

OpenLAB CDS EZChrom A.04.05

Tips and Tricks for GC Users

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EZChrom Edition

Problem / Solution

Problem

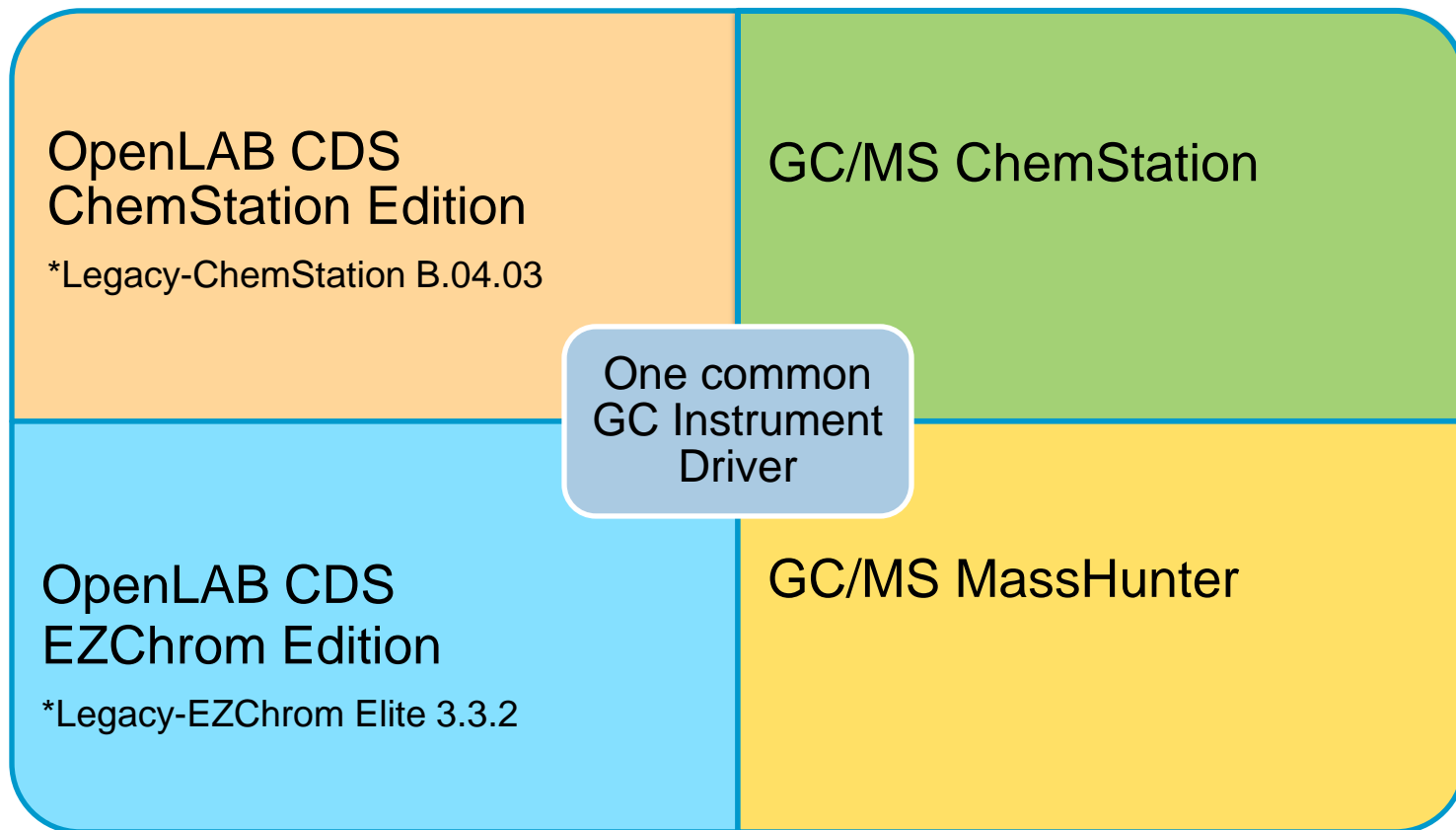
I need to be able to switch quickly between different Agilent data systems.

Solution

Enhanced drivers provide a standard layout for all Agilent Data Systems.

GC Instrument Driver

Support for 7890, 7820, 6850, and 6890 GC with enhanced Drivers to provide a standard layout for all Agilent Data Systems.



Problem / Solution

Problem

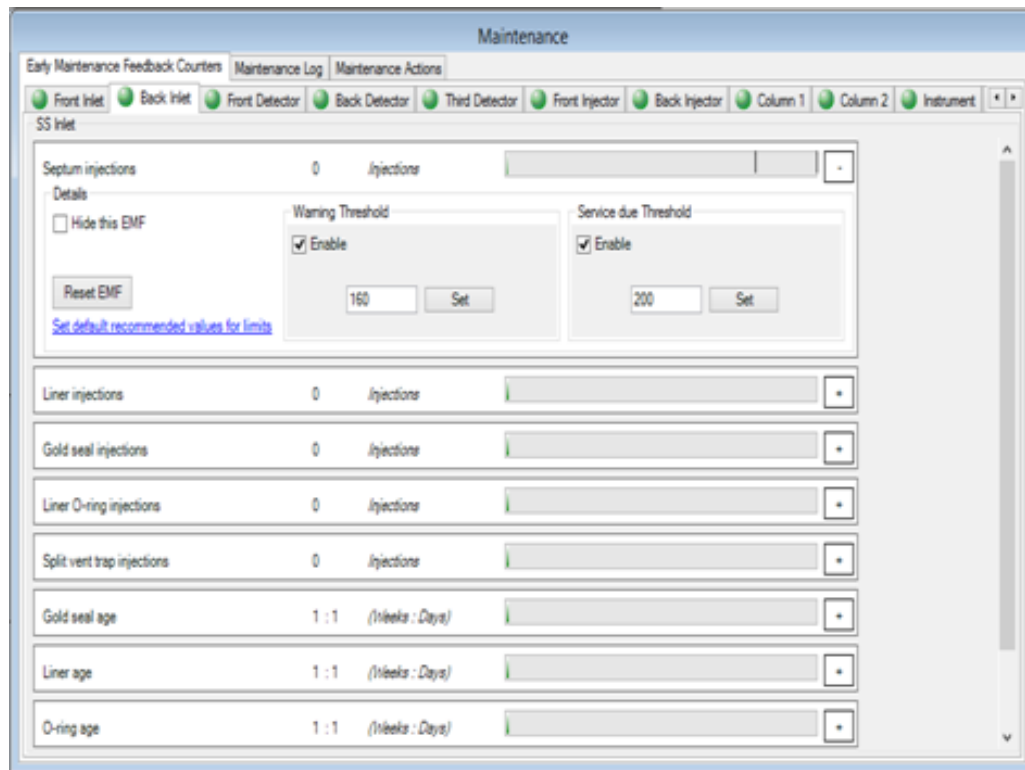
- How can I optimize my maintenance schedule and reduce unplanned downtime?
- The lab personnel including myself forgets when the instrument maintenance was last performed.

Solution

Agilent Early Maintenance Feedback

Agilent Early Maintenance Feedback

- Set-up the Counters within the Agilent Data Systems
- Based on the configuration of the GC
- User-defined early maintenance feedback counters
- Notification of the Warning and Service Due



Problem / Solution

Problem

I want to optimized my maintenance schedule, but I'm not sure of the values to set the EMF maintenance counters.

Solution

Agilent Early Maintenance Feedback

Agilent Early Maintenance Feedback

- Some EMF counters have default limits; however the maintenance required will be depended on the type of sample analyzed.

Another way to set them up:

- When you perform maintenance look at the settings of the counters.
- Set the warning limits to the amount.
- Check the counters next time when performing maintenance and adjust the limits.

The screenshot displays the 'Maintenance' software interface. At the top, there are tabs for 'Early Maintenance Feedback Counters', 'Maintenance Log', and 'Maintenance Actions'. Below these are status indicators for various components: Front Inlet, Back Inlet, Front Detector, Back Detector, Third Detector, Front Injector, Back Injector, Column 1, Column 2, and Instrument. The main area is titled 'SS Inlet' and contains a 'Septum injections' counter with a value of 0. Below this counter are 'Details' including a 'Hide this EMF' checkbox, a 'Reset EMF' button, and a link 'Set default recommended values for limits'. To the right of the details are 'Warning Threshold' and 'Service due Threshold' sections, both with 'Enable' checkboxes and input fields (160 and 200 respectively) and 'Set' buttons. Below the Septum counter is a list of other counters: Liner injections, Gold seal injection, Liner O-ring injections, Split vent trap injections, Gold seal age, Liner age, and O-ring age. Each counter has a numerical value, a unit, and a progress bar.

Problem / Solution

Problem

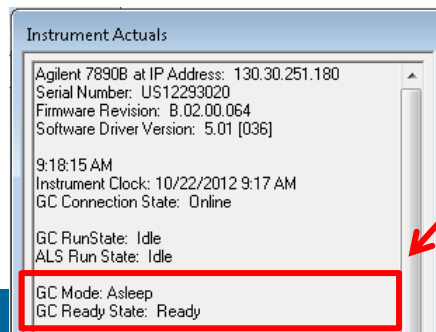
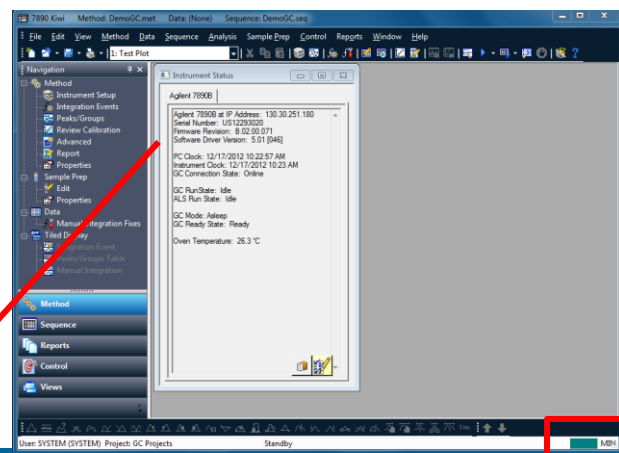
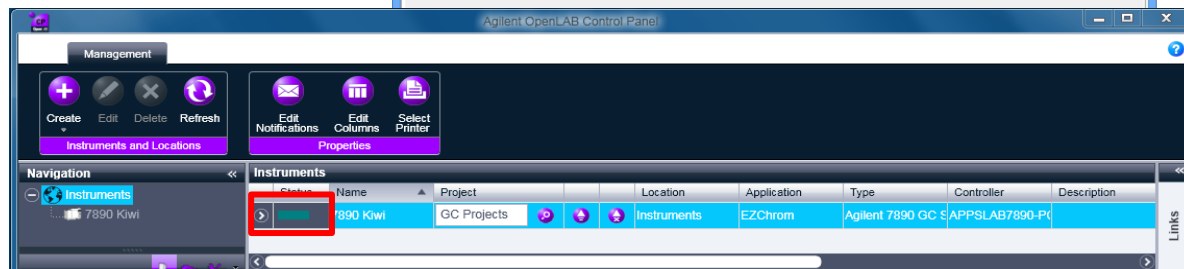
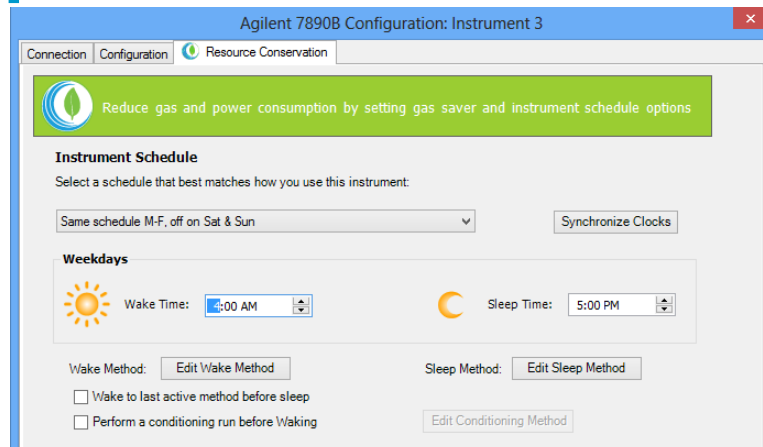
I need to control cost in my laboratory with increasing cost for energy and helium.

Solution

Resource Conservation using the “Sleep/Wake” mode

Resource Conservation: Sleep/Wake Mode

- Schedule the time of the Wake and Sleep Methods either as “custom”, “7 days a week” or “Sat/Sun”
- Manually put the instrument to sleep by clicking on “Sleep” on the “Instrument” menu
- Instrument will still go to Sleep or Wake mode even if the data system is not connected for any reason.



Problem / Solution

Problem

I missed putting a vial in the autosampler or miscounted.

Solution

ALS Error-Retry, Abort or Skip

Handling of ALS Errors

The screenshot displays the software interface for the ALS (Automated Sample Loader) configuration. The top navigation bar includes icons for ALS, Inlets, Columns, Oven (highlighted), Detectors, Events, Signals, Configuration, Readiness, and Calculators!.

The main configuration area is divided into two tabs: "Front Injector" and "Tray / Other".

Barcode reading, heating and mixing:

- Enable barcode heater
- Enable barcode mixer
- Heat Temperature: Actual 29 °C (Target: 50 °C)
- Mix cycles: 2
- Mix time: 10 sec
- Mix speed: 1000 rpm
- Heat time: 1 min

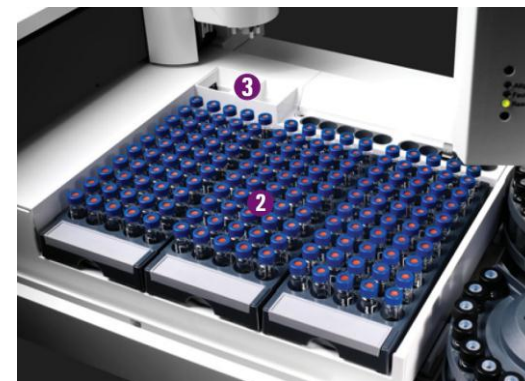
Sample Overlap:

- Enable Sample Overlap
- After the previous injection is completed
- Prepare sample 0 min before end of GC run
- Prepare sample 0 min after end of GC run

ALS Errors: A dropdown menu is open, showing the following options:

- Pause for user interaction (selected)
- Skip to the next sample
- Abort the sequence

The "Instrument Actuals" dialog box displays an "ALS Error" message. Below the message, there are three buttons: "Retry", "Abort", and "Skip".



Problem / Solution

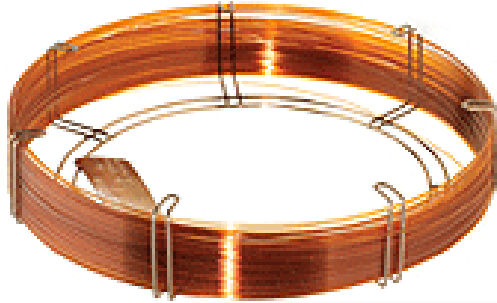
Problem

I need to be able to keep track of columns, liners, and syringes installed in the GC

Solution

Agilent Barcode Scanning Input- Updated Consumables inventory

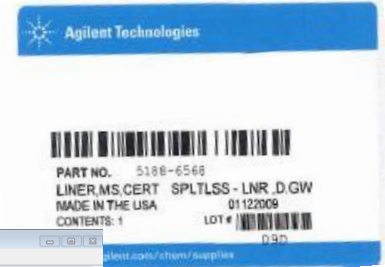
Barcode Scanning Input



Columns



Liners



Favorite	Part Number	Description	Length, m	Diameter, µm	Film Thick, µm	Phase	Min Temp, °C	Max Temp, °C	Max Prog Temp, °C	Form Factor	Comments	Time Stamp
<input type="checkbox"/>	19091A-012	ULTRA 1	25	320	0.17	469.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-012E	Ultra 1	25	320	0.17	469.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-012LTM	Ultra 1	25	320	0.17	469.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015	ULTRA 1	50	320	0.17	469.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015E	Ultra 1	50	320	0.17	469.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015L	ULTRA 1	12	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015E	Ultra 1	12	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015LTM	Ultra 1	12	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015E	Ultra 1	25	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015E	Ultra 1	25	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015LTM	Ultra 1	25	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015E	Ultra 1	50	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-015E	Ultra 1	50	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-018	Ultra 1	17	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-018LTM	Ultra 1	17	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091A-018E	Ultra 1	17	200	0.33	150.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091B-005E	Ultra 2	50	200	0.11	453.8	-60	325	350	7endh		10/25/12 13:10:37
<input type="checkbox"/>	19091B-012	ULTRA 2	25	320								10/25/12 13:10:37

Inventory and full Agilent catalog

Periodic updates available



*Also syringes

Barcode in the columns, liners, and syringes right into the Agilent data system method

Problem / Solution

Problem

I need to replace a part for the instrument. I need to find the correct part number quickly and re-order the part.

Solution

Agilent Parts Finder Tool

Agilent Parts Finder

- Quickly locate the part number and add to the parts list or favorites
- Print the parts list or save it to a file
- Links to the Agilent.com store for quick ordering through the Agilent website.
- Update file with up-to-date parts and part numbers available via the Agilent website for download.

The top screenshot shows the main 'FIND PARTS' interface with a sidebar menu and a main area displaying various instrument models like 7693A ALS, 7650A Automatic Liquid Sampler, Agilent 7890B, Agilent 7890A, and 5975 MSD.

The middle screenshot shows a detailed view of a 'Split/Splitless Inlet Parts (Top)' diagram with numbered callouts (1-5) pointing to different components of the inlet system.

The bottom screenshot shows the 'FAVORITES' section with a table of parts:

Part Number	Part Description
5308-5367	Gold Plated Inlet Seal with Washer
G1331-80620	FID Jet for high temps (0.018in id. tip)
7693A ALS parts	
G4514-67505	Vial rack kit contains: 3 racks and 3 white labels for use in 7693A

Problem / Solution

Problem

Checking the instrument actuals at the instrument is not always convenient.

Solution

Instrument actuals are displayed next to set-points in the data system.

Improvements to the GC Instrument Driver

The screenshot displays the GC Instrument Driver software interface. The top toolbar includes icons for ALS, Inlets, Columns, Oven, Detectors, Events, Signals, Configuration, Counters, and Readiness. The main window shows the 'FID - Front' configuration page with a table of setpoints and actuals. A red box highlights this table, and a red arrow points from the text box on the right to it. Below the table is a 'Subtract from Signal' section with radio buttons for '(Nothing)', 'Column Compensation Curve #1', and 'Column Compensation Curve #2'. An 'Instrument Actuals' dialog box is open in the foreground, showing detailed instrument information and status.

Setpoint	Actual
150 °C	142.6 °C
10 mL/min	10 mL/min
5 mL/min	5 mL/min
20 mL/min	48.1 mL/min
48.081 mL/min	58.1 mL/min
	0.2 pA

Instrument Actuals

Agilent 7890A at IP Address:
130.30.254.134
Serial Number: US10947009
Firmware Revision: A.01.13
Software Driver Version: 4.02 [023]

9:42:22 PM
GC Connection State: Online

GC RunState: Idle
ALS Run State: Idle

GC Ready State: **Waiting for Prep Run**

Oven Temperature: 25.0 °C
Barcode Heater temp: 25 °C

Front Inlet (SS Inlet):
Temperature: 250.0 °C
Pressure: 1.000 psi

- Improved GC Driver with setpoint and actuals
- Instrument actuals improvement with shutdown events
- Full support of LTM II
- New CTC Driver add-on

Problem/Solution

Problem

I would like the system to re-inject the sample automatically when the result is outside the reasonable limits

Solution

Smart sequencing

Smart Sequencing

Actions like re-injection to be triggered by the system if the define limits are out of range.

Peak / Group Tables -- FLD: Signal A

Named Peaks | Groups

Set concentration limits for each peak in the method

#		Name	ID	Level 10	STD ID #	STD Mult.	Manual RF	Low Conc	High Conc
1	<input checked="" type="checkbox"/>	Peak 1	1						
2	<input checked="" type="checkbox"/>								

Sequence

Run #	Multiplier 4	Multiplier 5	Dilutor 1	Dilutor 2	Dilutor 3	Dilutor 4	Dilutor 5	Action
1	1	1	1	1	1	1	1	
2	1	1	1	1	1	1	1	
3	1	1	1	1	1	1	1	
4	1	1	1	1	1	1	1	
5	1	1	1	1	1	1	1	

Action

#	Test	Result	Action	Parameter
1	Conc. Limit	Below Limit	Reinject	1
2				

Define the action in the sequence table

OK Cancel Help

Problem/Solution

Problem

I would like to add a sample to be analyzed tomorrow at 8 AM.

Solution

Schedule Runs

Schedule Run

- After a certain number of minutes
- Certain date and time
- Repeat every number of minutes.

Single Run

Run information:

Sample ID:

Method:

Data file:

Result path:

Result name:

Number of reps:

Method Report:

Save as PDF

Print Hardcopy

Amount values:

Sample Amt: ISTD Amt:

Multipliers:

Dilutors:

Autosampler:

Use program:

Vial:

Injection volume:

Calibrate:

Calibration level:

Clear all calibration

Clear calibration for level

Print calibration report

Clear replicates

Average replicates

Baseline Check

Begin run:

Start

Cancel

Help

Description...

Schedule Run

Begin Run

Now

After minutes

On at

Perform Run Every minutes

OK

Cancel

Help

Problem/Solution

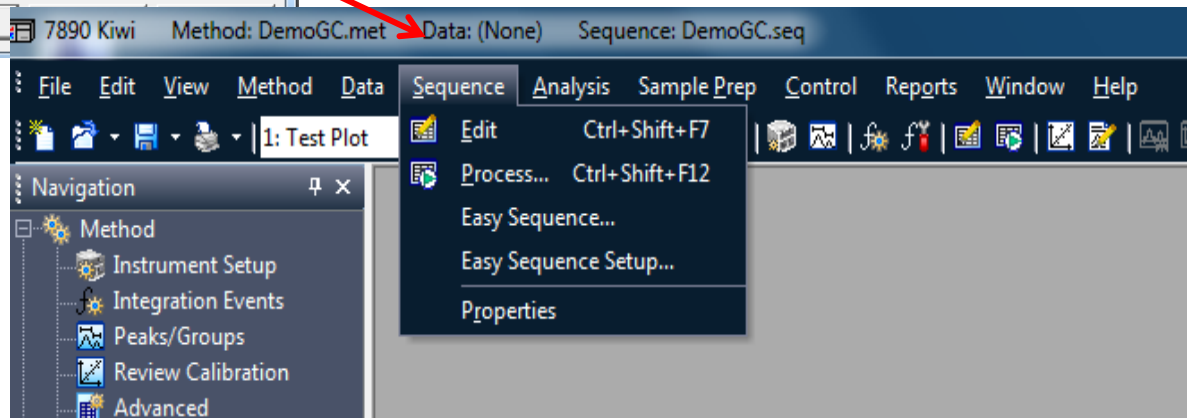
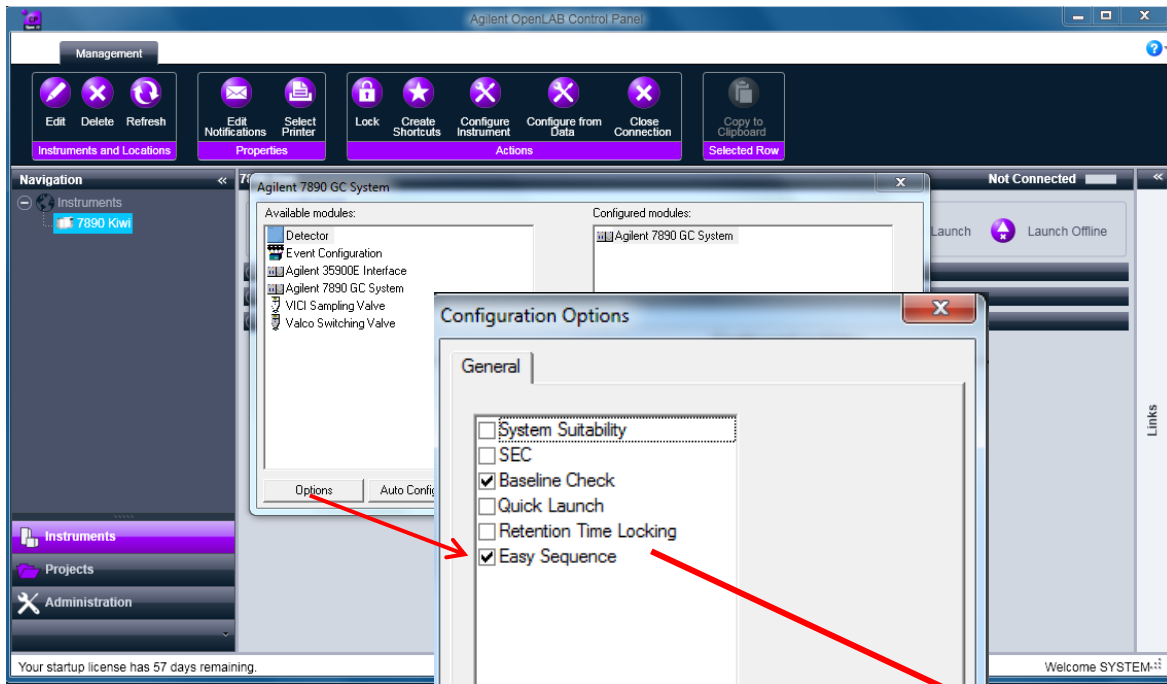
Problem

I would like to create an Easy Sequence template, so the information will already be pre-loaded when I create a sequence.

Solution

Easy Sequence

Easy Sequence



Problem/Solution

Problem

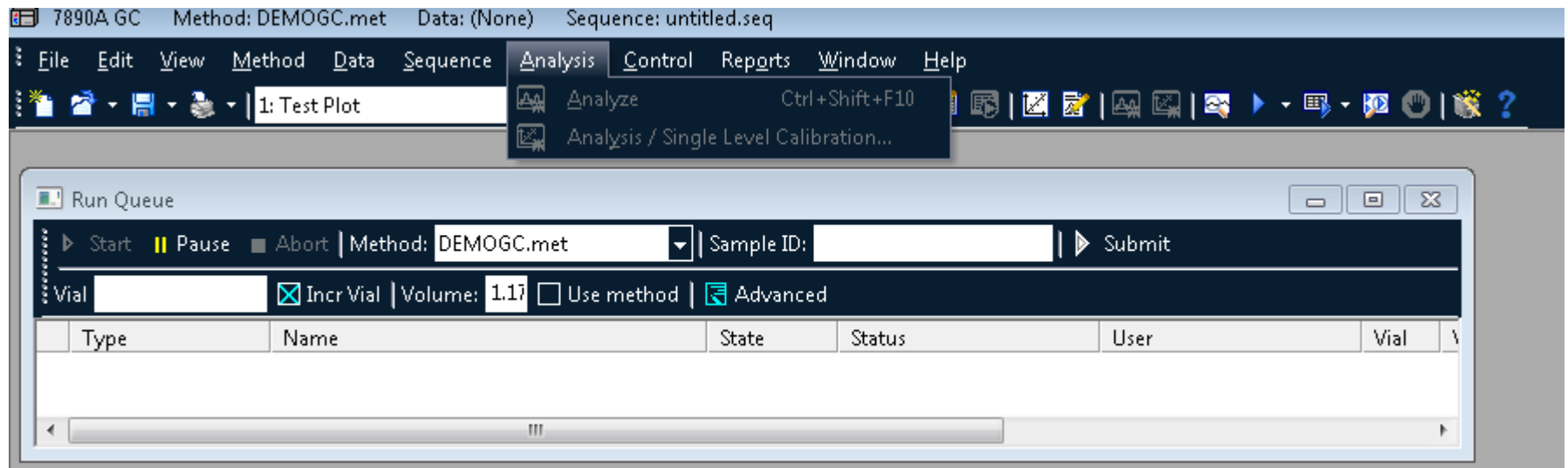
During a long running sequence, I want to reprocess results that have already completed.

Solution

Review mode

Reprocessing Results during a Running Seq.

Switch from Acquisition to Review mode to access the Result Set.



Enables a user to analyze the results while the sequence is still running.

Problem / Solution

Problem

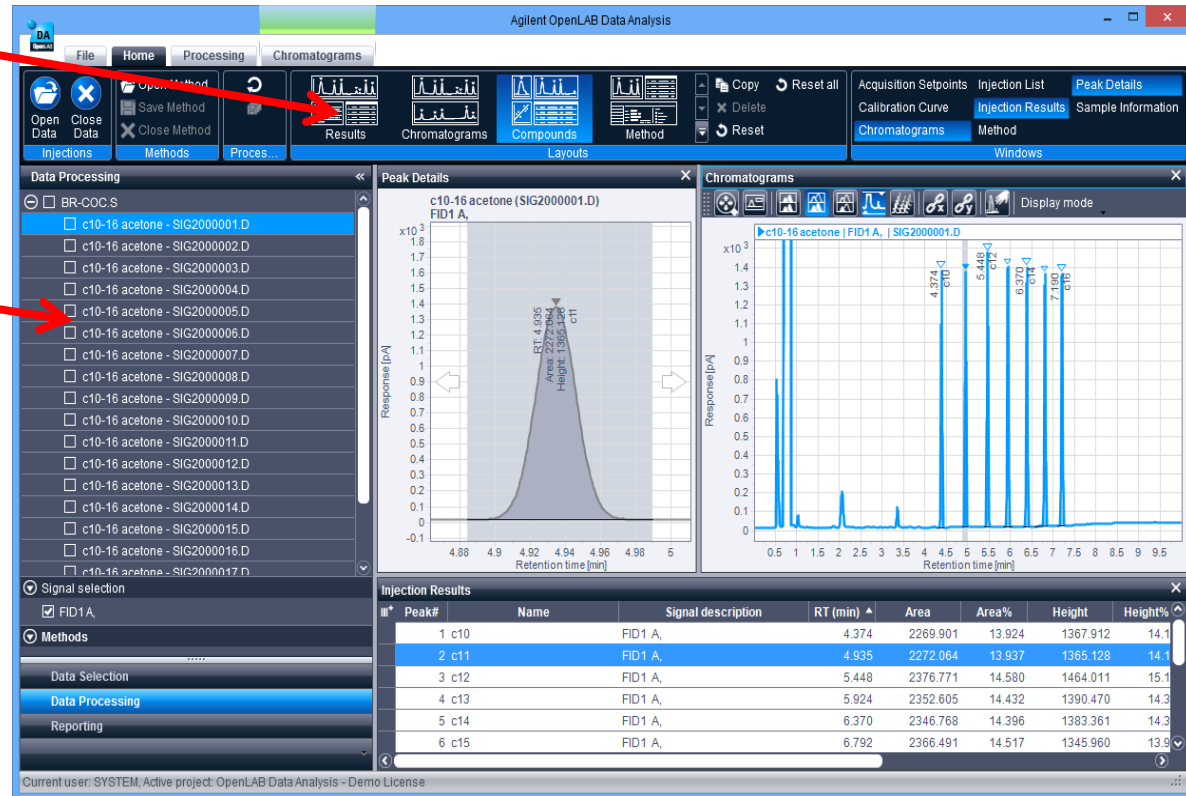
- I need to get the final data/report before the shipment can go out.
- I need to process more samples in a day.

Solution

OpenLAB Data Analysis Package

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 get the final report before the shipment can go out.
- I need to process more samples in a day and get the reports.

Solution

OpenLAB CDS Intelligent Reporting

OpenLAB CDS: Intelligent Reporting

Report Items

- Chromatograms
 - 2 Page Chromatogram
 - Multi Signal Plot Overlaid
 - Multi Signal Plot Separated
 - Parameterized Chromatogram
 - Single Signal Plot
 - System Suitability Plot
- Tables
- Peaks and Compounds
- System Suitability
- Matrices
- Sequences
- Samples
- Calibration Curves
- Spectra
- Fields
- Special Objects
 - Text
 - Image
 - Live System Values
 - Signatures
- Charts
 - Area Stability per Compound
 - Calibration Accuracy
 - Compounds per Injection
 - Max Peaks
 - Retentiontime Stability of all Comp
 - Retentiontime Stability per Compou
 - Simple Chart
- Method Information
 - Instrument Modules
 - Method Information Basic

Sequence Summary Report
Creation Date: 8/11/2010 11:13:11 AM

Body

DAD1 A: 254.4 Ref=500.20 (DemoData 1.D)

DAD1 A: 254.4 Ref=500.20 (DemoData 2.D)

DAD1 A: 254.4 Ref=500.20 (DemoData 3.D)

Sequence Summary Report
Creation Date: 6/9/2010 8:55:42 PM

Sequence: LIR-2007-1 2009-10-15 10-23-32
Description: First Sequence for Agilent OL Reporting
Acq. Date: 2/27/2007 11:43:47 AM
Acquired by: R. Honsberg

Sample Name	Tramadol Wt	Tablet Wt	% Target	Pass/Fail
Sample 1	1007.385	1110	100.7	Pass
Sample 1	1007.929	1110	100.8	Pass
Sample 2	1005.274	1120	100.8	Pass
Sample 2	1009.424	1120	100.9	Pass
Sample 3	1011.853	1003	101.2	Fail
Sample 3	1014.773	1003	101.5	Fail
Sample 4	1010.703	1205	101.1	Fail
Sample 4	1012.401	1205	101.2	Fail
Sample 5	1008.512	1170	100.9	Pass
Sample 5	1007.758	1170	100.8	Pass
Sample 6	1012.712	1111	101.3	Fail
Sample 6	1015.278	1111	101.5	Fail

New custom reporting application – embedded into OpenLAB CDS

Easily include graphics such as your company logo

Intuitive report template generation with drag & drop and interactive report preview functionality

Pre-configured report items (tables, graphics, matrices) make it easy to generate custom reports

Embedded custom calculation functionality to calculate final results – here %label claim

Intelligent Reporting: Including limit checks into report Decision-based result representation (pass/fail)

All current reporting options in ChemStation and EZChrom remain available

Problem / Solution

Problem

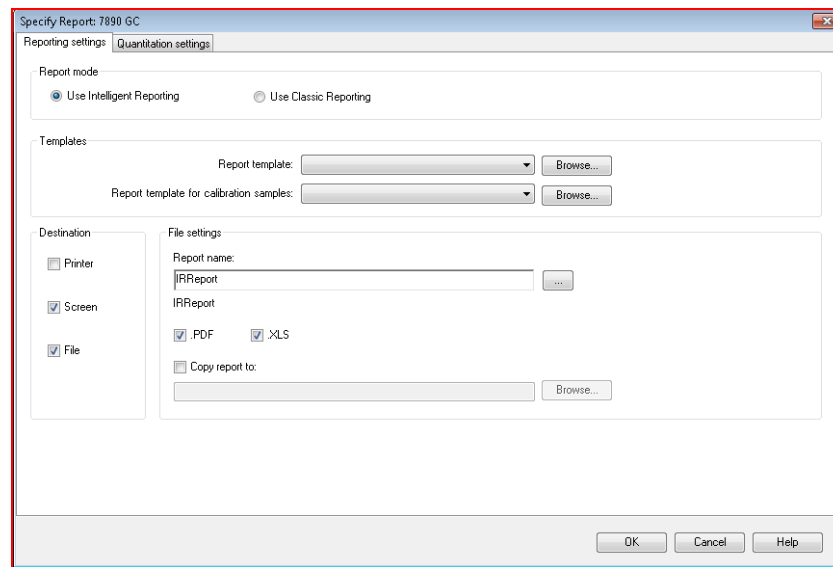
- I need to be able to easily create reports with statistical calculations.
- I want to highlight results that need a reviewer's attention.

Solution

OpenLAB CDS Intelligent Reporting

OpenLAB CDS: Intelligent Reporting

- Intuitive Customized Reports
- Calculations
 - Statistical Calculations (Sum, RSD, Average)
 - Custom Calculations
- Set limits to flag data
- Report output formats *.pdf, *.xls
- Save a copy of the single injection report to another location



Problem / Solution

Problem

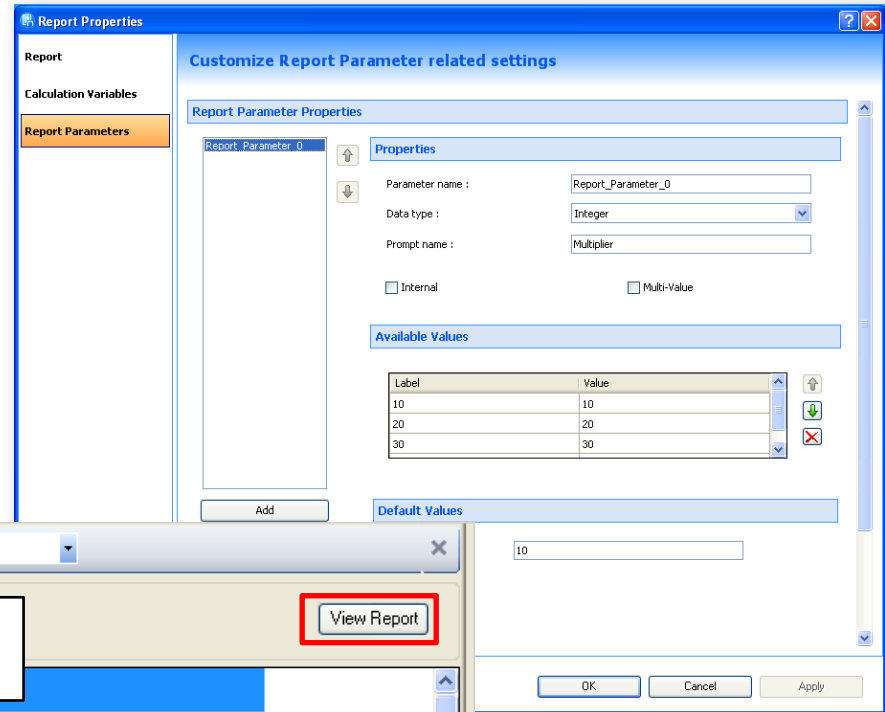
I want to easily adjust multipliers when creating the report.

Solution

OpenLAB CDS Intelligent Reporting: User-entered parameters

Intelligent Reporting: Report parameters

- Create/Edit report parameters as part of report properties
- Allow user to enter values during rendering
- Use of report parameters in expression editor (calculations, sorting, filtering etc.) allows to user to interact with the report content and change the behavior without changing the template



The screenshot shows the report rendering interface. A 'Report Parameters' dialog box is open, showing a 'Multiplier' dropdown menu with the value '20' selected. The 'View Report' button is highlighted with a red box. A red arrow points from the 'View Report' button to the report table below.

The report table displays the following data:

Name	RT [min]	Area	Amount [ng/ul]	Multiplier	Amount (corrected)
c10	4.374	2269.9009	98.903	20	1978.06
c11	4.935	2272.0645	98.416	20	1968.32
c12	5.448	2376.7705	98.062	20	1961.24
c13	5.924	2352.6052	98.184	20	1963.69
c14	6.37	2346.7683	97.81	20	1956.20
c15	6.792	2366.4912	97.659	20	1953.19
c16	7.19	2317.2615	97.757	20	1955.15

The 'Multiplier' and 'Amount (corrected)' columns are highlighted with red boxes. A red arrow points from the 'View Report' button to the 'Amount (corrected)' column. A text box with the text 'Use user-entered parameters in calculations' is positioned below the table, with a line pointing to the 'Amount (corrected)' column.

Problem / Solution

Problem

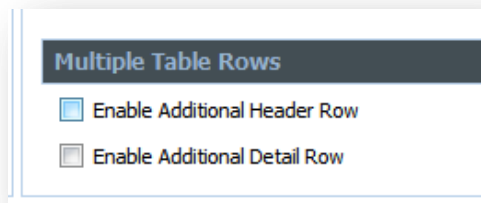
I need to control cost in my laboratory when printing out reports.

Solution


OpenLAB CDS Intelligent Reporting: Double-row tables allow you to create paper-saving reports.

Intelligent Reporting: Double row table

- Allow to design tables with two headers and two detail rows
- Summary calculations for both detail rows
- Especially useful for reports where you want to fit a lot of information onto one page



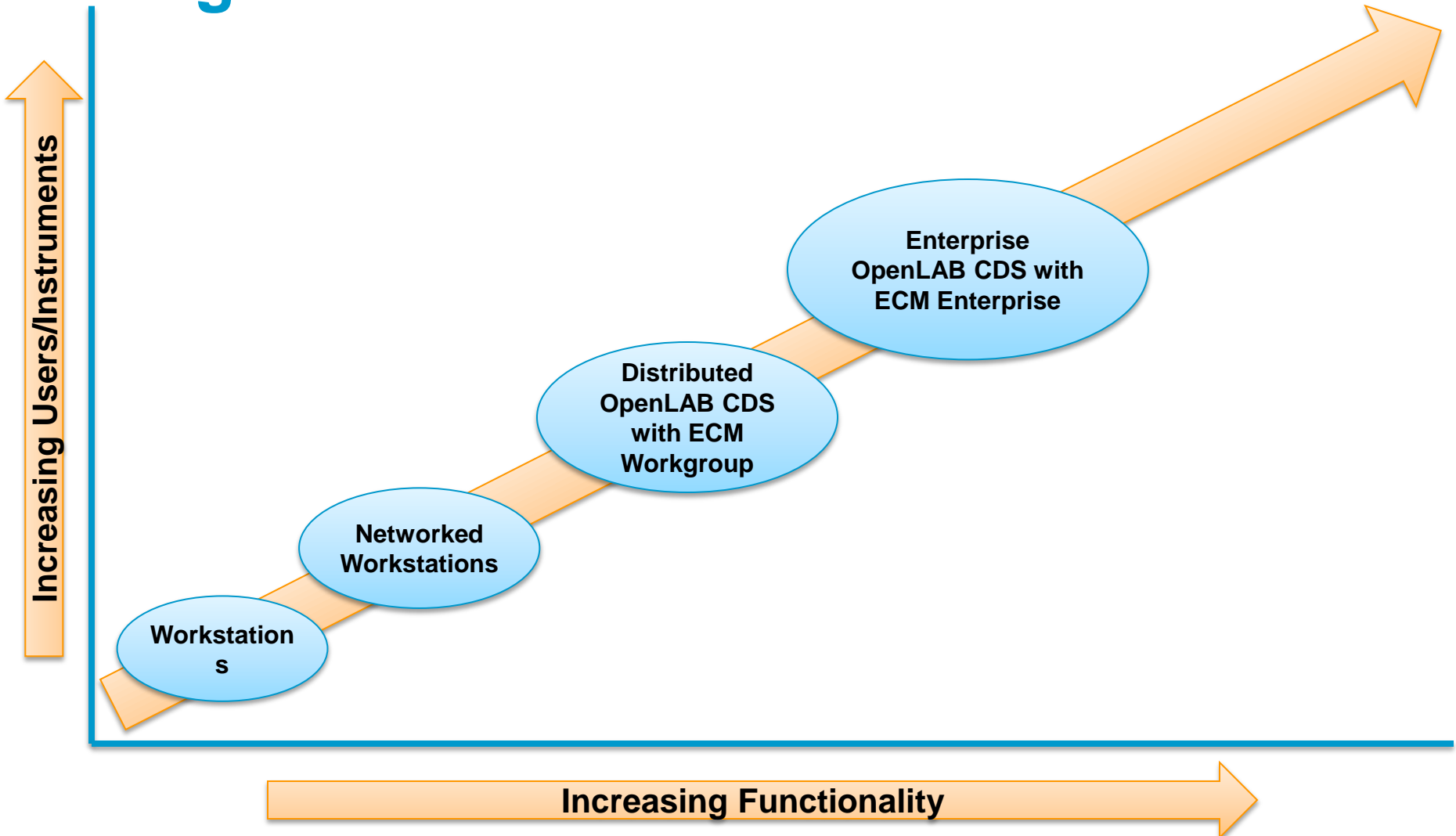
Single Injection Report



Name	RT [min]	Area	Height	Area %	Height %	Amount [ng/ul]
		Signal Desc.	RF			
c10	4.374	2269.9009	1367.9119	13.92	14.16	98.903
		FID1 A,	0.04357			
c11	4.935	2272.0645	1365.1278	13.94	14.13	98.416
		FID1 A,	0.04332			
c12	5.448	2376.7705	1464.0107	14.58	15.15	98.062
		FID1 A,	0.04126			
c13	5.924	2352.6052	1390.4696	14.43	14.39	98.184
		FID1 A,	0.04173			
c14	6.37	2346.7683	1383.3612	14.40	14.32	97.81
		FID1 A,	0.04168			
c15	6.792	2366.4912	1345.9601	14.52	13.93	97.659
		FID1 A,	0.04127			
c16	7.19	2317.2615	1345.5991	14.21	13.93	97.757
		FID1 A,	0.04219			

In addition.....

OpenLAB CDS: Scalable in Storage, Lab Management and Administration



OpenLAB CDS Networked Workstation with OpenLAB ECM configuration

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.

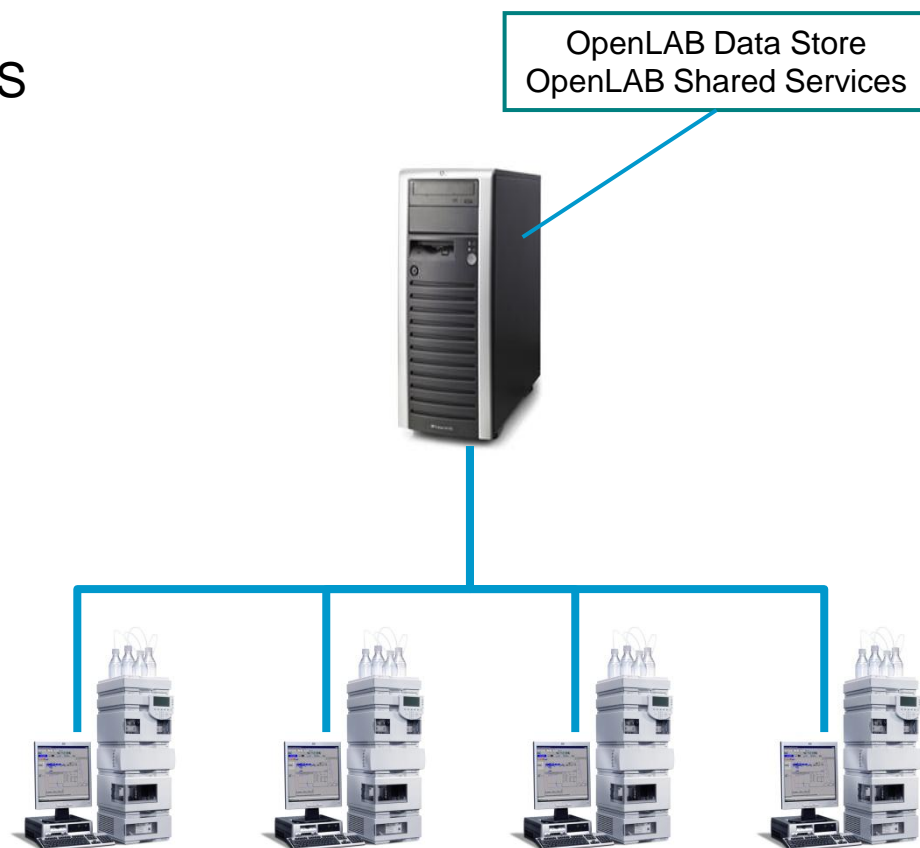
OpenLAB Data Store – Central Data Storage for OpenLAB CDS

Efficient Data Storage and Retrieval

- ✓ Centralized Storage for OpenLAB CDS
- ✓ Project-based organization and user privileges (EZChrom)
- ✓ Efficient search and retrieval of files
- ✓ Local Language Support (Chinese & Japanese)

21 CFR Part 11 Compliant

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



For More Information ...



For more information, check the Agilent web site
or contact your Agilent sales representative.