file in Windows Explorer. From the popup menu, select Properties. In the Properties dialog box, verify that the Read-Only check box is cleared.

On NTFS file systems, the file security properties are located on the Security tab, which some users may not be able to access. If your computer uses the NTFS file system, have your Windows administrator give you read/write privileges for the RESULT database folder and file.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03592.

Why doesn't the Configure System dialog box appear when I select Configure System from the Administrative menu in RESULT Operation?

A RESULT user must have read/write privileges to the RESULT database folder and file in order to view or change settings in the Configure System dialog box.

Recommendation: Have your Windows administrator give you read/write privileges for the RESULT database folder and file. The file is typically located in c:{subject} Data\config and is named RESULT.mdb.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03593.

Why does my computer take a long time to start RESULT software?

You are operating a computer running the Windows NT operating system as a local workstation (network cable is unplugged), but it is configured for networking.

Recommendation: Configure the networking options on your computer according to the recommendations in *Installing Your Software*.

History: Describes operation in RESULT versions 1.0 – 1.1. Added to release notes in May 2002. Tracking number: V&V03594.

Why can't I measure spectra using a PLSplus/IQ method?

RESULT cannot access PLSplus/IQ method files that files were saved as Read-only.

Recommendation: Turn off the Read-only property of your method file(s) and then rerun the workflow.

History: Describes operation in RESULT version 1.1. Added to release notes in October 2001. Tracking number: V&V02732.

Why can't I run my workflow after my verification workflow runs successfully?

A verification workflow must store a workflow status RESULT to the database. If your verification workflow does not store a passing workflow status RESULT, you will not be allowed to run the associated workflow.

Recommendation: At the end of your verification workflow, add a Check event named "Workflow status" and link it to a Logic specification defining the desired pass/fail condition. Make sure the Check event has the Store Pass/Fail RESULT To Database check box selected and the Logical Test Specification has the Logical Test Is Always False If Workflow Errors Have Been Detected check box selected. See "Check events" and "Logical test specifications" in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V02204.

Why isn't the Print option enabled when I right click on a graphic image, such as a spectrum in a displayed report?

RESULT uses the same engine as Internet Explorer for displaying and printing reports. When you right click on a graphic image, the software disables the Print option and enables menu items that are specific to graphic images.

Recommendation: To print a report displayed in RESULT software, right click on a portion of the report that doesn't include a graphic image. Then select a print option from the popup menu.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V01920.

How do I monitor unauthorized attempts to log on to RESULT?

RESULT software uses the event logging services of the Windows operating system to track unauthorized attempts to log on to RESULT.

Recommendation: To configure RESULT to track unauthorized attempts to log on or to digitally sign files,

configure the Windows event logging service to log unauthorized logon attempts. The event logging service works the same way in RESULT as it does in Windows. For example, you can configure Windows to disable a user account if that user makes too many invalid attempts to log on. The account will be disabled if the user attempts to log on to Windows or RESULT software. See “Windows security features” in the “Software Administration” section of your Antaris User’s Guide for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01603.

Why do my transmission spectra collected using the three-position sample tube holder have an offset baseline?

Baseline offsets occur when the operator uses different aperture settings to collect the sample and background spectra. When using the software’s default settings to collect transmission spectra using the three-position sample tube holder, the software measures background spectra through the center opening in the sample tube holder which does not have an aperture. If you install an aperture in the sample holder position used to measure a liquid sample, the RESULTing spectrum will have an offset baseline.

Recommendation: If you want to measure a liquid sample using an aperture, install an aperture in both the front and back positions of the sample tube holder and then place the sample tube in one of those positions (front is easiest). Set the Sample Position list box on the sample specification associated with your collection event to match the location of the sample (Front Sample Compartment or Rear Sample Compartment). Set the Position list box on the associated background specification to the other position (Front Sample Compartment or Rear Sample Compartment) and then run the workflow. See the “Sample specifications” and “Background specifications” chapters in the “RESULT Integration Software” section of your *Antaris User’s Guide* for more information about the Sample Position and Background Position parameters.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01387.

Why do some spectral files cause a workflow error when I use them to run my workflow in simulation mode while others do not?

The Collect Simulation Spectrum dialog box (displayed by choosing New Sample For Simulation on the sample specification) allows you to create or select the spectra that will be used for simulated runs of a workflow. The Collect Associated Background Spectrum check box in the Collect Simulation Spectrum dialog box specifies whether a new simulation sample spectrum will include a corresponding background spectrum. This is true whether you collect the simulation sample or select an existing spectral file. If Collect Associated Background Spectrum is selected and you select a simulation spectrum that contains only sample data such as a Single Beam or Interferogram file (by choosing From File in the Collect Simulation Spectrum dialog), when you close the dialog box, the software will not add the spectrum to the Samples For Simulation list box on the sample specification.

Recommendation: If you want to run the workflow in simulation mode using a sample spectrum and its corresponding background spectrum, select a spectral file that contains both a sample and a background interferogram. Most spectral files contain both a sample and a background interferogram. Spectra that are collected with Data Format (located on the collection event) set to Interferogram or Single Beam contain only a sample interferogram.

If you want to run the workflow in simulation mode using an interferogram or single-beam spectrum (Data Format is set to Interferogram or Single Beam), clear the Collect Associated Background Spectrum check box before selecting the simulation spectrum.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01518.

When RESULT is configured to give me access to menus, why don't the menus appear in the RESULT Operation main window?

RESULT Operation does not provide proper access privileges to users when the computer or domain name contains a space. Microsoft strongly discourages using spaces when entering computer and domain names in their Windows operating system because Windows does not handle the space correctly in all situations. The Windows operating system presents a warning after a user enters a computer name that contains a space.

Recommendation: Remove the space from your computer or domain name in Windows and then restart the RESULT Operation application. You should also remove any spaces from the user names defined in RESULT Operation software.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01566.

Why don't displayed items remain expanded or collapsed when I switch between the workflow tree and the specification tree?

If you expand or collapse the items displayed in the workflow navigation frame in the RESULT Integration main window and then switch back and forth between the Workflow tab and the Details tab, the software does not retain the previous view. For example, if you select the Workflow tab, select Expand from the toolbar to expand the displayed workflow, switch to the Details tab, and then switch back to the Workflow tab (or vice versa), the view is no longer expanded. Choose Expand again to expand the displayed items.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V00690.

Why does my workflow produce a measurement error after I recreate my collection event?

Some collection and measurement event parameters are interdependent. If you delete a collection event whose RESULT spectrum is used by a subsequent measurement event, and then create another collection event, add its RESULT spectrum to the measurement event and rerun the workflow, the workflow may produce a measurement error due to inconsistent parameter settings between the collection event and the measurement event or its associated TQ Analyst method.

Recommendation: Use the workflow error text to determine which parameters are inconsistent with the measurement event and then change the collection event parameters to fix the error.

Tip: The workflow wizard will automatically make your collection parameters consistent if you create a measurement event that uses an existing TQ Analyst method when you run the wizard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01060.

After I update my TQ Analyst method, why don't the changes appear on the measurement specification?

If you change a TQ Analyst method that is linked to a measurement specification in the current workflow, the measurement specification won't reflect the change until you select another event or specification and then reselect the measurement specification. Let's say, for example, you are running RESULT Integration and you

select a measurement specification that is linked to a TQ Analyst quantitative method and decide to add another component to that method. Then you start TQ Analyst software, add the component and save the method. When you return to RESULT Integration, the new component doesn't appear in the list of measurements on the measurement specification.

Recommendation: Select another item in the workflow navigation frame, such as the measurement event or another measurement specification, and then reselect the previous measurement specification.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01044.

Why does the software report a Fit value of 0.0 for all of my spectra?

The software reports a fit value of 0.0 whenever the spectral range for the collection event doesn't cover the full range of the standards in the associated TQ Analyst method (for example, when the spectral range on the sample specification is 4000 -10000 cm^{-1} and the method standards range from 3800 – 12000 cm^{-1}). If your spectral range is set appropriately, you might see a low fit value but you are unlikely to see a fit value of 0.0, which is the lowest possible fit value. When the spectral ranges of the samples and standards are inconsistent, the software reports a fit value of 0.0 even for spectra that are very similar.

Recommendation: To achieve an appropriate reading for the fit value, change the spectral range for the collection event (located on its associated sample specification) to cover the full range of the standards. In the example above, you would need to change the spectral range for the collection event to 3800-12000 cm^{-1} .

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01214.

What do the validation wheel dates in my instrument status report mean?

When you view Instrument Status under the Maintenance menu in RESULT Operation software, the start date displayed for the validation wheel is the date on which the wheel was calibrated; not the date it was installed.

Recommendation: Use the validation wheel installation date to determine when to re-qualify the validation wheel. That date is noted in the Validation Wheel Standard booklet provided at installation.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2000. Tracking number: V&V01657.

Why aren't my standards added to the method when I use the Build TQ Analyst Method command?

The Build TQ Analyst Method command provides two buttons for defining the method standards: a Browse button and a Select button. The Browse button sets the directory and path that will be used to add standards to the new method; the Select button allows you to specify a base name for adding a group of standards to the method by selecting a representative spectral data file.

Recommendation: Make sure the path points to the same location as the spectral data file you select as your representative standard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02652.

Known Issues New in June 2004 Release Notes

Measurement log – y axis units

If you are monitoring a peak location at 5402 cm⁻¹ and you set the y display limits to 5400 to 5404 cm⁻¹, you will see no numbers on the y axis. It appears that the space allowed for the y axis is not wide enough for the number of digits required.

Comment: The problem has been alleviated, but there are some restrictions. For numbers greater than 99, but less than 999, the smallest range of y axis values is 0.05. For numbers greater than 999, but less than 100,000, the smallest range of y axis values is 0.5.

History: This problem was reported in RESULT version 1.1; it was resolved in RESULT version 2.0. Added to release notes in June 2004. Tracking number: V&V02807.

RESULT software does not recognize a blank password

If the cursor is left highlighting the measure event in a given workflow and Build TQ method is selected, the checkbox for automatically link new method to measure event is checked, the new method will not be linked to the measure event. The cursor must be left on a different event.

Recommendation: Leave the cursor on a an event other than the linked measure event, before selecting the Build TQ Method command from the menu.

History: Problem occurred in RESULT version 1.2-2.0. Added to release notes in June 2004. Tracking number: V&V3636.

Known Issues From Previous Updates

ACLS with mean centering gives incorrect RESULTS

An ACLS quant method that has the mean centering option on produces incorrect measurement RESULTS.

Recommendation: Modify the quant method so that either ACLS or mean centering is not required or upgrade to RESULT 1.2 or later.

History: Problem occurred in RESULT versions 1.0 and 1.1. Added to release notes in December 2003. Tracking number: V&V2957. Resolved in RESULT 1.2.

RESULT software does not operate correctly when Windows 2000 standby mode is enabled

Many Windows 2000 computers support Advanced Power Management. These computers can be set up to enter standby mode after a period of inactivity in order to save power. The device driver used by RESULT software is not currently compatible with standby mode. If the computer enters standby mode when RESULT is running, or if it tries to communicate with the Antaris instrument after leaving standby mode, RESULT stops running.

Recommendation: Disable Standby Mode in the Power Options dialog box of Windows software for all RESULT users. To access the Power Options dialog box, right-click on the Windows desktop and then select Properties. The Display Properties dialog box appears. Select the Screen Saver tab. On the Screen Saver tab, choose the Power button. In the RESULTing dialog box, select the Power Schemes tab. On the Power Schemes tab, set the Turn Off Monitor list box to Never and the Turn Off Hard Disks list box to Never. Choose OK to close the dialog box. Choose OK again to close the Display Properties dialog box.

History: Problem occurred in RESULT version 1.1. Added to release notes in May 2002. Tracking number: V&V03591.

Tables don't print correctly when using Internet Explorer 5.5 and HP LaserJet 8000 DN printer driver

If you have Internet Explorer version 5.5 loaded on your computer, you may have problems printing tables in reports generated in RESULT software when using the HP LaserJet 8000 DN printer. The printer may fail to print a row in a table that crosses a page boundary.

Recommendation: Install Internet Explorer version 4.0 or 5.0.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01255. This problem was reported to Microsoft and is tracked by Microsoft incident SRZ000816000156.

New background not collected automatically after collection parameters are changed

In RESULT Integration software, when the user changes a setting in a collection event that has Background Frequency set to Once Every Hour or Once Every Four Hours and then either tests the workflow or collects a standard, the software does not collect a new background (or prompt the operator to do so) until the specified background frequency period has elapsed.

Recommendation: Set Background Frequency to Before Every Sample and then either test the workflow or collect a standard. This forces the software to collect a new background before collecting the first sample or standard. Then you are free to use other Background Frequency settings.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01434.

Sample prompt is missing when collecting simulation spectra for tablet analyzers

In RESULT Integration software, when the user collects a simulation spectrum for the tablet analyzer with the Collect Associated Background Spectrum check box selected, sample collection begins immediately following background collection. The software does not allow time for or prompt the user to insert the sample.

Recommendation: Use the tablet analyzer to collect and save the sample and background spectra that will be used for simulated runs of your workflow. Then display the sample specification and choose New in the Samples For Simulation group. In the RESULTing dialog box, use the From File button to add the sample and background files to your workflow.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02649.

RESULT 1.0

Questions and Answers New in June 2004 Update

Questions and Answers new in June 2004 Release Notes

Why can't I view the service log?

The operator is unable to view the contents of the service log.

Recommendation: In order to view any of the logs, the operator must have read access to the RESULT database (*.mdb) file.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03989.

Why do I have a problem predicting with a Pirouette measurement method?

Pirouette is open and then RESULT Integrator is opened. If you browse through a workflow with a Pirouette measure event, then you get a message that only one copy of Pirouette may be open at a time. RESULT Integration closes after the warning message.

Recommendation: This is a known feature of Pirouette. Close RESULT before running Pirouette and close Pirouette before running RESULT.

History: Describes operation in RESULT versions 1.0 – 2.0. Added to release notes in June 2004. Tracking number: V&V03535.

Questions and Answers From previous updates

Why can't I run my workflow after my verification workflow runs successfully?

A verification workflow must store a workflow status RESULT to the database. If your verification workflow does not store a passing workflow status RESULT, you will not be allowed to run the associated workflow.

Recommendation: At the end of your verification workflow, add a Check event named "Workflow status" and link it to a Logic specification defining the desired pass/fail condition. Make sure the Check event has the Store Pass/Fail RESULT To Database check box selected and the Logical Test Specification has the Logical Test Is Always False If Workflow Errors Have Been Detected check box selected. See "Check events" and "Logical test specifications" in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V02204.

Why isn't the Print option enabled when I right click on a graphic image, such as a spectrum in a displayed report?

RESULT uses the same engine as Internet Explorer for displaying and printing reports. When you right click on a graphic image, the software disables the Print option and enables menu items that are specific to graphic images.

Recommendation: To print a report displayed in RESULT software, right click on a portion of the report that doesn't include a graphic image. Then select a print option from the popup menu.

History: Describes operation in RESULT version 1.0. Added to release notes in April 2001. Tracking number: V&V01920.

Why aren't my standards added to the method when I use the Build TQ Analyst Method command?

The Build TQ Analyst Method command provides two buttons for defining the method standards: a Browse button and a Select button. The Browse button sets the directory and path that will be used to add standards to the new method; the Select button allows you to specify a base name for adding a group of standards to the method by selecting a representative spectral data file.

Recommendation: Make sure the path points to the same location as the spectral data file you select as your representative standard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02652.

How do I monitor unauthorized attempts to log on to RESULT?

RESULT software uses the event logging services of the Windows operating system to track unauthorized attempts to log on to RESULT.

Recommendation: To configure RESULT to track unauthorized attempts to log on or to digitally sign files, configure the Windows event logging service to log unauthorized logon attempts. The event logging service works the same way in RESULT as it does in Windows. For example, you can configure Windows to disable a user account if that user makes too many invalid attempts to log on. The account will be disabled if the user attempts to log on to Windows or RESULT software. See "Windows security features" in the "Software Administration" section of your Antaris User's Guide for more information.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01603.

Why do my transmission spectra collected using the three-position sample tube holder have an offset baseline?

Baseline offsets occur when the operator uses different aperture settings to collect the sample and background spectra. When using the software's default settings to collect transmission spectra using the three-position sample tube holder, the software measures background spectra through the center opening in the sample tube holder which does not have an aperture. If you install an aperture in the sample holder position used to measure a liquid sample, the RESULTing spectrum will have an offset baseline.

Recommendation: If you want to measure a liquid sample using an aperture, install an aperture in both the front and back positions of the sample tube holder and then place the sample tube in one of those positions (front is easiest). Set the Sample Position list box on the sample specification associated with your collection event to match the location of the sample (Front Sample Compartment or Rear Sample Compartment). Set the Position list box on the associated background specification to the other position (Front Sample Compartment or Rear Sample Compartment) and then run the workflow. See the "Sample specifications" and "Background specifications" chapters in the "RESULT Integration Software" section of your *Antaris User's Guide* for more information about the Sample Position and Background Position parameters.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01387.

Why do some spectral files cause a workflow error when I use them to run my workflow in simulation mode while others do not?

The Collect Simulation Spectrum dialog box (displayed by choosing New Sample For Simulation on the sample specification) allows you to create or select the spectra that will be used for simulated runs of a workflow. The Collect Associated Background Spectrum check box in the Collect Simulation Spectrum dialog box specifies whether a new simulation sample spectrum will include a corresponding background spectrum. This is true whether you collect the simulation sample or select an existing spectral file. If Collect Associated Background Spectrum is selected and you select a simulation spectrum that contains only sample data such as a Single Beam or Interferogram file (by choosing From File in the Collect Simulation Spectrum dialog), when you close the dialog box, the software will not add the spectrum to the Samples For Simulation list box on the sample specification.

Recommendation: If you want to run the workflow in simulation mode using a sample spectrum and its corresponding background spectrum, select a spectral file that contains both a sample and a background interferogram. Most spectral files contain both a sample and a background interferogram. Spectra that are collected with Data Format (located on the collection event) set to Interferogram or Single Beam contain only a sample interferogram.

If you want to run the workflow in simulation mode using an interferogram or single-beam spectrum (Data Format is set to Interferogram or Single Beam), clear the Collect Associated Background Spectrum check box before selecting the simulation spectrum.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01518.

When RESULT is configured to give me access to menus, why don't the menus appear in the RESULT Operation main window?

RESULT Operation does not provide proper access privileges to users when the computer or domain name contains a space. Microsoft strongly discourages using spaces when entering computer and domain names in their Windows operating system because Windows does not handle the space correctly in all situations. The Windows operating system presents a warning after a user enters a computer name that contains a space.

Recommendation: Remove the space from your computer or domain name in Windows and then restart the RESULT Operation application. You should also remove any spaces from the user names defined in RESULT Operation software.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01566.

Why don't displayed items remain expanded or collapsed when I switch between the workflow tree and the specification tree?

If you expand or collapse the items displayed in the workflow navigation frame in the RESULT Integration main window and then switch back and forth between the Workflow tab and the Details tab, the software does not retain the previous view. For example, if you select the Workflow tab, select Expand from the toolbar to expand the displayed workflow, switch to the Details tab, and then switch back to the Workflow tab (or vice versa), the view is no longer expanded. Choose Expand again to expand the displayed items.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V00690.

Why does my workflow produce a measurement error after I recreate my collection event?

Some collection and measurement event parameters are interdependent. If you delete a collection event whose RESULT spectrum is used by a subsequent measurement event, and then create another collection event, add its RESULT spectrum to the measurement event and rerun the workflow, the workflow may produce a measurement error due to inconsistent parameter settings between the collection event and the measurement event or its associated TQ Analyst method.

Recommendation: Use the workflow error text to determine which parameters are inconsistent with the measurement event and then change the collection event parameters to fix the error.

Tip: The workflow wizard will automatically make your collection parameters consistent if you create a measurement event that uses an existing TQ Analyst method when you run the wizard.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01060.

After I update my TQ Analyst method, why don't the changes appear on the measurement specification?

If you change a TQ Analyst method that is linked to a measurement specification in the current workflow, the measurement specification won't reflect the change until you select another event or specification and then reselect the measurement specification. Let's say, for example, you are running RESULT Integration and you select a measurement specification that is linked to a TQ Analyst quantitative method and decide to add another component to that method. Then you start TQ Analyst software, add the component and save the method. When you return to RESULT Integration, the new component doesn't appear in the list of measurements on the measurement specification.

Recommendation: Select another item in the workflow navigation frame, such as the measurement event or another measurement specification, and then reselect the previous measurement specification.

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01044.

Why does the software report a Fit value of 0.0 for all of my spectra?

The software reports a fit value of 0.0 whenever the spectral range for the collection event doesn't cover the full range of the standards in the associated TQ Analyst method (for example, when the spectral range on the sample specification is 4000 -10000 cm^{-1} and the method standards range from 3800 – 12000 cm^{-1}). If your spectral range is set appropriately, you might see a low fit value but you are unlikely to see a fit value of 0.0, which is the lowest possible fit value. When the spectral ranges of the samples and standards are inconsistent, the software reports a fit value of 0.0 even for spectra that are very similar.

Recommendation: To achieve an appropriate reading for the fit value, change the spectral range for the collection event (located on its associated sample specification) to cover the full range of the standards. In the example above, you would need to change the spectral range for the collection event to 3800-12000 cm^{-1} .

History: Describes operation in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01214.

What do the validation wheel dates in my instrument status report mean?

When you view Instrument Status under the Maintenance menu in RESULT Operation software, the start date displayed for the validation wheel is the date on which the wheel was calibrated; not the date it was installed.

Recommendation: Use the validation wheel installation date to determine when to re-qualify the validation wheel. That date is noted in the Validation Wheel Standard booklet provided at installation.

History: Describes operation in RESULT version 1.0. Added to release notes in January 2000. Tracking number: V&V01657.

Known Issues New in June 2004 Release Notes

RESULT software does not recognize a blank password

If the cursor is left highlighting the measure event in a given workflow and Build TQ method is selected, the checkbox for automatically link new method to measure event is checked, the new method will not be linked to the measure event. The cursor must be left on a different event.

Recommendation: Leave the cursor on a an event other than the linked measure event, before selecting the Build TQ Method command from the menu.

History: Problem occurred in RESULT version 1.2-2.0. Added to release notes in June 2004. Tracking number: V&V3636.

Known Issues From Previous Updates

ACLS with mean centering gives incorrect RESULTS

An ACLS quant method that has the mean centering option on produces incorrect measurement RESULTS.

Recommendation: Modify the quant method so that either ACLS or mean centering is not required or upgrade to RESULT 1.2 or later.

History: Problem occurred in RESULT versions 1.0 and 1.1. Added to release notes in December 2003. Tracking number: V&V2957. Resolved in RESULT 1.2.

Collection error occurs when using a custom spectral range with the computer locale set to use a comma as the decimal separator character

When a comma is used for the number separator instead of a period, (standard setting for European computer configurations), the software incorrectly translates the spectral range settings to numeric values. This causes a collection error in the workflow.

Recommendation: Use the standard spectral range instead of a custom spectral range.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02566.

Peak Location measurement does not always produce a RESULT for all spectral resolutions

The peak location measurement requires three data points to determine the peak location. If you change the resolution so that a specified region no longer contains three data points, the measurement does not produce a RESULT.

Recommendation: Open your analytical method and increase the selected regions so they include at least three data points for all of the resolution settings used with the method.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V01676.

QC Compare methods report incorrect class names for the second, third, etc. best matches

If you set up a QC Compare method to report the class name for the second, third, etc. best matched spectrum, the software reports the correct class name for the best matched spectrum but not for the second, third, etc. best matches. The class names reported for the second, third, etc. best matches are the same as for the best match.

Recommendation: Don't include the second best match in your report or, if you need to include the second best match, use a different classification technique such as discriminant analysis.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02340.

Holding down the Shift key while dropping a workflow item sometimes causes the dropped item to be inaccessible

If you hold down the Shift key while you drag and then drop a workflow item onto the topmost item in the open workflow, when you run the workflow, the dropped item will not execute and will disappear if you switch between the Details tab and the Workflow tab.

Recommendation: Release the Shift key before you drop a workflow item onto the topmost item in your workflow.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02389.

Sample prompt is missing when collecting simulation spectra for tablet analyzers.

In RESULT Integration software, when the user collects a simulation spectrum for the tablet analyzer with the collect associated background spectrum option checked, sample collection occurs immediately following background collection. This does not provide an opportunity to insert the sample during the collection of the simulation spectrum.

Recommendation: Uncheck the collect associated background spectrum option, place your sample in the tablet analyzer and click collect. You must also collect at least one background simulation spectrum from the associated background specification. Alternatively you can use the from file option to add simulated spectra to your workflow.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2001. Tracking number: V&V02649.

Spectra collected at 2 cm-1 resolution contain channeling effects

The apodization function used by RESULT software contains an error that causes channeling in spectra produced from single-sided interferograms. RESULT is configured to collect single-sided interferograms only when the Resolution parameter on the sample specification is set to 2 cm-1.

Recommendation: Set Resolution to a value other than 2 cm-1.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01404.

Drag and drop feature of RESULT Integration sometimes places item in wrong location

When arranging events in a workflow displayed in the workflow navigation frame of the RESULT Integration main window, if you drag and drop an item to a lower position in the same event group, the software sometimes places the item one position below the specified location.

Recommendation: Switch to the Details tab and then back to the Workflow tab to see the change.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01420.

Alignment sometimes fails after using the standard tablet analyzer module

If you use the standard tablet analyzer sampling module to collect a spectrum and then align the instrument in RESULT Operation software, the alignment sometimes fails. The failure occurs because the software does not always reset the velocity to the correct value for the main transmission detector before starting the alignment procedure.

Recommendation: If you need to align the instrument and you just finished collecting a spectrum using the standard tablet analyzer, use the Quick Collect feature of RESULT Operation software to collect a spectrum using one of the other sampling modules. When the collection is completed, run the alignment procedure.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01499.

Cycle Through Simulation Samples check box is unavailable when it should be available

The Cycle Through Simulation Samples check box on the sample specification is unavailable in the software even though the Samples For Simulation drop-down list contains multiple simulation spectra.

Recommendation: If the Samples For Simulation list box on the sample specification includes multiple entries but the Cycle Through Simulation Samples check box is not available in the software, select another specification or event in the workflow navigation frame and then redisplay the sample specification. The check box should be enabled.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01518.

Instrument Status Report shows a communication error

The Instrument Status Report sometimes indicates a communication error occurred. Communication errors occur for three reasons: the instrument is powered off, the cable that runs between the computer and the analyzer is disconnected, or the instrument is too busy to reply to a request. To correct the first two cases,

reconnect the cable and turn on the instrument. The third case is temporary and will correct itself.

Recommendation: If the Instrument Status Report contains a communication error and the instrument is running with the cable properly connected, then rerun the Instrument Status Report. If the communication error is gone, it was due to a temporary time out caused by multiple simultaneous requests.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01533.

Digitally signing a file produces an error message

After the operator digitally signs a file, certain computers sometimes report an error similar to the following:

"The Registry entry for the key container could not be opened and may not exist. Confirm software installation."

The error occurs whether the file was signed in RESULT Integration or RESULT Operation software. Those computers require additional initialization steps before the software's digital signature features will function properly.

Note: Most computers do not require the additional initialization steps.

Recommendation: Contact our service representative for assistance in performing the additional initialization steps.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01574.

Running RESULT on a computer without ATL.DLL produces an error message

Version 1.0 of RESULT software depends on the file ATL.DLL. The file is typically present on most computers. If the file is not available, the software displays an error message similar to the following:

"The dynamic link library ATL.DLL could not be found in the specified path."

Those computers require additional initialization steps before the software will function properly.

Note: Most computers do not require the additional initialization steps.

Recommendation: Contact our service representative for assistance in performing the additional initialization steps.

History: Problem occurs in RESULT version 1.0. Added to release notes in January 2001. Tracking number: V&V01609.

Page Up and Page Down keys sometimes don't work

The Page Up and Page Down keys do not function when viewing work instructions using RESULT Operation software.

Recommendation: Use the mouse and scroll bar arrows or the scroll box to scroll the document up or down in the display area.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V00699.

Tables don't print correctly when using Internet Explorer 5.5 and HP LaserJet 8000 DN printer driver

If you have Internet Explorer version 5.5 loaded on your computer, you may have problems printing tables in reports generated in RESULT software when using the HP LaserJet 8000 DN printer. The printer may fail to print a row in a table that crosses a page boundary.

Recommendation: Install Internet Explorer version 4.0 or 5.0.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01255. This problem was reported to Microsoft and is tracked by Microsoft incident SRZ000816000156.

Unassigned Alt key combinations causes RESULT Integration to stop responding

In RESULT Integration software, Alt key combinations that are associated with menu items and tool bar buttons work correctly, but unassigned Alt key combinations, such as Alt+R and Alt+Q, sometimes cause the application to stop responding. The problem occurs only when the Alt key combination is used while the cursor is located in an edit field or check box in the display area of RESULT Integration. It does not occur when the cursor is in the menu, toolbar, or workflow navigation frame.

Recommendation: To avoid this problem, use the mouse to select toolbar and menu commands or use only those Alt key combinations that are associated with a menu or tool bar command. If the program stops responding, use Ctrl+Alt+Delete and task manager to close the application.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01375.

Data collection sometimes fails when using the integrating sphere with Gain set to 4 or 8

When using the Antaris integrating sphere sampling module with Gain set to 4 or 8 and a Background Frequency setting other than Before Every Sample, you can usually collect an initial spectrum but every subsequent collection either produces bad spectra or generates a workflow error that relates to a peak location problem. The Optimize Gain feature may recommend using a gain of 4 or 8 for sampling with the integrating sphere, which creates the conditions for this problem to occur.

Recommendation: Change Gain to 1 or 2 or change Background Frequency to Before Every Sample. If you don't want to change those settings, you should add a dummy collection event prior to the real collection event. For the dummy collection event, set Gain to 1, Screen to Empty, and Final Format to Interferogram. This will correct the problem for sample collection using any subsequent collection events.

If you want to collect standards in RESULT Integration, change Background Frequency to Before Every Sample before collecting the standards, and then reset Background Frequency when you are finished. To collect standards in RESULT Operation, change Background Frequency to Before Every Sample in the appropriate workflow.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01386.

Optimize Gain sometimes suggests inappropriate attenuation setting for transmission module

When using the transmission sampling module, the Optimize Gain feature sometimes recommends the B Screen and Empty attenuation wheel settings, which are not appropriate for use with the transmission module.

Recommendation: When using the transmission or fiber optic sampling module, set Attenuator to C Screen unless you want to use an external reference material for the background measurement.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01403.

New background not collected automatically after collection parameters are changed

In RESULT Integration software, when the user changes a setting in a collection event that has Background Frequency set to Once Every Hour or Once Every Four Hours and then either tests the workflow or collects a standard, the software does not collect a new background (or prompt the operator to do so) until the specified background frequency period has elapsed.

Recommendation: Set Background Frequency to Before Every Sample and then either test the workflow or collect a standard. This forces the software to collect a new background before collecting the first sample or standard. Then you are free to use other Background Frequency settings.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01434.

Y-axis limits for spectra plotted in absorbance units do not accept negative numbers

The Y-axis limits for spectral plots in Absorbance units are restricted to positive numbers. This made it difficult to plot a 100% line in Absorbance using fixed Y-axis limits.

Recommendation: Display the spectrum full scale or set Final Format to % Transmission.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01436.

Manage Workflows dialog box allows duplicate copies of the same workflow

In RESULT Operation software, the Manage Workflows dialog box allows the user to add the same workflow multiple times and to select different options for each entry. When the user tries to select and then run the workflow by choosing Select Workflow, multiple copies of the workflow appear in the selection list.

Recommendation: Before adding a workflow using the Manage Workflows dialog box, check the drop-down list to see if the workflow has already been added.

History: Problem occurs in RESULT version 1.0. Added to release notes in October 2000. Tracking number: V&V01437.