Sample run SOP for ECD/FID/TCD

Sparky Jr.[1]
[1]USDA

Apr 05, 2021

1 *Works for me* This protocol is published without a DOI.

PDI Test

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ABSTRACT

Sample run SOP for ECD/FID/TCD by Sparky Jr.

PROTOCOL CITATION

Sparky Jr. 2021. Sample run SOP for ECD/FID/TCD. **protocols.io** https://protocols.io/view/sample-run-sop-for-ecd-fid-tcd-btx2npqe

KEYWORDS

Sample, Run, SOP, ECD, FID, TCD

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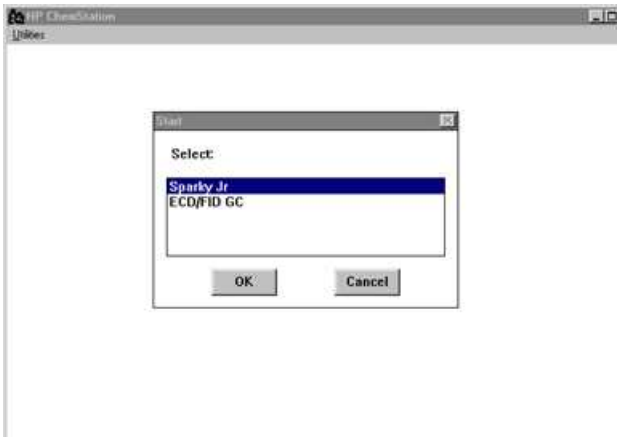
48858

Startup

1 Open HP ChemStation using the shortcut on the desktop

2 Start each instrument listed in the **Utilities** menu:
- SparkyJr
- ECD/FID



Sample Run

3 To run samples on the ECD/FID GC with HP 7694 Headspace Autosampler (Sparky Jr.):

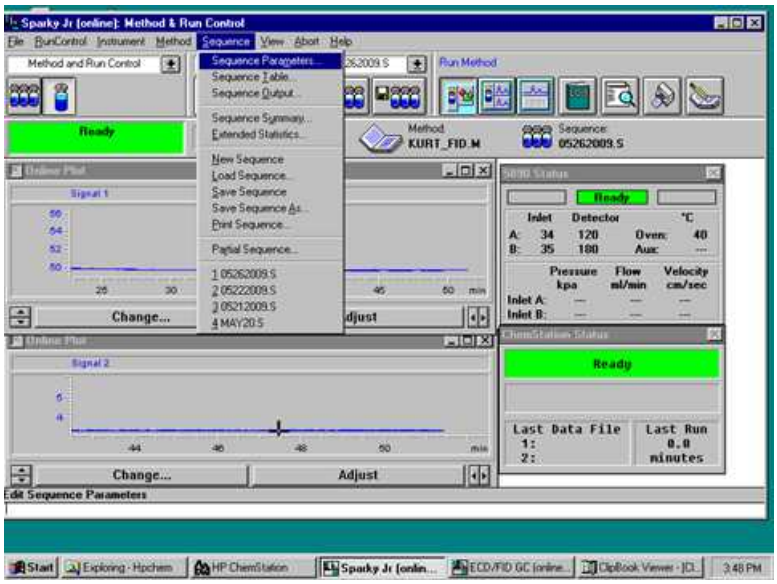
3.1 Create a sequence
- Sequence Parameters
- Sequence Output
- Sequence Summary
- Sequence Table

3.2 Queue the sequence
- Waiting for Injection

3.3 Set vial parameters on HP7694 (Sparky Jr.) and start run
- HP7694

Sequence Setup

4 Set up a sequence for each instrument. Verify that the settings for the following sequence related items are as shown in the SOP.
- Sequence Parameters
- Sequence Output
- Sequence Summary
- Sequence Table



Sequence Parameters for FIDTCD

5 Set the *Sequence Parameters* as shown below. Other than the Subdirectory, these are the default settings, and should not need to be changed for each run.

- Operator Name: "your initials"(Ex. MGD)
- Data File: Prefix/Counter
- Signal 1:
  Prefix: SIG1
  Counter: 0001

Subdirectory: run date (MMDDYYA...Z). HP Chem will automatically create the subdirectory if it does not already exist.
Path: C:\HPCHEM\1\DATA (This can only be changed in the HP Chemstation Utilities tool.)

- Part of methods to run: According to Runtime Checklist
- Sequence Comment: Optional comment regarding samples or sequence, etc.

For ECDFID the parameters are the same except:

- Operator Name: "your initials" (Ex. MGD)
- Data file -- Path: C:\HPCHEM\2\DATA

Sequence Output

6
- Sequence Summary
  Print Sequence Summary Report:
  Report to File
  Signal 1: FIDTCD.TXT for FIDTCD
  Signal 1: ECDFID.TXT for ECD/FID GC

Print individual reports for each run as well

- Destination of individual reports for each run:
  as specified in each Method

The individual reports will be saved in each data folder SIG1XXXX.

Sequence Summary or Setup in Sequence Output

7 Activate report:

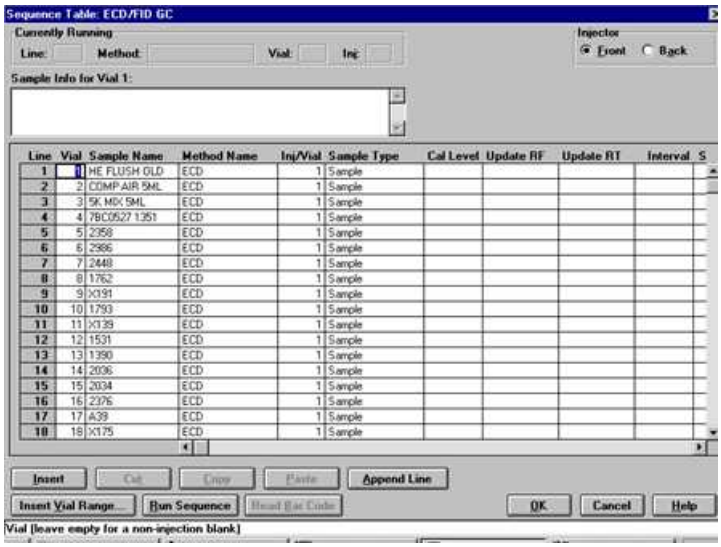
- 8. Statistics sample runs [Standard Statistics]
- 9. Summary [Compound Summary]

Sequence Table

8 Use Insert Vial Range to create a Sequence Table.Create matching Sparky Jr. and ECD/FID GC sequence tables with the same number of samples and corresponding Method Name.

- Method Name
  FID for Sparky Jr.
  ECD for ECD/FID GC
- Start Vial
- End Vial
- Inj/Vial:1

9 Enter sample ID, vial number etc. in Sample Name column of ECD/FID GC sequence table. Whenever possible give some indication of what data set the vials belong to in the first and last sample name for the dataset. For example, 4001 MMDD indicates that the sample run starting with vial# 01 is from the MMDD sampling of incubation Set BC 40. It is not necessary to enter this information in the Sparky Jr. sequence table.

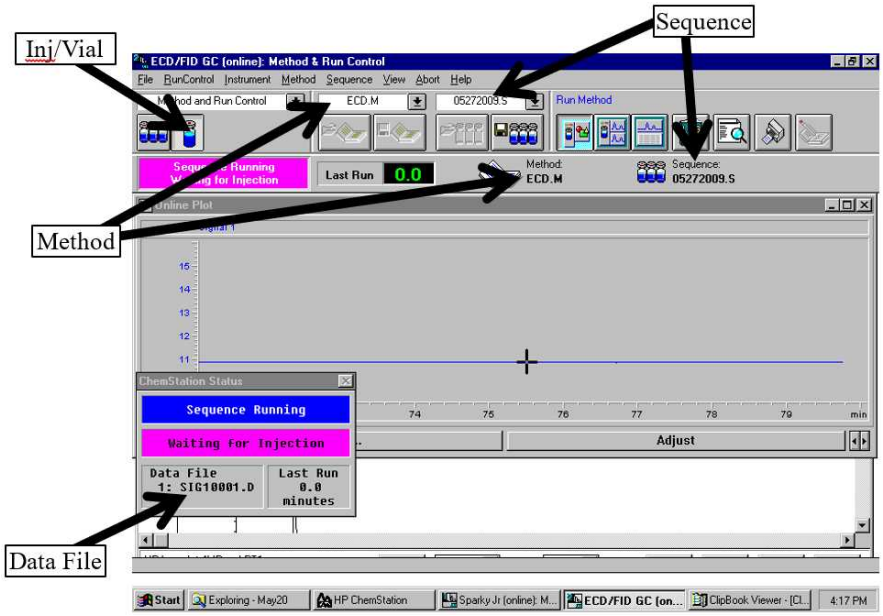


10 Save each sequence table as the run date (MMDDYYA...Z) to match *Sequence Parameters Subdirectory*.

Waiting for Injection

11 Return to each sequence table and click on *Run Sequence* to queue sequence tables and send methods to Sparky Jr. and ECD/FID GC.

12 Once methods have been loaded and sequences queued, HP Chem will display Waiting for Injection screen.Verify that the Method, Sequence Table, Inj/Vial, and Data File are correct.



HP7694

13 Set Vial Parameters to corresponding first and last vial

14 When ECD/FID GC and Sparky Jr. are *Waiting for Injection*, press *Start/Stop* button to begin sample run.

Running more than 44 vials in a single sequence table

15 HP Chem will remain in *Waiting for Injection* state if the sequence table has more samples than were queued into the headspace autosampler (HP7694). This allows us to run more than 44 vials within the same sequence table.

For example, to run 74 vials:

15.1 Create a sequence table with 74 entries.

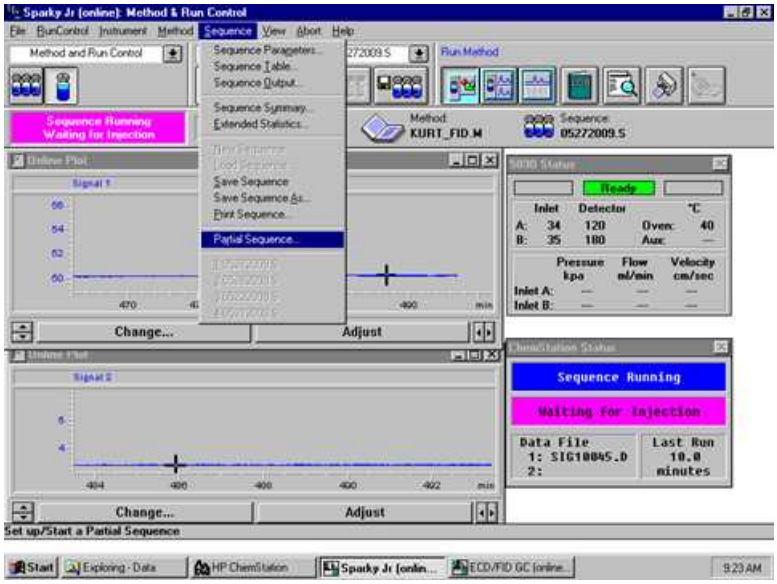
15.2 Set the headspace autosampler to run vials 1 through 30.

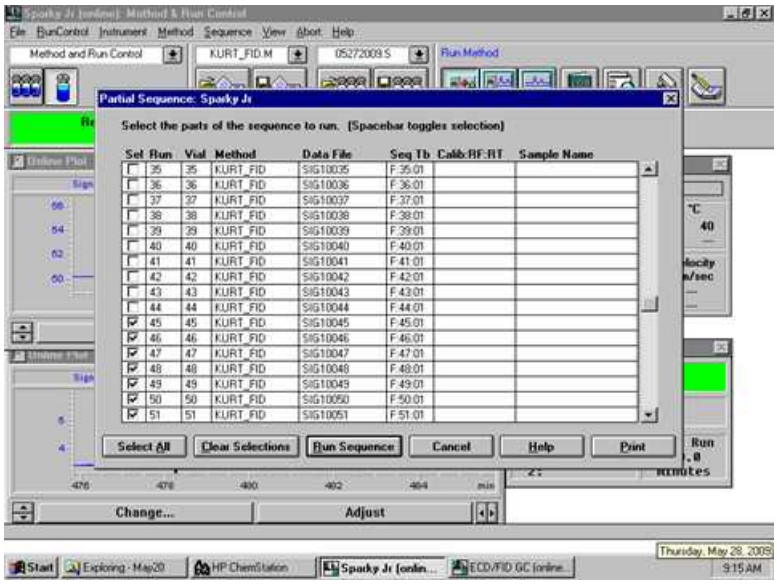
15.3 When the sequence table gets to sample 31, it will wait for the start signal from the autosampler.

15.4 Reload the autosampler and set it to run vials 1 through 44.

15.5 Press *Start/Stop* to continue the run. The system will now run the remaining 44 sample vials.

Partial Sequence

16 



Reprocess Samples

17 To reprocess files when sequence was NOT queued:

17.1 Copy data folders into target subdirectory

17.2 Edit Sequence Parameters:
- Sig Prefix & Counter to watch first data folder in group
- Part of Method: Reprocess Only

17.3 Make sure sequence has correct number of samples/names

17.4 Run Sequence