SOP 050 – Sequence Setup – Agilent Chemstation Software

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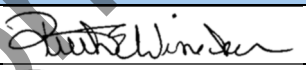
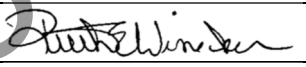
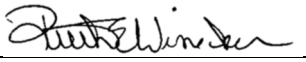
North Carolina Office of the Chief Medical Examiner Toxicology Laboratory	**Revision:**	**Revision Date/Initials:**
Approving Authority Name	**Approving Authority Signature**	**Approval Date**
Ruth E. Winecker, Ph.D.		04/07/2015
Ruth E. Winecker, Ph.D.		06/10/2016
Ruth E. Winecker, Ph.D.		08/29/2017

SOP 050 – Sequence Setup – Agilent Chemstation Software

1. Principle

1.1. This procedure is designed to aid the user in setting up an instrument sequence used to analyze Organic Base Screen, Acid and Neutral Screen and Quantification methods with an Agilent GC (NPD, FID) and/or an Agilent GC/MS.

2. Specimens

2.1. N/A

3. Reagents and Materials

3.1. N/A

4. Instrumentation and Equipment

4.1. Agilent GC (NPD, FID) or Agilent GCMS

4.2. Agilent Chemstation Software

4.3. Data reporting system (PC)

5. Procedure

5.1. Sequence Setup (Agilent GC/MS)

5.1.1. On an instrument PC with Agilent Chemstation Software installed, open the Chemstation software by double-clicking the Shortcut.

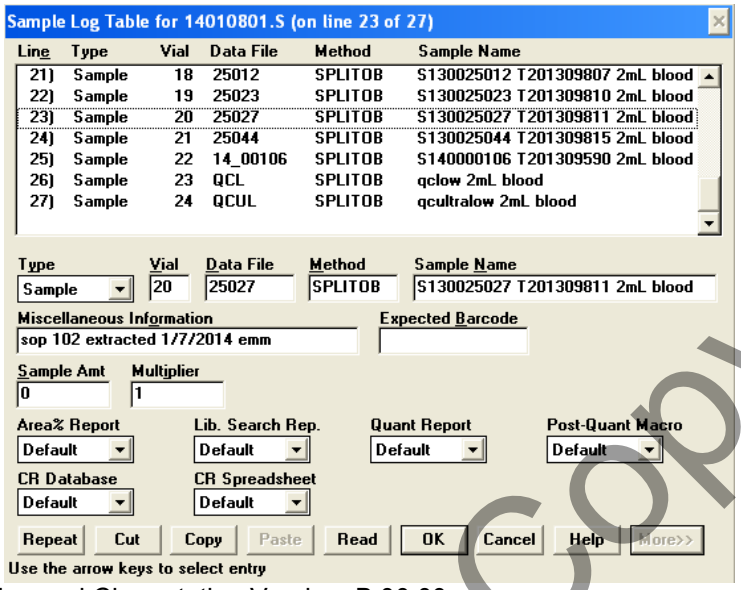
5.1.1.1. 

5.1.2. From the menu bar, select "View – Top" (Skip this step if using version E.02.02.1431 or above).

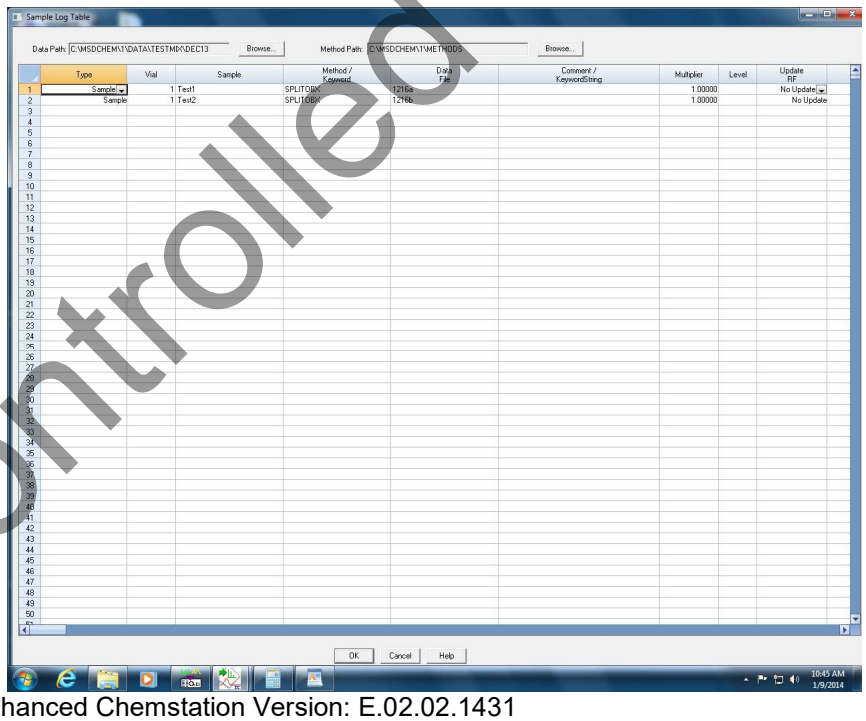
5.1.3. Load a previous sequence to use as a template.

5.1.3.1. Select "Sequence – Load ..." In the Load Sequence Window, navigate to C:\HPCHEM\1\Sequence and select a sequence to load.

5.1.3.2. From the menu bar, select "Sequence – Edit Sample Log Table" to open the Sequence for editing.



5.1.3.2.1. Enhanced Chemstation Version: B.00.00



5.1.3.2.2. Enhanced Chemstation Version: E.02.02.1431

5.1.3.3. Before editing sequence, save the new sequence by selecting "Sequence – Save" ("Sequence – Save Sequence as" in later software versions).

5.1.3.4. In the file name field, enter the load number minus the 1st two digits (2013010705 becomes 13010705).

5.1.3.5. Enter the following information for each specimen in the order they are to be injected starting at the top of the sequence table. Click on the Repeat Button to add a new line (or arrow down in newer software versions).

5.1.3.5.1. Type = Sample

5.1.3.5.2. Vial = The position the specimen is to be placed on the autosampler

5.1.3.5.3. Data File = Unique identifier for each Specimen – Typically the Standard Level, QC level, or Blank (all differentiated by matrix type) or the last 4 or 5 digits of the S#. If a specimen is to be injected in duplicate, the letter "d" is entered at the end of the data File name).

5.1.3.5.4. Method = instrument Method to be used to collect data

5.1.3.5.5. Sample Name = Description of Control or Complete S# and T# followed by aliquot volume and matrix type (see 5.1.3.2.1)

5.1.3.5.6. Miscellaneous Information = Contains the SOP description, extraction date, and analyst initials.

5.1.3.5.7. Multiplier = Dilution factor of Specimen. (Click the "More>>" button to view this field in earlier software versions).

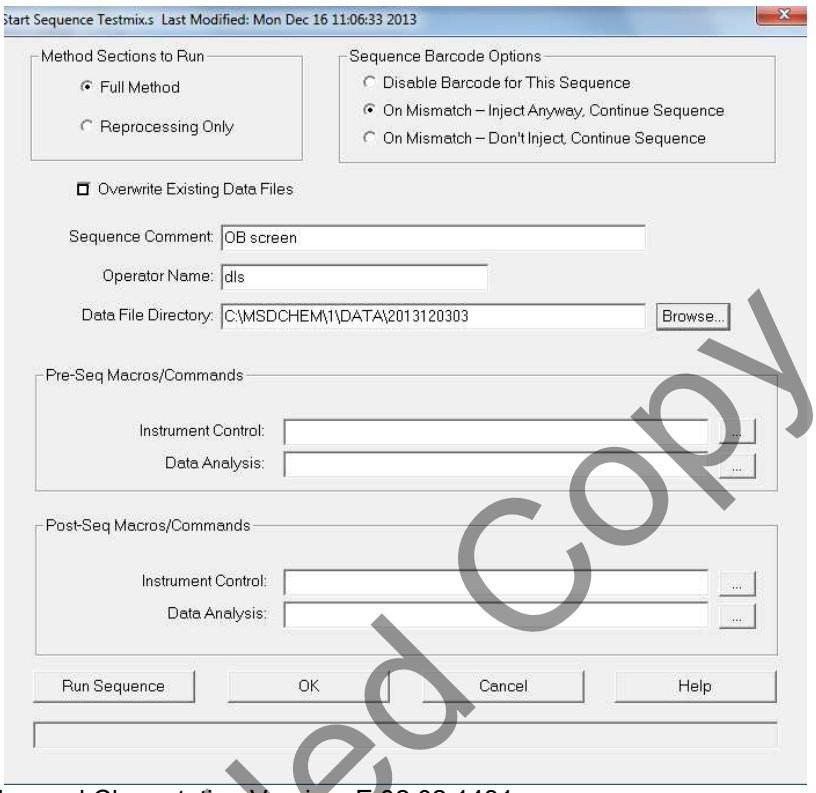
5.1.3.6. Once sequence information is entered, Save (overwrite) the Sequence.

5.1.3.7. To print the sequence table for verification, select "Sequence – Simulate Sequence" – the software will run through the sequence to check for errors and check hard drive space.

5.1.3.8. Select "File – Print" to print the sequence.

5.1.3.8.1. Have another analyst verify the printed sequence table against the vial positions in the autosampler tray.

5.1.3.9. To start the run, select "Sequence – Run" (see below).



5.1.3.9.1. Enhanced Chemstation Version: E.02.02.1431

5.1.3.10. Enter assay name in the “Sequence Comment” Field

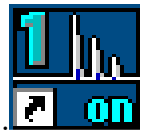
5.1.3.11. Enter Analyst initials in the “Operator Name” Field

5.1.3.12. Enter the correct Path for the data files (C:\HPCHEM\1\DATA\”Truncated Load Number”) in the “Data File Directory” field.

5.1.3.13. Select “Run Sequence” and wait until the first autosampler vial in injected into the instrument.

5.2. Sequence Setup (Agilent GC)

5.2.1. On an instrument PC with Agilent Chemstation Software installed, open the Chemstation software by double-clicking the Shortcut.

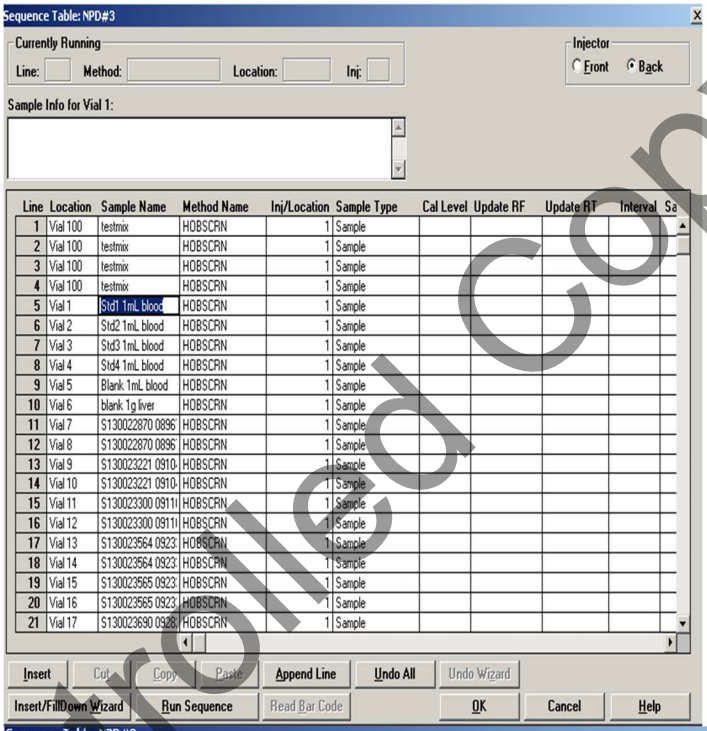
5.2.1.1. 

5.2.2. Load a previous sequence to use as a template.

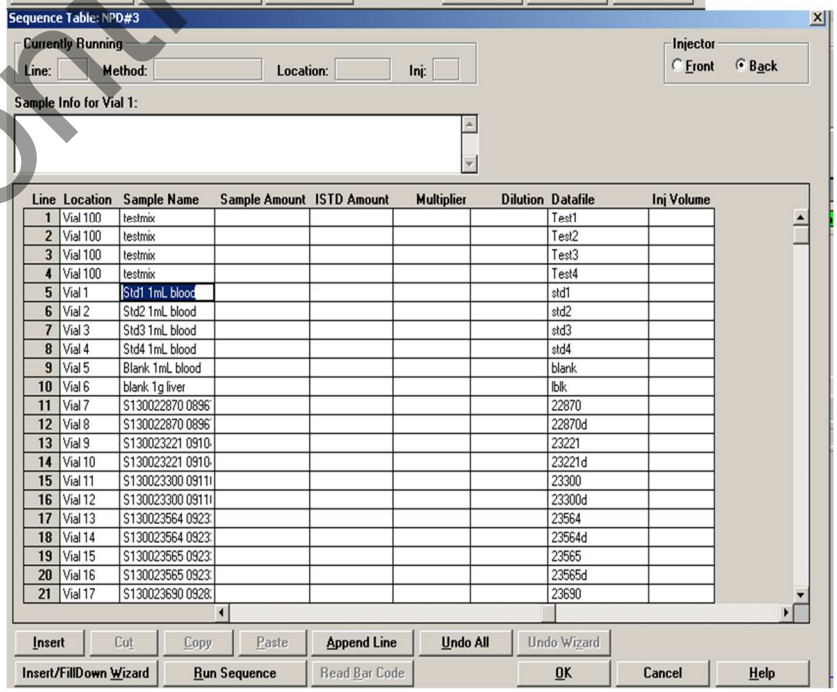
5.2.2.1. Select “Sequence – Load Sequence ...” In the Load Sequence Window, navigate to C:\HPCHEM\1\Sequence and select a sequence to load.

5.2.2.2. From the menu bar, select “Sequence – Sequence Table” to open the Sequence for editing.

5.2.2.2.1.



5.2.2.2.2.



5.2.2.3. Enter the following information for each specimen in the order they are to be injected starting at the top of the sequence table. Click on the "Append Line" button to add a new line.

5.2.2.3.1. Location = The position the specimen vial is to be placed on the autosampler tray

5.2.2.3.2. Sample Name = Description of Control or Complete S# and Partial T# (to be completed during data reduction

5.2.2.3.3. Method Name = instrument Method to be used to collect data

5.2.2.3.4. Inj/Location = Number of injections for each vial (typically =1)

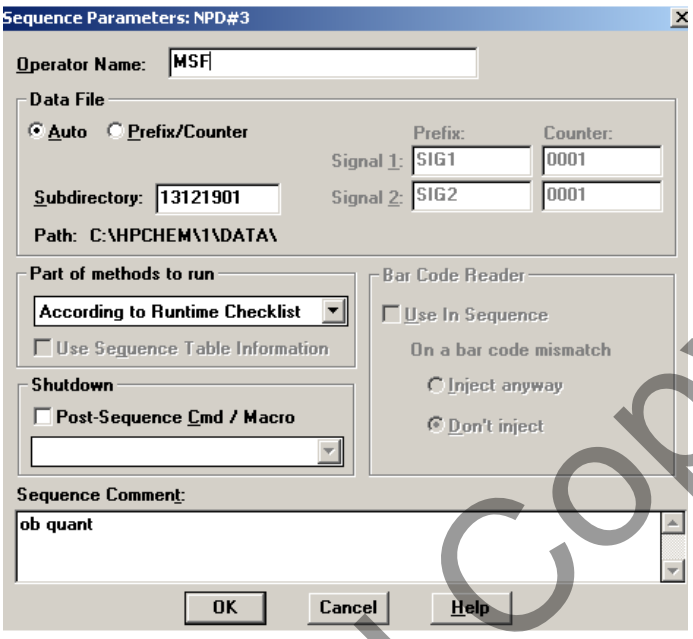
5.2.2.3.5. SampleType = Sample

5.2.2.3.6. Data File = Unique identifier for each Specimen – Typically the Standard Level, QC level, or Blank (all differentiated by matrix type) or the last 4 or 5 digits of the S#. If a specimen is to be injected in duplicate, the letter "d" is entered at the end of the data File name).

5.2.2.4. Once sequence information is entered, Save the Sequence:

5.2.2.4.1. Select "Sequence – Save Sequence As...". In the file name field, enter the load number minus the 1st two digits (2013010705 becomes 13010705).

5.2.2.5. Select "Sequence – Sequence Parameters..."

5.2.2.5.1. 

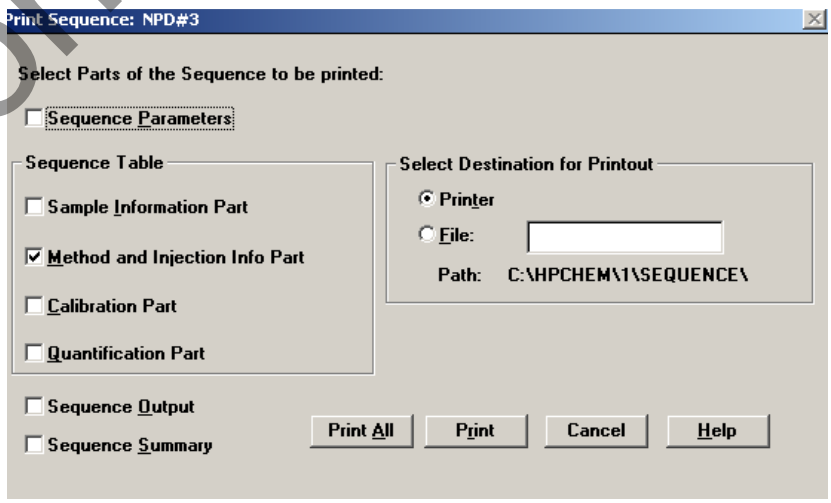
5.2.2.5.2. Enter Analyst initials in the "Operator Name" Field

5.2.2.5.3. Enter the Truncated Load Number in the "Subdirectory:" field

5.2.2.5.4. Click "OK".

5.2.2.6. Save the Sequence: Select "Sequence – Save Sequence ..."

5.2.2.7. To print the sequence table for verification, select "Sequence – Print Sequence"

5.2.2.7.1. 

5.2.2.7.2. Check the box next to "Method and Injection Info Part" and select "Printer" as the Destination for Printout and click "Print All".

5.2.2.8. Have another analyst verify the printed sequence table against the vial positions in the autosampler tray.

5.2.2.9. To start the run, select "Sequence Table... – Run Sequence" and wait until the first autosampler vial in injected into the instrument.

6. References

6.1. *Understanding Your Chemstation*. Waldbronn, Gemany: Agilent Technologies, July 2009. PDF.