OpenLAB CDS EZChrom Edition A.04.06
Tips and Tricks for GC Users

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Problem / Solution

Problem:

I have purchase a new 7890B GC with OpenLAB CDS EZChrom A.04.06 replacing a 6890 GC. I want a way to transfer method to the 7890B GC.

Solution:

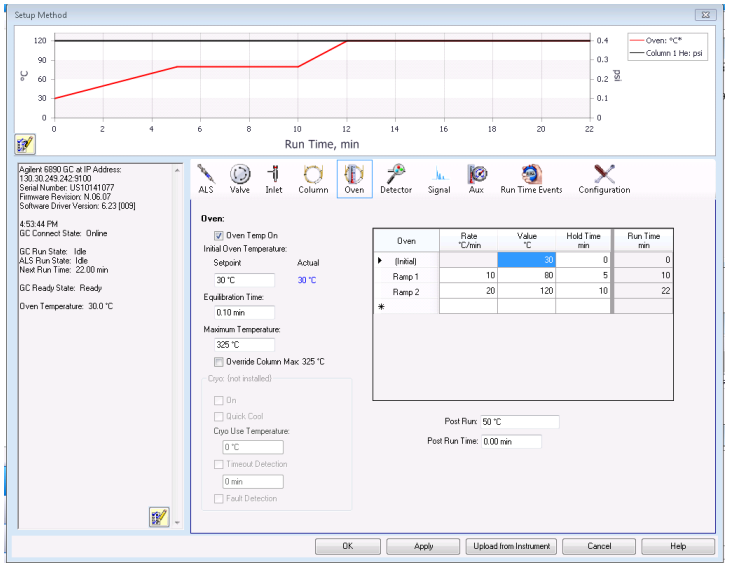
GC Method Transfer

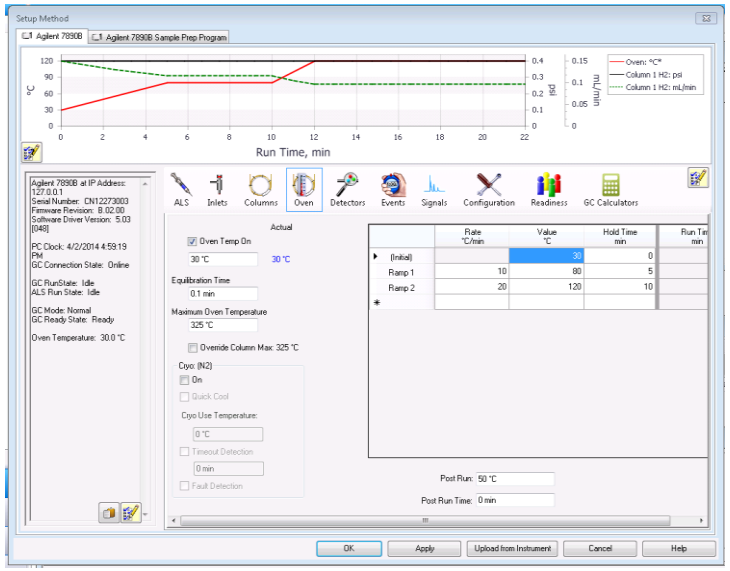
Instrument Control Driver

Method Migration

6890 GC Method

Open Method in OpenLAB CDS EZChrom Edition, Download to the 7890B, then upload to the software. Save method





Problem / Solution

Problem:

I want to view data in a simple UI tailored to my needs without changing screen each time I start the software.

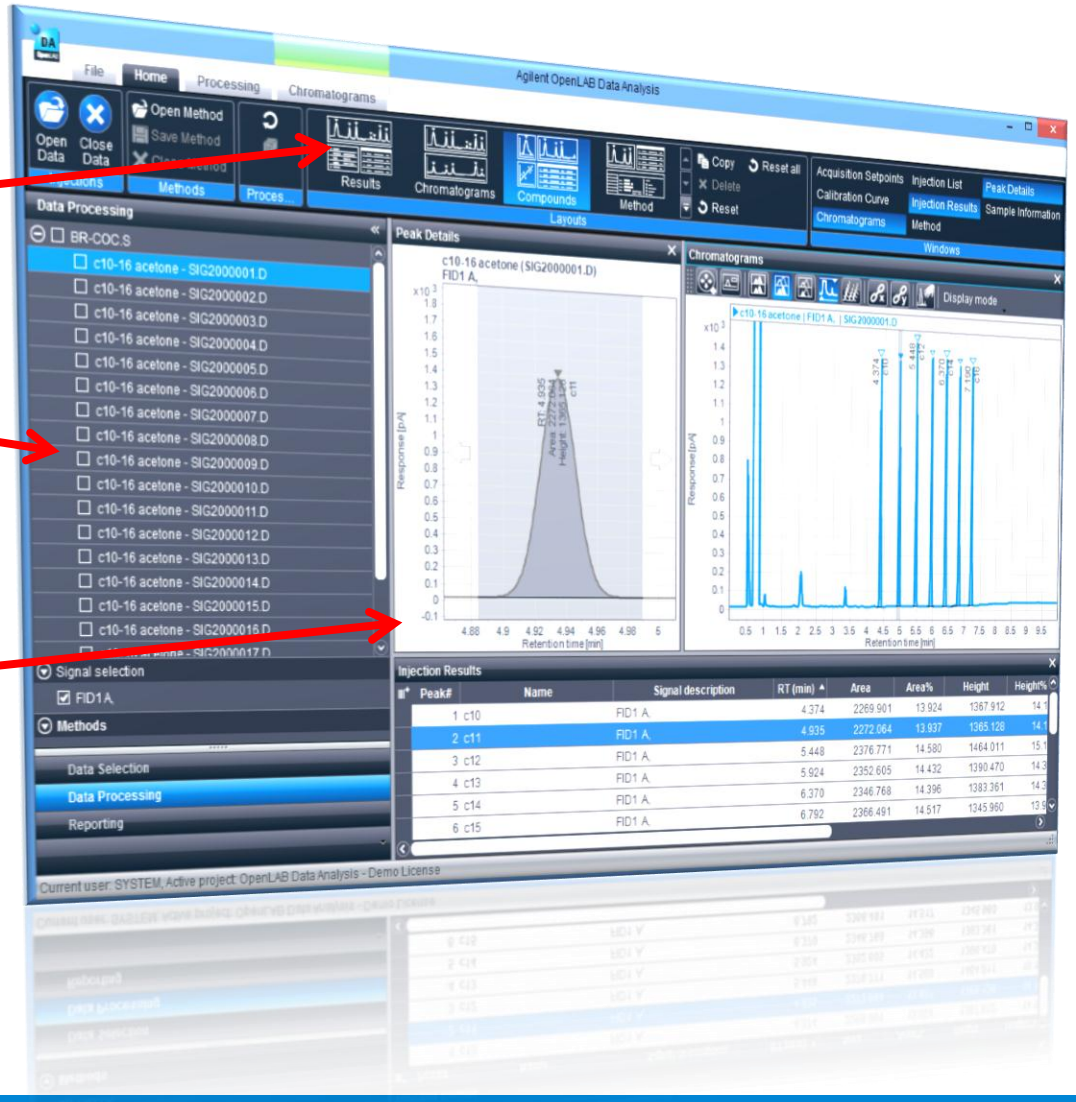
I want to view data in my personalized preferences while my colleagues have another preference.

Solution:

OpenLAB Data Analysis-Customized layouts

OpenLAB Data Analysis

- Customized layouts: User selects which windows and items they want to view. They are persisted even if the software is closed.
- Use “up” and “down” arrows to review all the samples in the result set in a few minutes.
- Peak detail: View each peak in the sample in a zoom-in.



Problem / Solution

Problem:

I need to customize labeling the peaks to determine if a peak is present or missing.

I need to view the groups sections within the chromatogram.

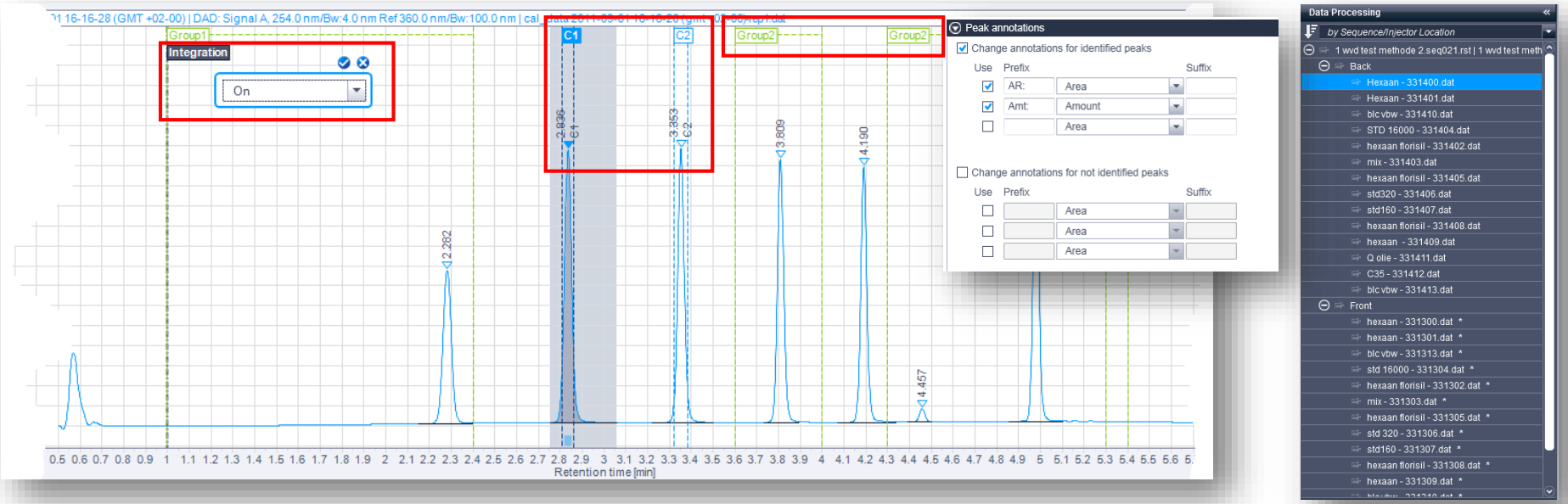
Solution:

OpenLAB Data Analysis-Groups Views

Enhanced UI for productive data review

- Display of compounds and groups in the chromatogram
- Display and editing of integration events in the chromatogram
- Customizable peak annotations
- Enhanced layout management
- Global shifting of expected RT's of all compounds

- Configuration of tables
  - Choose the columns you want to see
  - Define number precision to display
  - Re-order columns
  - Show identified and/or unidentified peaks in the injection results
- GC dual channel data review



Problem / Solution

Problem:

I need to use specific data analysis for my result calculation.

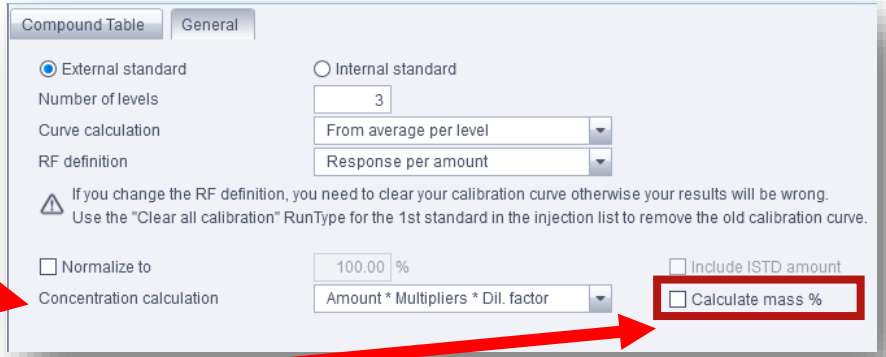
- I want to use published Relative Retention Times
- I need to report results in mass%.
- I need to add multipliers in the data analysis to obtain the result for my analysis.

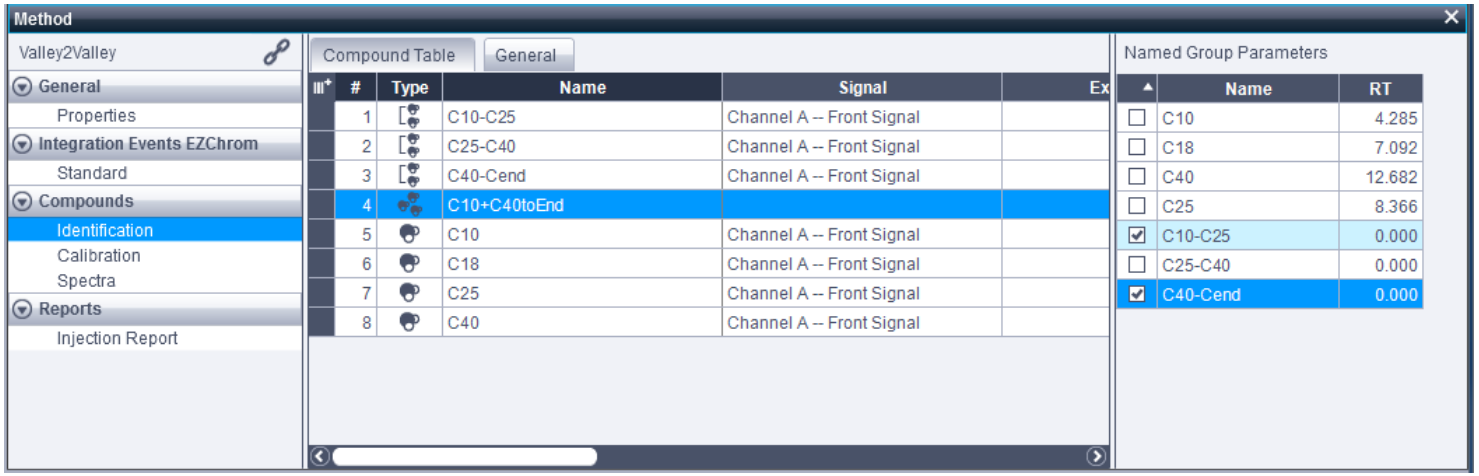
Solution:

OpenLAB Data Analysis-Quantitation features

Compound ID & Quantitation features

- Compound identification by Relative Retention Time Groups of Groups
- Compound multipliers
  - Allows to correct for purity of standard compounds
- Mass% calculation
- Summarize amounts of timed groups and other compounds in a single named group





Problem / Solution

Problem:

I need to use specific data analysis for my result calculation.

I need to use a specific calibration curve and weighting types.

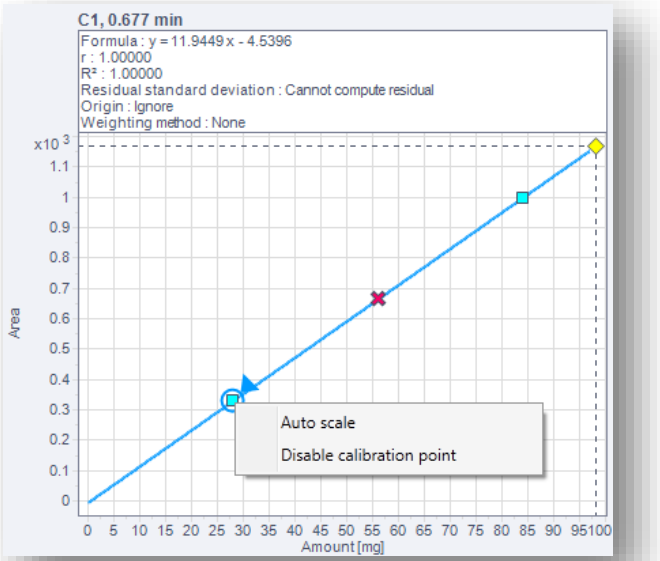
I need to use calibration curve functions.

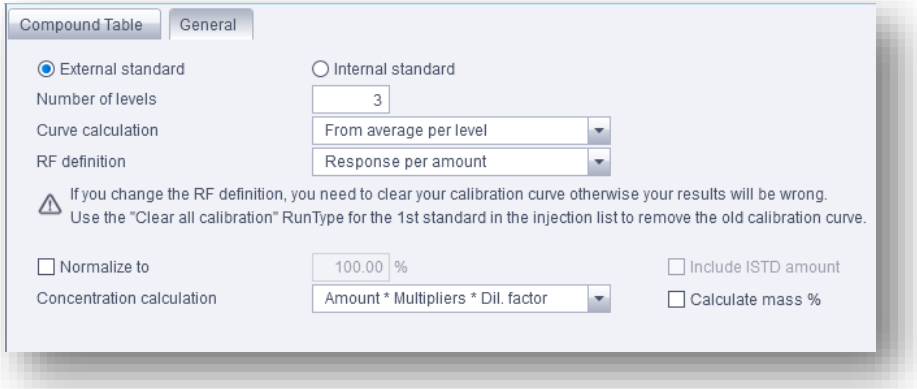
Solution:

OpenLAB Data Analysis-Quantitation features

Calibration & Quantitation features

- New calibration curve and weighting types
  - quadratic, logarithmic, exponential, double-logarithmic - based on Area, Height, Area%, Height%
  - 1/Response and 1/Response^2 weighting
- Enhanced calibration curve functions
  - Enable/disable individual calibration points
  - display of last modification time of a calibration curve
  - display of last calibration time for a compound
  - curve calculation on average point per level or from all individual points





Problem / Solution

Problem:

I need to report the peaks in groups of certain compounds.

I need to report peaks in groups of groups.

I need to report the instrument parameters on my sample report.

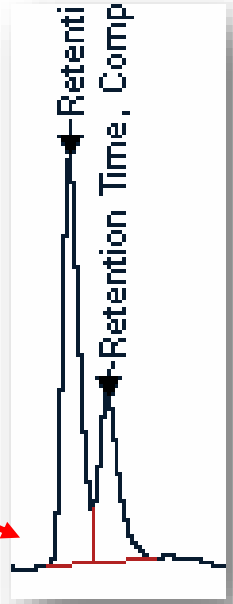
Solution:

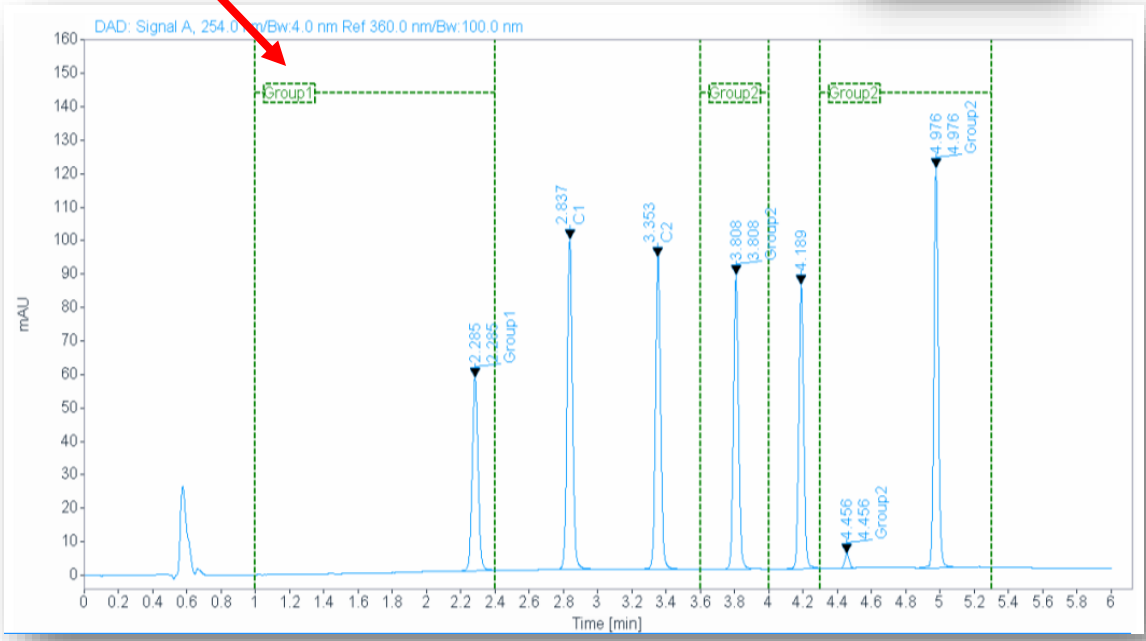
OpenLAB Data Analysis-Intelligent Reporting

Calibration curves / Chromatogram annotation

- Define color of the peak baseline
- Timed group annotation
  - Supports multiple regions
- Allow to define fixed marker intervals for the time axis of a chromatogram

Baseline is red





Problem / Solution

Problem:

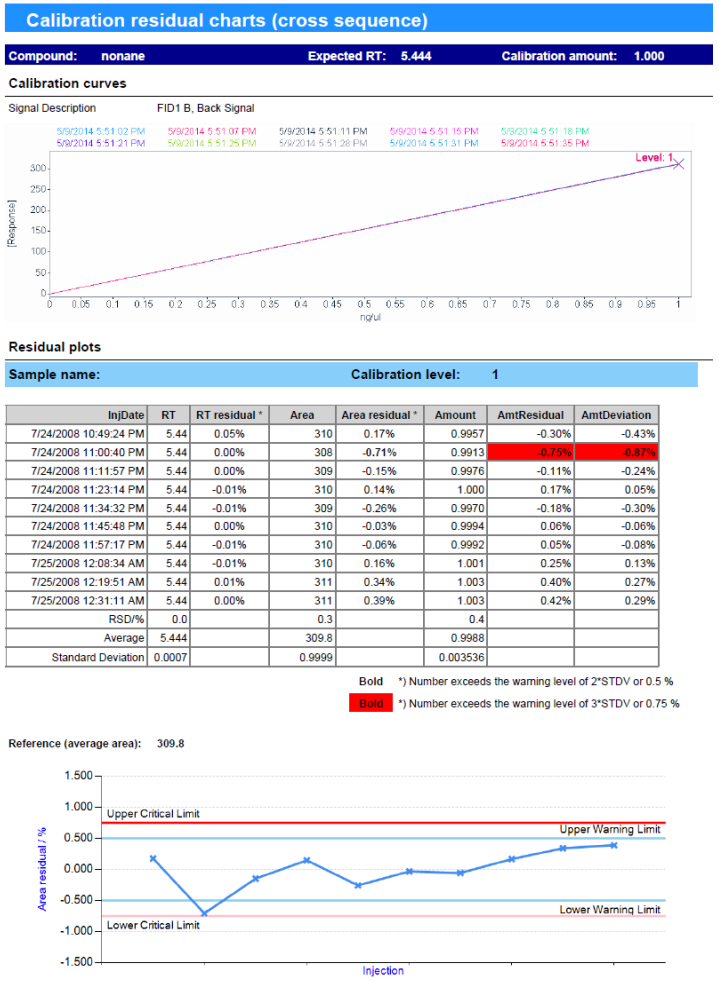
I need to see a trend chart of samples with upper and lower limits

Solution:

OpenLAB Data Analysis-Intelligent Reporting

OpenLAB Data Analysis-Intelligent Reporting Trend Charting

- Upper and Lower control limits can be entered interactively
- Outliers can be flagged automatically
  - 2- Sigma limits & 3- Sigma limits
- Applying Shewart- or Westgard- rules are possible
  - x points above or below average
  - x points showing up- or down-trend



Calibration residual charts (cross sequence)

Compound: nonane **Expected RT:** 5.444 **Calibration amount:** 1.000

Calibration curves

Signal Description FID1 B, Back Signal

5/9/2014 5:51:02 PM, 5/9/2014 5:51:07 PM, 5/9/2014 5:51:11 PM, 5/9/2014 5:51:15 PM, 5/9/2014 5:51:18 PM, 5/9/2014 5:51:21 PM, 5/9/2014 5:51:25 PM, 5/9/2014 5:51:28 PM, 5/9/2014 5:51:31 PM, 5/9/2014 5:51:35 PM

Level: 1

[Response]

ng/µl

Residual plots

Sample name: **Calibration level:** 1

InjDate	RT	RT residual *	Area	Area residual *	Amount	AmtResidual	AmtDeviation
7/24/2008 10:49:24 PM	5.44	0.05%	310	0.17%	0.9957	-0.30%	-0.43%
7/24/2008 11:00:40 PM	5.44	0.00%	308	-0.71%	0.9913	-0.75%	-0.87%
7/24/2008 11:11:57 PM	5.44	0.00%	309	-0.15%	0.9976	-0.11%	-0.24%
7/24/2008 11:23:14 PM	5.44	-0.01%	310	0.14%	1.000	0.17%	0.05%
7/24/2008 11:34:32 PM	5.44	-0.01%	309	-0.26%	0.9970	-0.18%	-0.30%
7/24/2008 11:45:48 PM	5.44	0.00%	310	-0.03%	0.9994	0.06%	-0.06%
7/24/2008 11:57:17 PM	5.44	-0.01%	310	-0.06%	0.9992	0.05%	-0.08%
7/25/2008 12:08:34 AM	5.44	-0.01%	310	0.16%	1.001	0.25%	0.13%
7/25/2008 12:19:51 AM	5.44	0.01%	311	0.34%	1.003	0.40%	0.27%
7/25/2008 12:31:11 AM	5.44	0.00%	311	0.39%	1.003	0.42%	0.29%
RSD/%	0.0		0.3		0.4		
Average	5.444		309.8		0.9988		
Standard Deviation	0.0007		0.9999		0.003536		

Bold *) Number exceeds the warning level of 2*STDV or 0.5 %

Bold *) Number exceeds the warning level of 3*STDV or 0.75 %

Reference (average area): 309.8

Upper Critical Limit

Upper Warning Limit

Lower Warning Limit

Lower Critical Limit

Area residual / %

Injection

Problem / Solution

Problem:

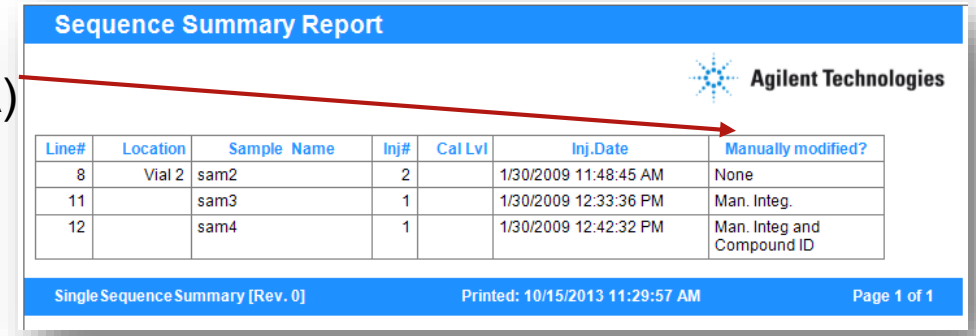
I need more flexibility in designing templates for the customized reports.

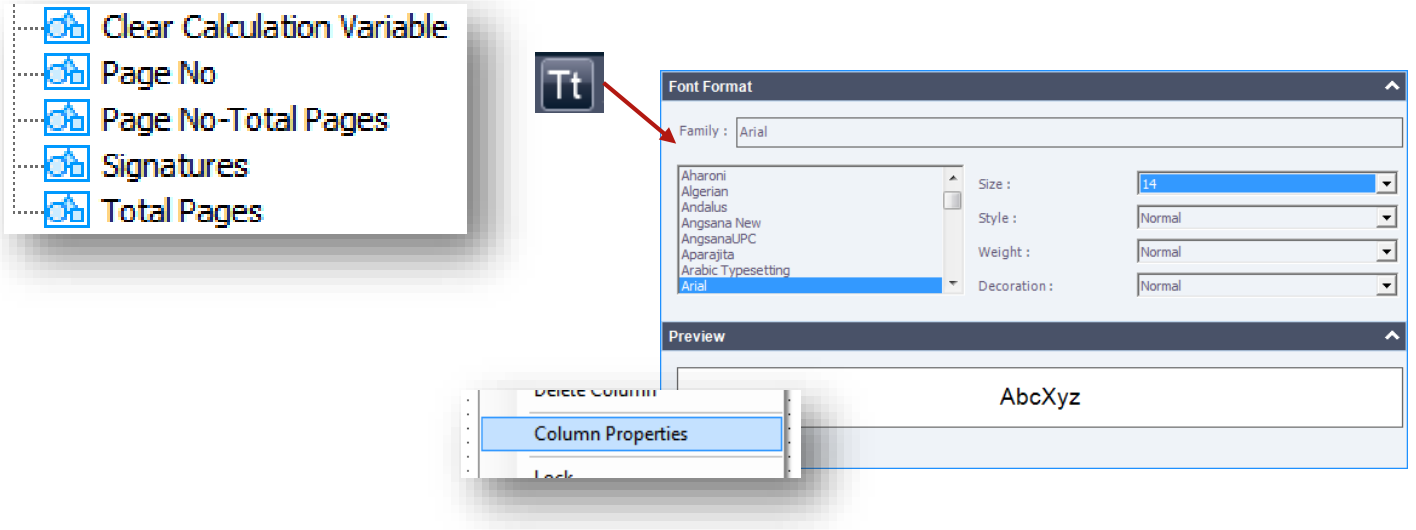
Solution:

OpenLAB Data Analysis-Intelligent Reporting

OpenLAB Data Analysis-Intelligent Reporting

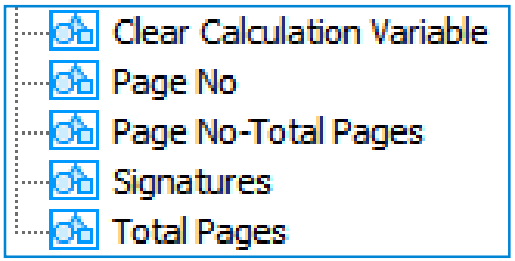
- New “modified injection” flag (new DA) such as manually modified

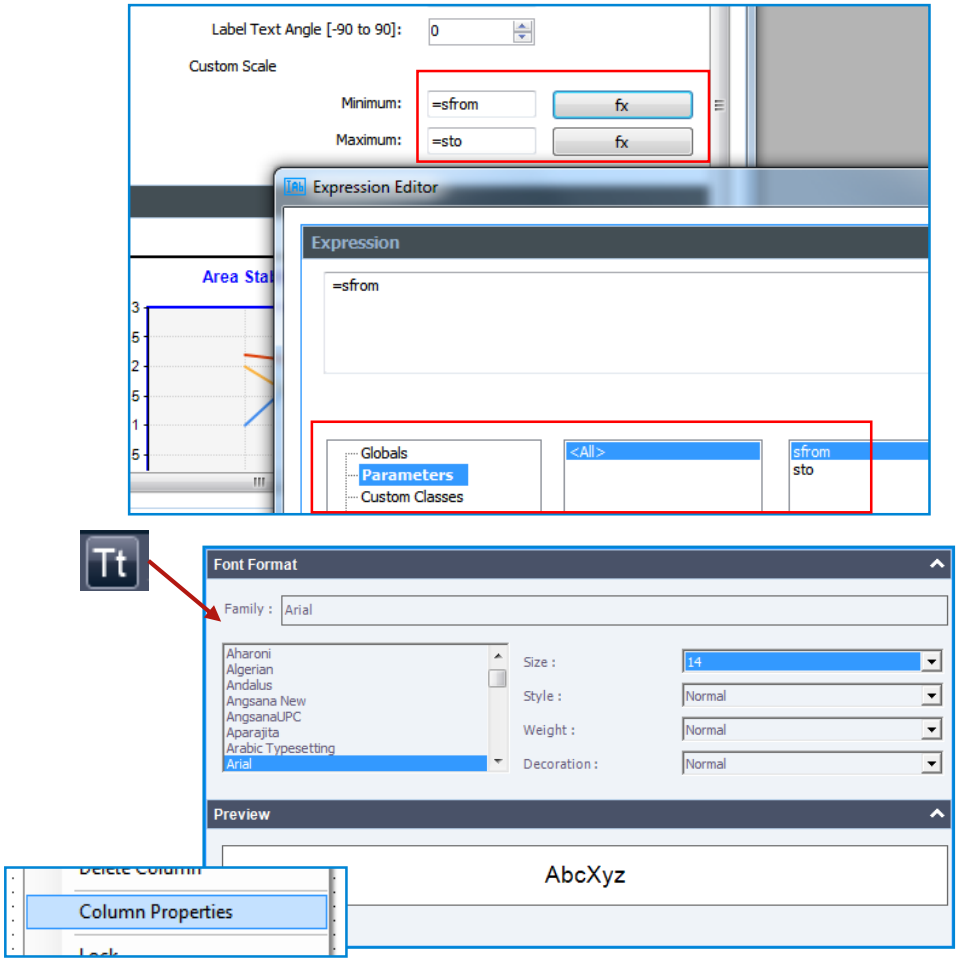




Charts and Customization

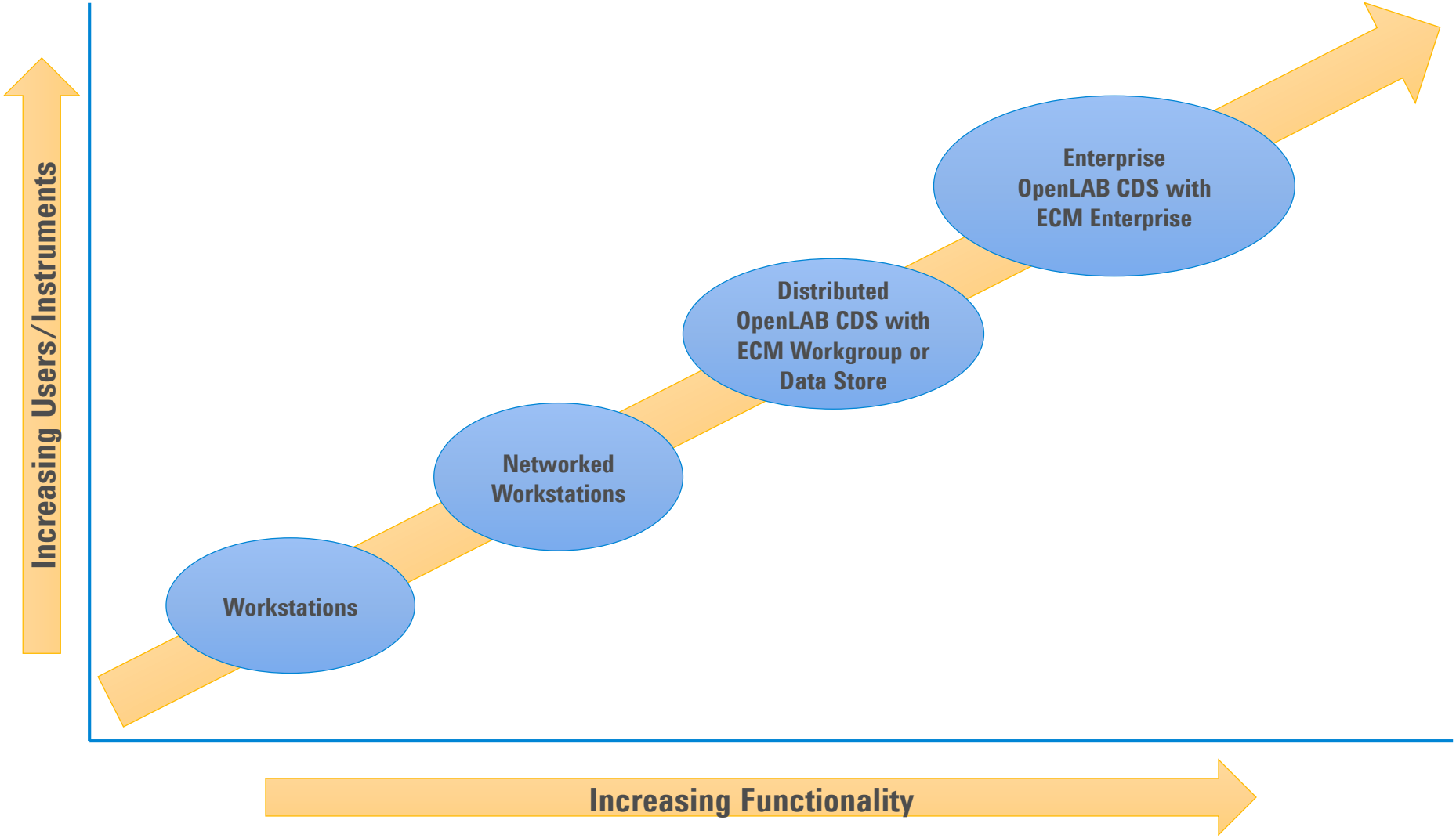
- Expression support for chart axis scaling
- Simple peak filter settings for chart control (like table/matrix)
- Snippets to insert page numbers into header or footer





In addition…..

OpenLAB CDS: Scalable in Storage, Lab Management and Administration



OpenLAB CDS: Networked Workstation Configuration

OpenLAB CDS Configurations: Networked workstation

- **Instrument Control:** Local on each workstation
- **Administration:** Central in OpenLAB Core Server Software
- **Storage:** Local on each workstation
- **Benefits:**
  - Central administration for all users, licenses and all user privileges
  - Status information in lab-at-a-glance view from all instruments connected

Fits well with:

- Laboratories with many instruments and few users, budget-controlled
- Laboratories looking for central lab monitoring without putting their instruments on the network

OpenLAB CDS Networked Workstation with Central Storage

OpenLAB CDS Configurations: Networked workstation with OpenLAB ECM

- **Instrument Control:** Local
- **Administration:** Central
- **Storage:** Central (OpenLAB ECM)
- **Benefits:**
  - Central administration (users, licenses, user privileges)
  - Instrument status information (lab-at-a-glance view)
  - Result data available from anywhere
  - Storage in central OpenLAB ECM with database storage

Fits well with:

- Laboratories who need GLP/GMP compliance and central storage
- Laboratories looking for central lab monitoring without putting their instruments on the network and have a need of database storage

Problem / Solution

Problem

- I cannot afford to duplicate work one of my colleagues has already done.
- I need to securely store my data for a set period of time.

Solution

OpenLAB Data Store allows you to centrally store your data, share it with colleagues, backup and archive.

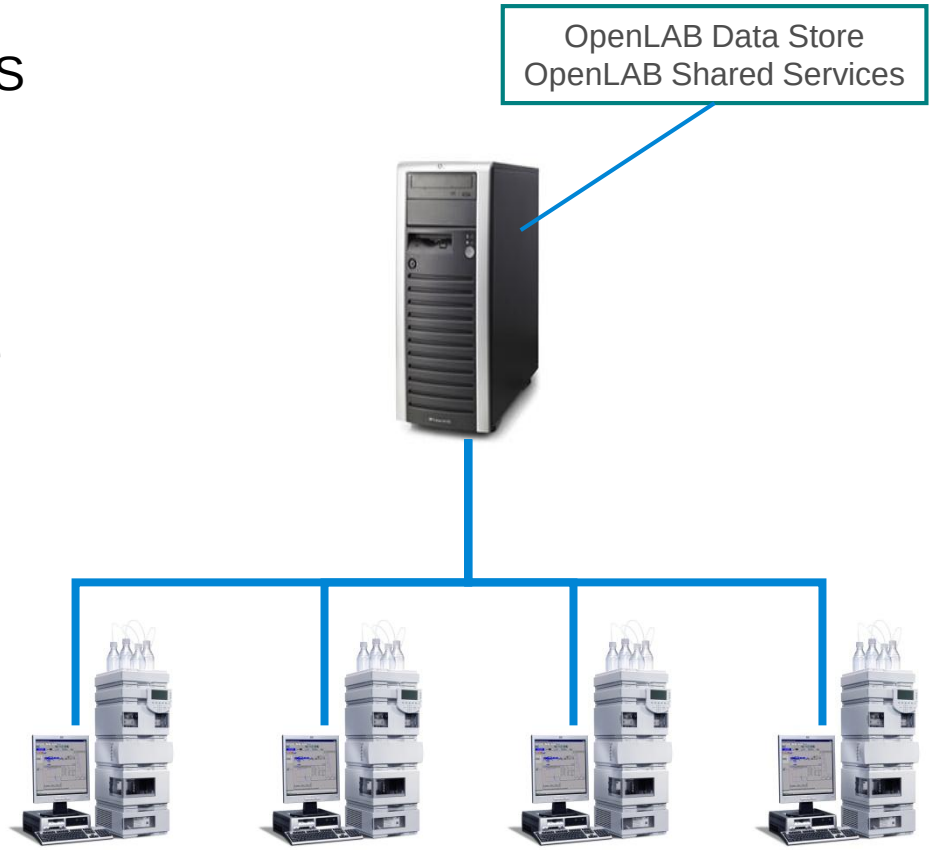
OpenLAB Data Store – Central Data Storage for OpenLAB CDS

Efficient Data Storage and Retrieval

- ✓ Centralized Storage for OpenLAB CDS
- ✓ Efficient search and retrieval of files
- ✓ Local Language Support (Chinese & Japanese)
- ✓ Free of Charge PostgreSQL database

21 CFR Part 11 Compliant

- ✓ Built to support FDA regulations
  - ✓ Data Integrity and Traceability
  - ✓ Electronic Signatures
  - ✓ Archival Capabilities



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