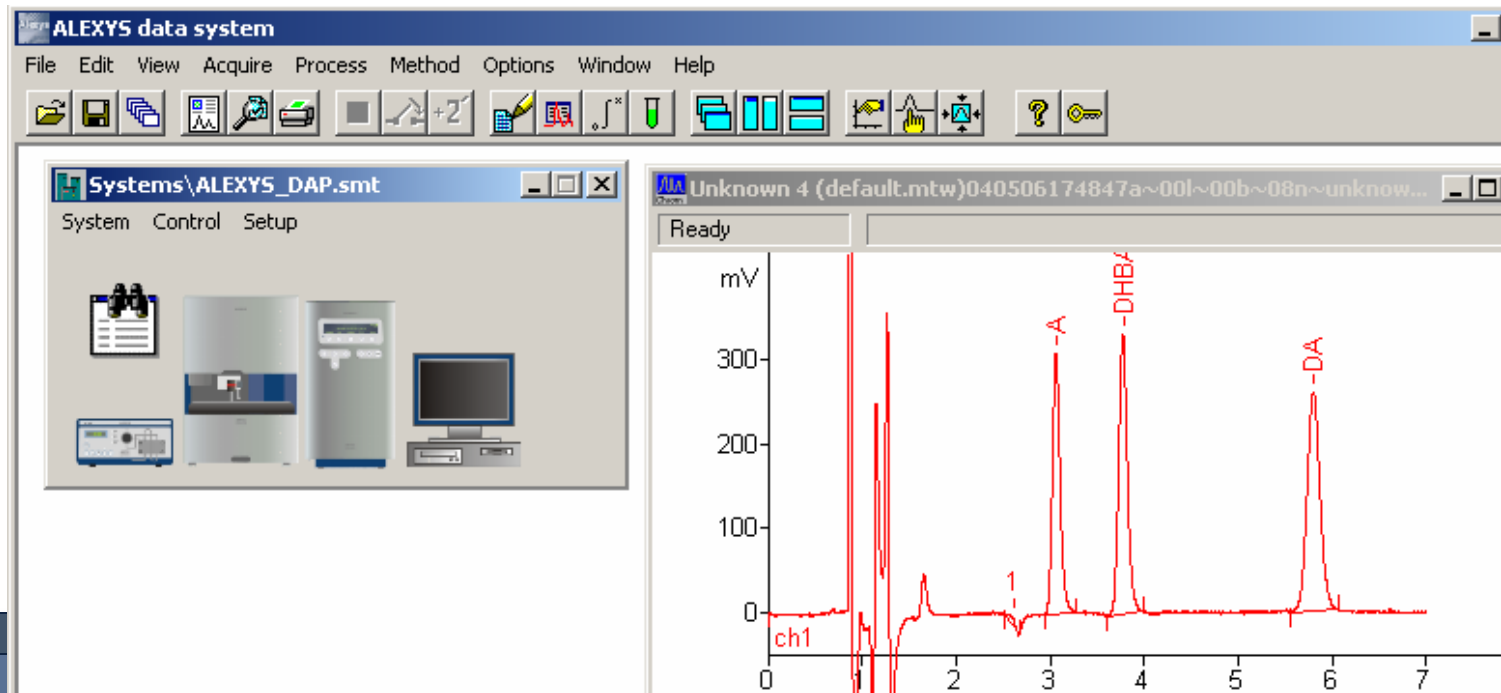


Concept of ALEXYS data system

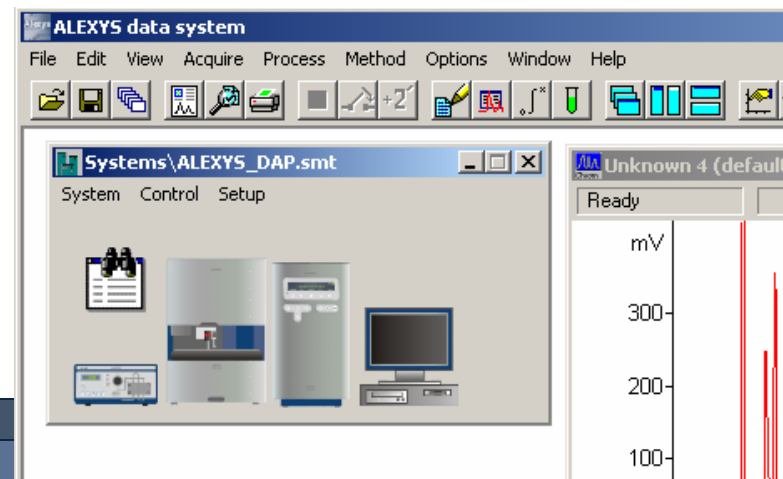


This is not a tutorial.....

- In this presentation the concept of ALEXYS is explained with a special focus on file structure
- For detailed information how to use the software, we refer to the tutorials on this website.



- What is ALEXYS data system?
- ALEXYS data system is a fully featured acquisition software, with all the tools for automated data acquisition, calibration, processing and reporting.



- I know about data acquisition and instrument control. But what should I know about ALEXYS, before getting started?
- Before getting started you should know about the file structure. How do systems, methods, queues and chromatograms interrelate?



ALEXYS file structure

- Working with ALEXYS results in several files:
 - System (*.smt)
 - Method (*.mtw)
 - Chromatogram (*.chw)
 - Queue (*.que)
 - Batch (*.bar)

- Where do I find a System or Method file, and what are they good for?



Systems and methods

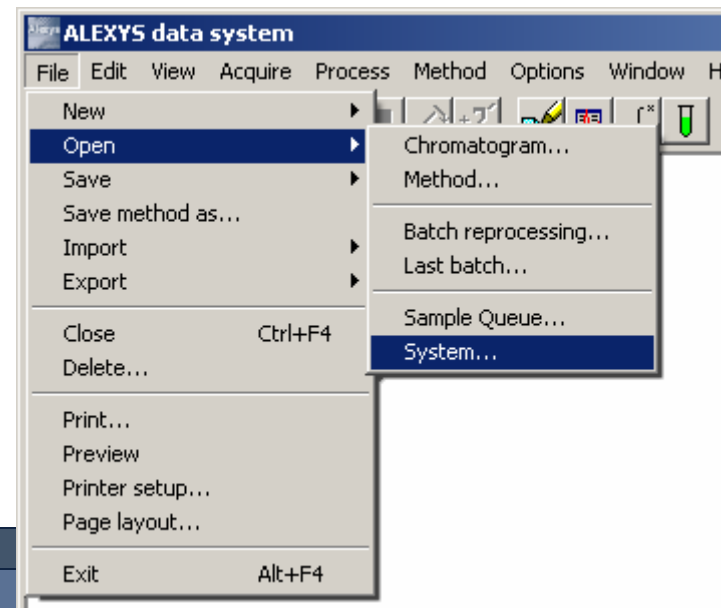
- System file contains:
 - all device settings (detector, pump, autosampler)
 - acquisition channels and link to a method (in 'Recorder')
 - manual control of acquisition (start/stop, start mode)

- Method file contains:
 - run duration and data directory
 - automatic integration settings
 - calibration data: peak & concentration table and graph



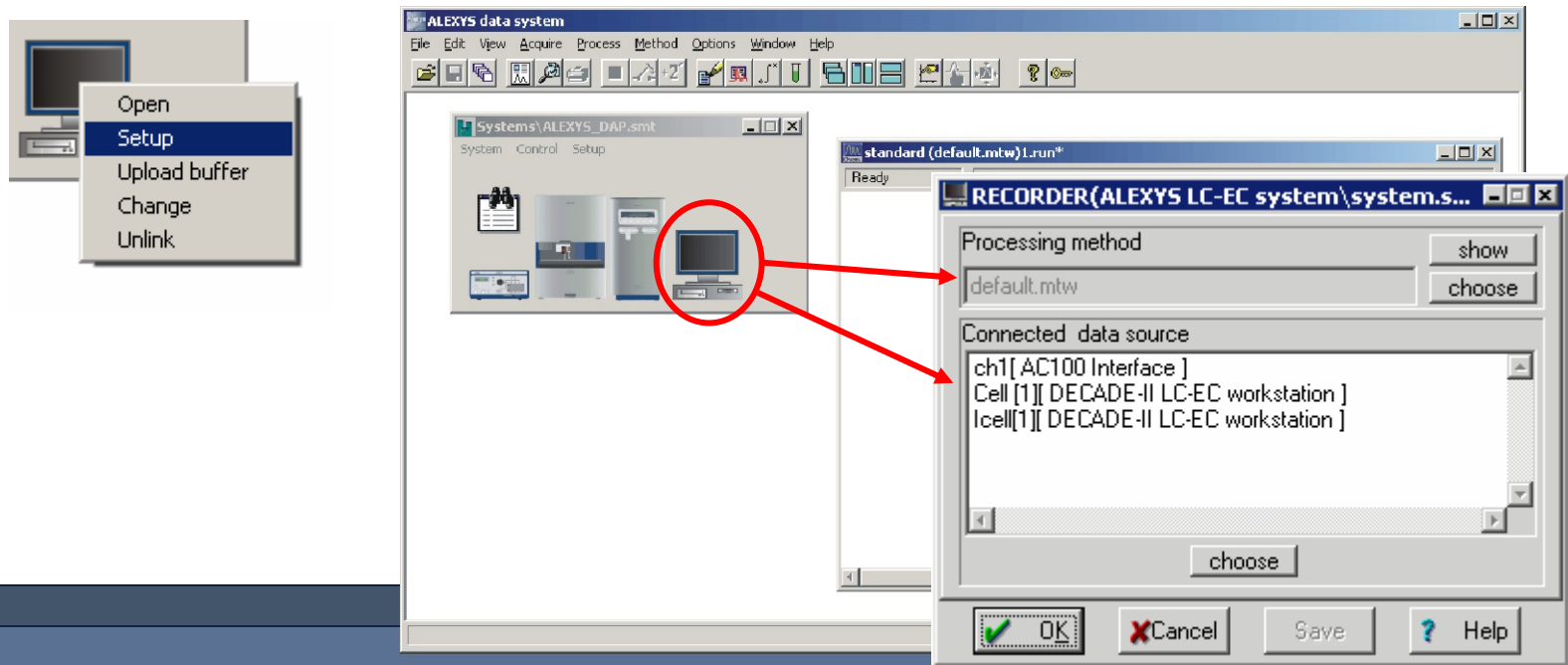
Open System

- System files are opened via the File menu.



Recorder

- Recorder:
 - links a method file to the system
 - contains data source (acquisition channels)



Systems and methods

- Method is opened by double click on the Recorder
 - Details are set via main menu/method/method setup



System (*.smt):

- device settings
- acquisition channels
- start/stop:
 - * connect workplace
 - * start mode

Method (*.mtw):

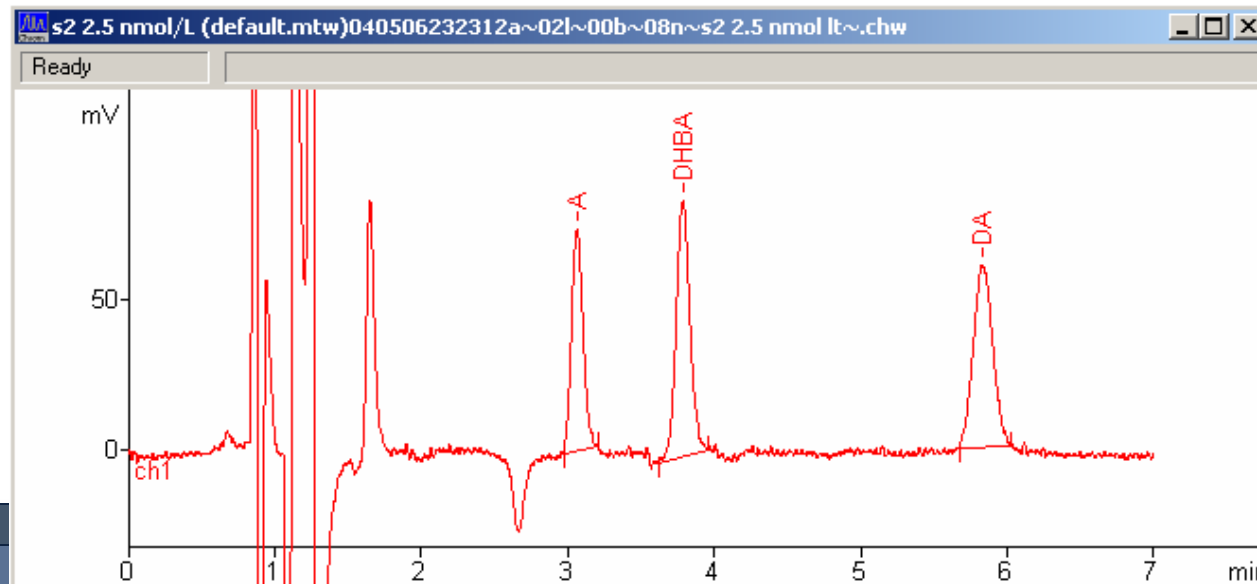
- run duration
- data directory
- integration settings
- calibration:
 - * component table
 - * concentrations table
 - * graph

- Why treat Systems and Methods as separate files?
- Keeping Systems and Methods in separate files offers flexibility in configuring data acquisition the way that is most convenient for you.

To give one example: a System can have 2 Recorders, each with their own Method. Consequently, data of each Recorder can be put in another directory (data path is stored in Method). A small but important feature to keep your data organised!

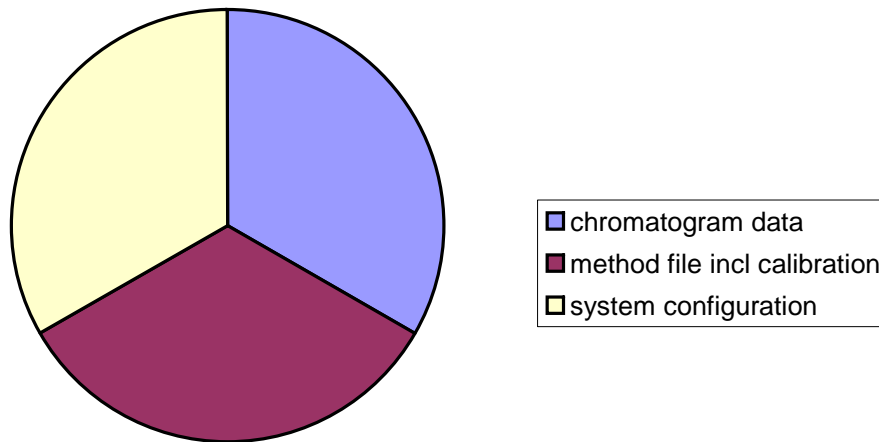


- What is special about a Chromatogram file?
- A chromatogram (*.chw) does not only contain data, but also the System and Method definition.



Chromatogram

- An ALEXYS chromatogram contains more than data
 - Data, System, Method (incl. calibration)

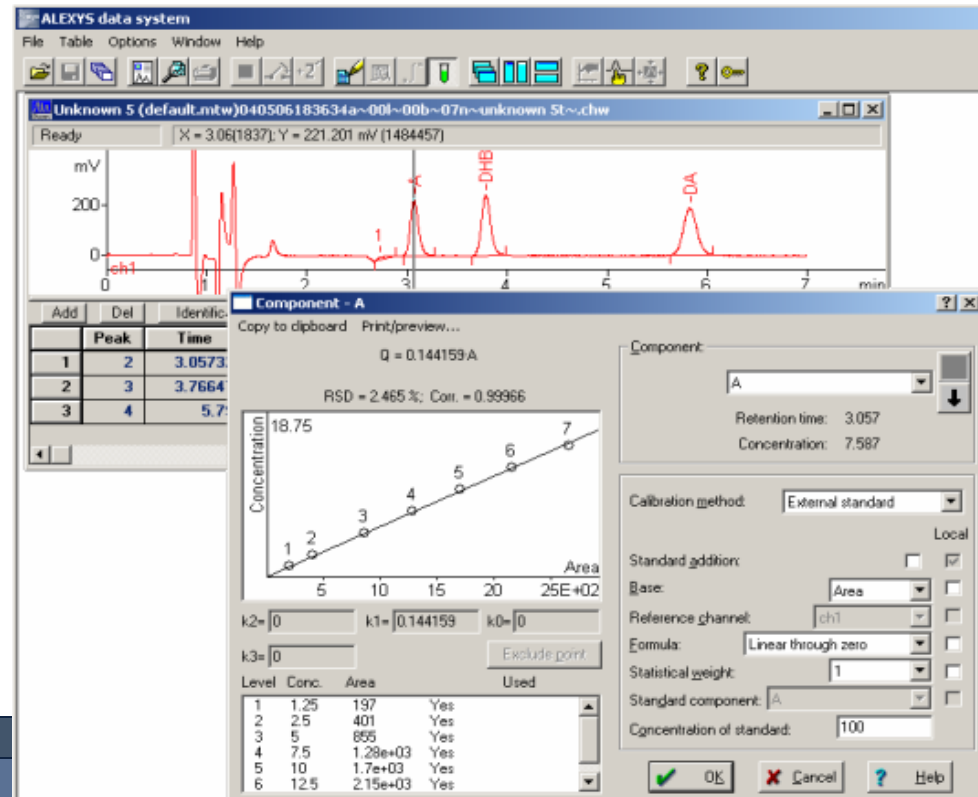


- Why storing all this information with each Chromatogram?
- It means that you have always instant access to all original device settings and method configuration, when opening a chromatogram. It guarantees not only the integrity of data, but off all relevant settings.

Moreover, exchanging or sharing configuration settings and results between systems is as simple as sending an email with only one chromatogram!

Chromatogram

- Full calibration data stored in each chromatogram (if part of a calibration queue)



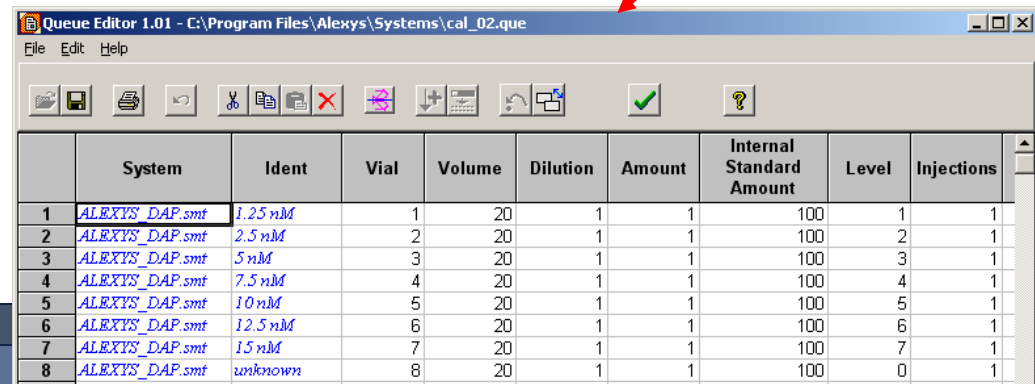
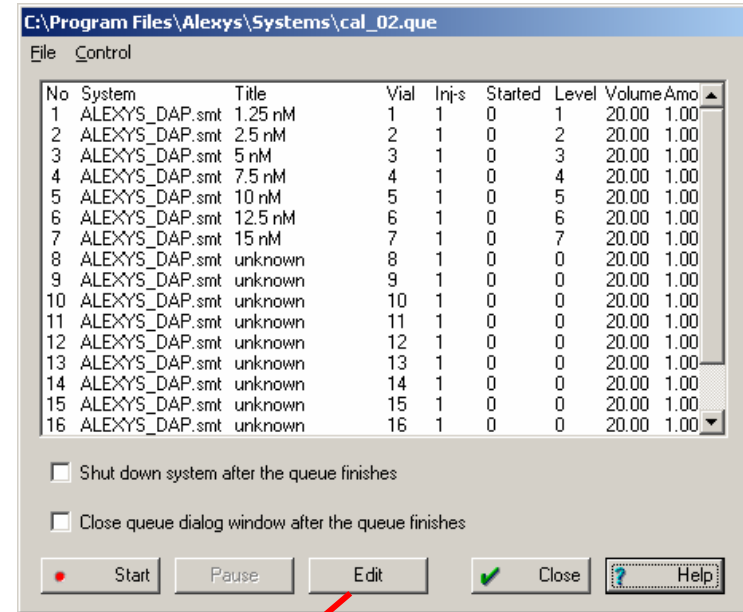
- What is a sample queue?
- A sample queue is used for automatic processing of samples using an autosampler. The method, number of replicate injections, injection volume, calibration level and sample description is specified by vial number.

A calibration queue is a sample queue with calibration standards (see special on calibration on the tutorial web page).



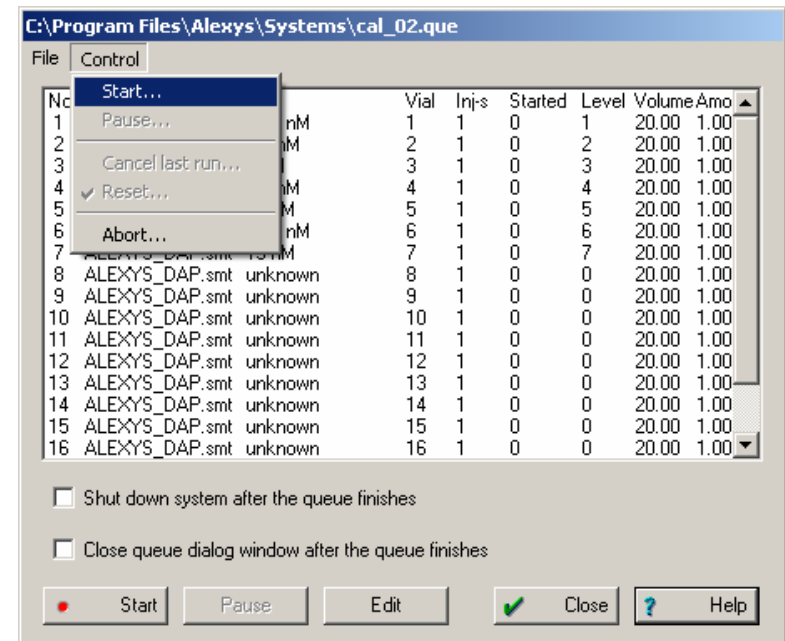
Sample queue

- Specifies analysis details for each sample by vial number
- Queue editor is a tool for creating a sample queue

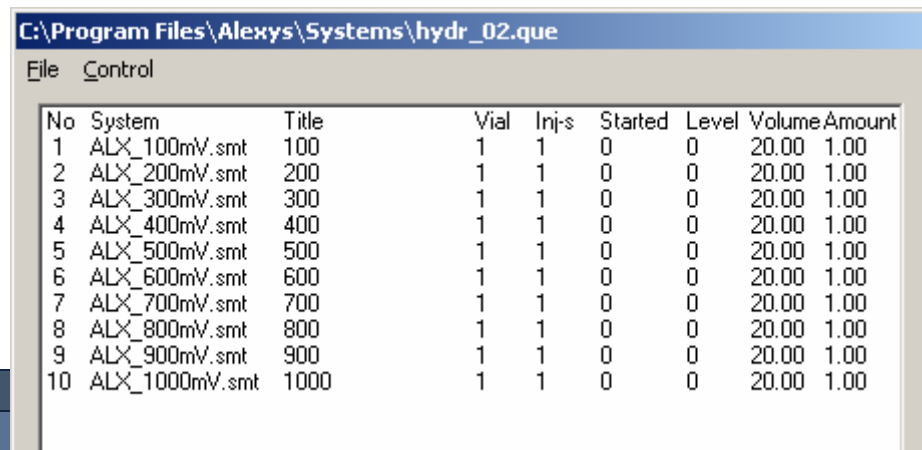


Running a sample queue

- From the control menu a queue can be started or aborted



- Is there anything special about this sample queue?
- To mention one, you can specify another system for each analysis. This allows you for example, to run a hydrodynamic voltammogram using a different detection potential for each run.



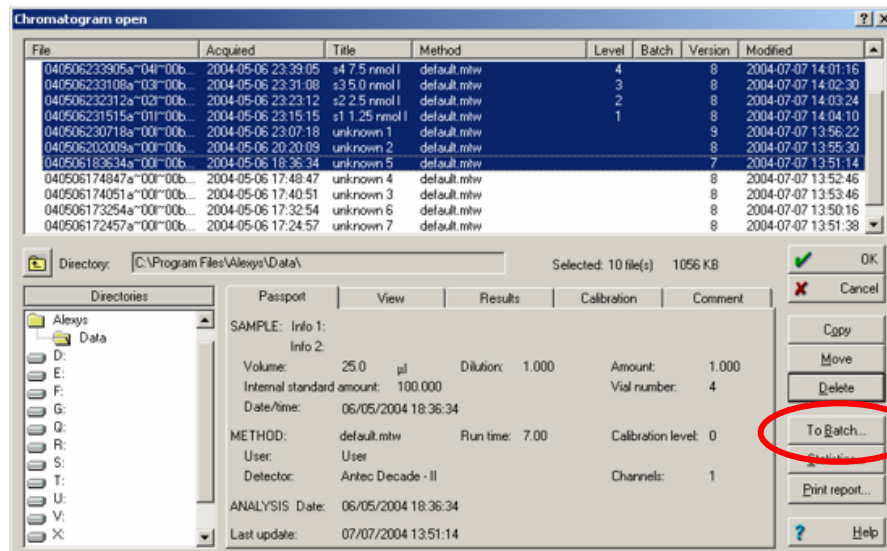
No	System	Title	Vial	Inj-s	Started	Level	Volume	Amount
1	ALX_100mV.smt	100	1	1	0	0	20.00	1.00
2	ALX_200mV.smt	200	1	1	0	0	20.00	1.00
3	ALX_300mV.smt	300	1	1	0	0	20.00	1.00
4	ALX_400mV.smt	400	1	1	0	0	20.00	1.00
5	ALX_500mV.smt	500	1	1	0	0	20.00	1.00
6	ALX_600mV.smt	600	1	1	0	0	20.00	1.00
7	ALX_700mV.smt	700	1	1	0	0	20.00	1.00
8	ALX_800mV.smt	800	1	1	0	0	20.00	1.00
9	ALX_900mV.smt	900	1	1	0	0	20.00	1.00
10	ALX_1000mV.smt	1000	1	1	0	0	20.00	1.00

- What is a batch file?
- A batch is a collection of chromatograms. A batch can be used to make an overlay, or to reprocess chromatograms using the same set of parameters.

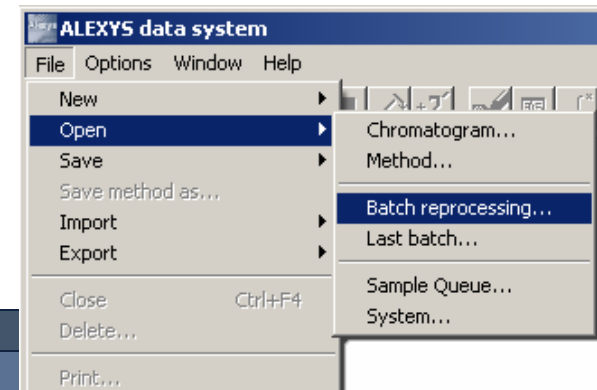


Batch reprocessing

- Starting a new batch

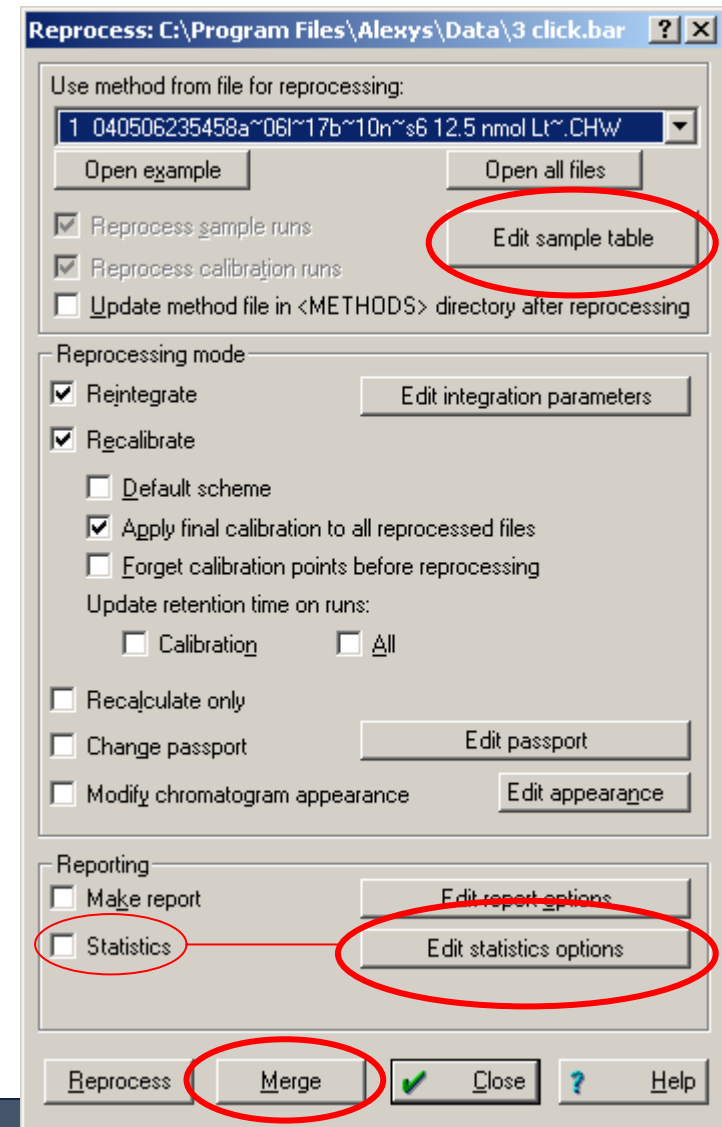


.... or open an existing one



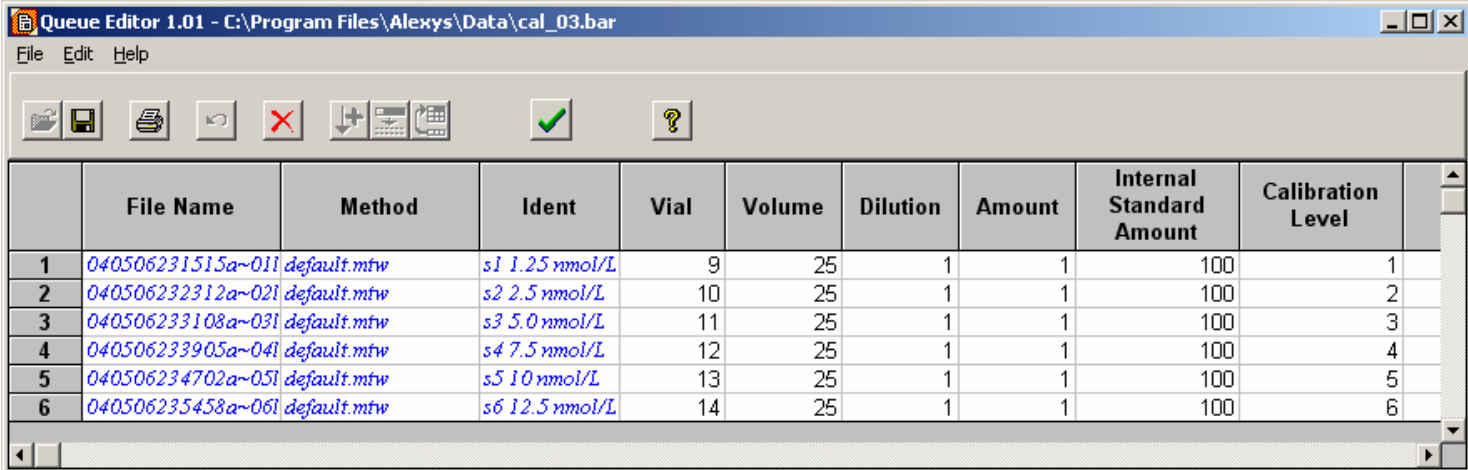
Reprocess window

- From the reprocess window, a number of actions can be selected
- We look at results from 3 actions:
 - Edit sample table
 - Statistics report
 - Merge



Edit sample table

- Opens a special version of the queue editor window
- Allows editing of calibration level and several (not all) info fields
 - For example: to configure your calibration after running all samples
 - After editing and closing, Reprocess can be applied



Queue Editor 1.01 - C:\Program Files\Alexys\Data\cal_03.bar

File Edit Help

Queue Editor 1.01 interface showing a table of sample data. The table has columns: File Name, Method, Ident, Vial, Volume, Dilution, Amount, Internal Standard Amount, and Calibration Level. The data is as follows:

	File Name	Method	Ident	Vial	Volume	Dilution	Amount	Internal Standard Amount	Calibration Level
1	040506231515a~01	default.mtw	s1 1.25 nmol/L	9	25	1	1	100	1
2	040506232312a~02	default.mtw	s2 2.5 nmol/L	10	25	1	1	100	2
3	040506233108a~03	default.mtw	s3 5.0 nmol/L	11	25	1	1	100	3
4	040506233905a~04	default.mtw	s4 7.5 nmol/L	12	25	1	1	100	4
5	040506234702a~05	default.mtw	s5 10 nmol/L	13	25	1	1	100	5
6	040506235458a~06	default.mtw	s6 12.5 nmol/L	14	25	1	1	100	6

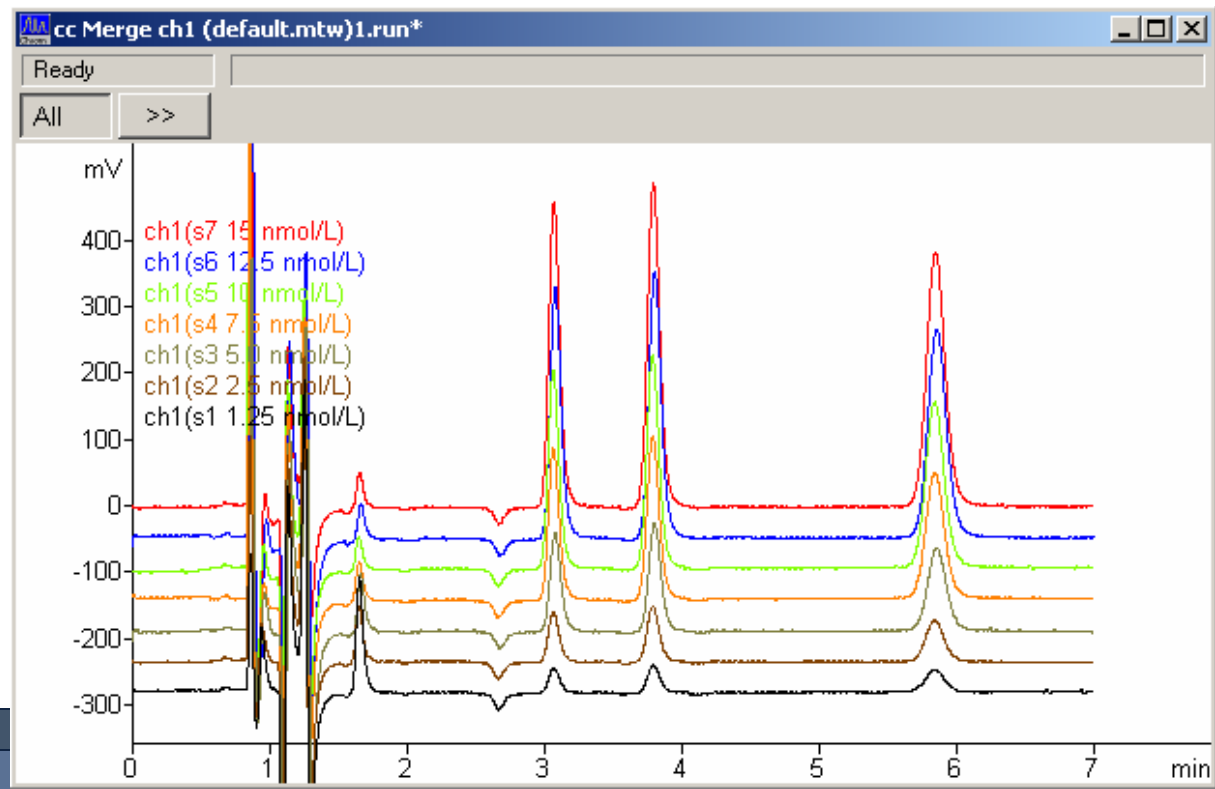
Statistics report

- Reprocess with 'statistics' is used to prepare a report table

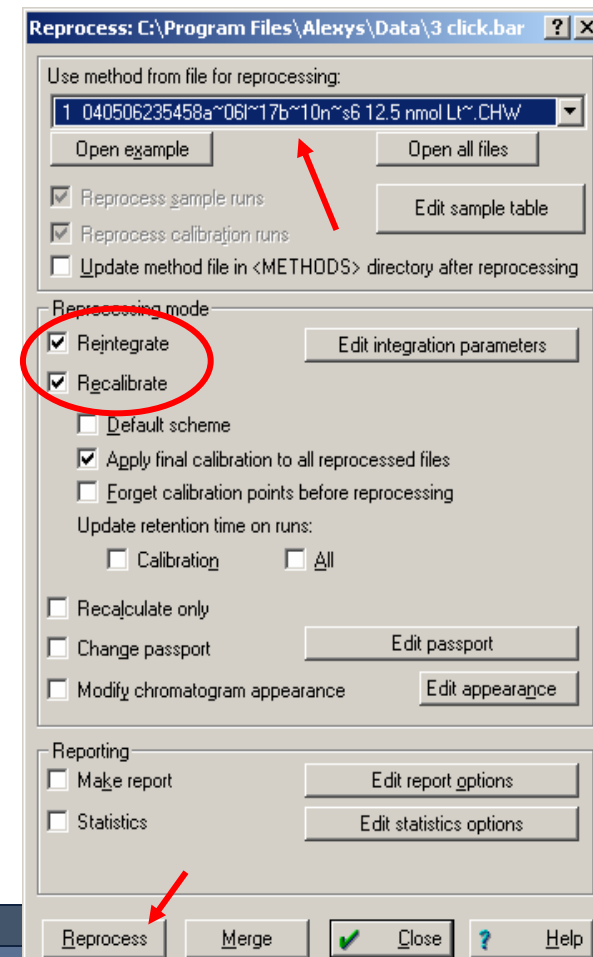
Component: A						
File	Title	Date & Time	Retention	Height	Area	Conc.
			min	mV	mV*s	nmol/L
1	Unknown 8	6-5-2004 17:16	3.043	41.14	235.76	1.36
2	Unknown 7	6-5-2004 17:24	3.048	81.32	457.79	2.64
3	Unknown 6	6-5-2004 17:32	3.057	154.90	884.05	5.10
4	Unknown 3	6-5-2004 17:40	3.050	233.24	1320.49	7.61
5	Unknown 4	6-5-2004 17:48	3.061	307.60	1740.18	10.03
6	Unknown 5	6-5-2004 18:36	3.069	231.78	1315.75	7.59
7	Unknown 2	6-5-2004 20:20	3.066	75.49	424.73	2.45
8	Unknown 1	6-5-2004 23:07	3.064	36.92	196.98	1.14

Merge

- Clicking 'Merge' is used for chromatogram overlay



- I see a lot of options and buttons, are there any other special features in batch reprocessing?
- Many, to mention one more: you can reprocess all your data using one chromatogram (or to be more specific: its method) as template. Changes in peak table, or integration settings are applied to all other selected chromatograms.



More information....

- For more details on the ALEXYS data system we refer to the manual, and to the ALEXYS screen recordings on this same website.

