PRODUCT NOTE

GAS CHROMATOGRAPHY

TotalChrom 6.3 for TurboMatrix Headspace Samplers

Introduction

TotalChrom® 6.3 software simplifies the routine use of PerkinElmer® TurboMatrix™ Headspace (HS) samplers (HS-16, HS-40, HS-110, HS-40 Trap and HS-110 Trap models). Enhanced integration between TotalChrom and TurboMatrix HS methods provides streamlined operation, including faster setup times and reduced entry errors.

TotalChrom 6.3 provides direct sequence and method creation for both headspace and liquid autosampling, using the Remote Control Software (RCS) module. The TurboMatrix HS RCS module ensures reliable assignment of TurboMatrix HS vial numbers to TotalChrom data files and reduces the risk of data entry errors.

TotalChrom 6.3 also provides a record of HS and GC methods, including injection timings and other method parameters, to ensure greater sample tracking. The RCS module provides TotalChrom with a list of all HS samplers it is in communication with, including the serial number of the sampler and the number of vials in the sampling tray. The RCS module also provides the ability to edit methods when the TurboMatrix HS sampler is not connected or switched on.

TotalChrom 6.3 can be configured in workstation and client/server environments (if the local computer is configured as an Acquire server) for the Clarus® 500 GC-TurboMatrix HS system.

Key Benefits

- Simplifies use of the TurboMatrix HS sampler in conjunction with TotalChrom
- Creates a closer coupling between the TotalChrom and TurboMatrix methods
- Eliminates the need for duplicate entry of vial-sequence information in both TotalChrom and TurboMatrix RCS
- Ensures reliable assignment of TurboMatrix vial numbers to TotalChrom data files

Functional features

The integration of TotalChrom 6.3 with the TurboMatrix HS sampler includes the following key functions:

Instrument configuration

TotalChrom 6.3 provides the ability to specify that an instrument includes a TurboMatrix HS sampler of a specific type from within the TotalChrom Configuration application. This is illustrated in Figure 1, which shows the Configuration Editor screen.

Method editing

The TurboMatrix method can be edited directly from the TotalChrom Method Editor. Figure 2 illustrates this functionality.

The TotalChrom Method Editor allows you to specify 'TurboMatrix' as an injection-source option for a controlled GC, in addition to the existing 'Manual' and 'Autosampler' options. This option is only available when the instrument assigned to the method has a TurboMatrix associated with it.

The TurboMatrix Method button within Instrument Control invokes the RCS method page (Figure 3).

Sequence creation

When a sequence is created for an instrument with an associated TurboMatrix HS sampler, the sampling mode (Manual, Autosampler or TurboMatrix HS sampler) will also be defined.

The behavior of the Sequence Template dialog enables you to simplify generation of a sequence containing a TurboMatrix method that involves multiple injections per vial or tube (e.g. Multiple Headspace Extraction of the headspace).

Setup

Setup of a TotalChrom instrument with an associated TurboMatrix instrument involves the following steps:

1. TotalChrom will validate the sequence to ensure that it is compatible with a TurboMatrix HS sampler system.
2. TotalChrom will communicate with the RCS module to ensure that the required TurboMatrix instrument is available to be set up. The RCS module will check each line of the sequence to ensure it is valid for the specified instrument.

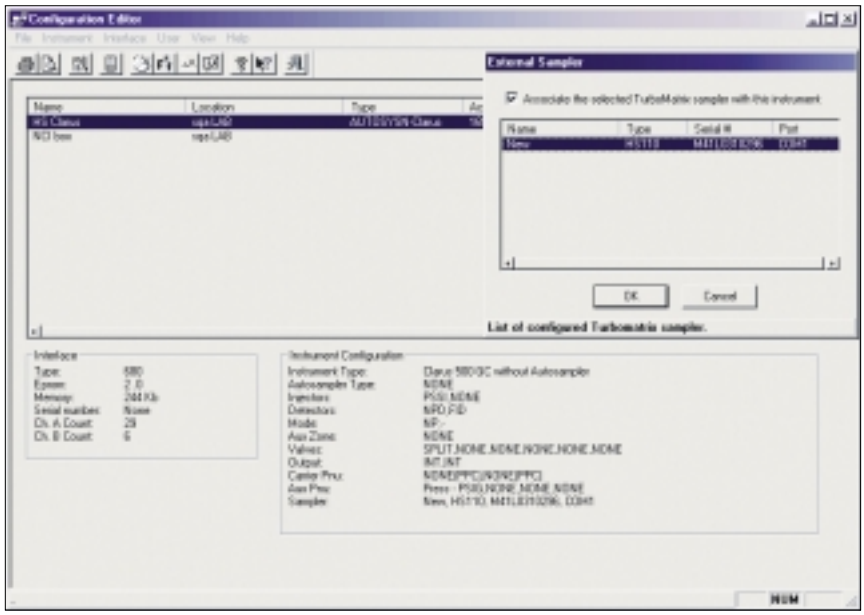

Figure 1. TotalChrom 6.3 provides the ability to specify the TurboMatrix HS sampler of a specific type.

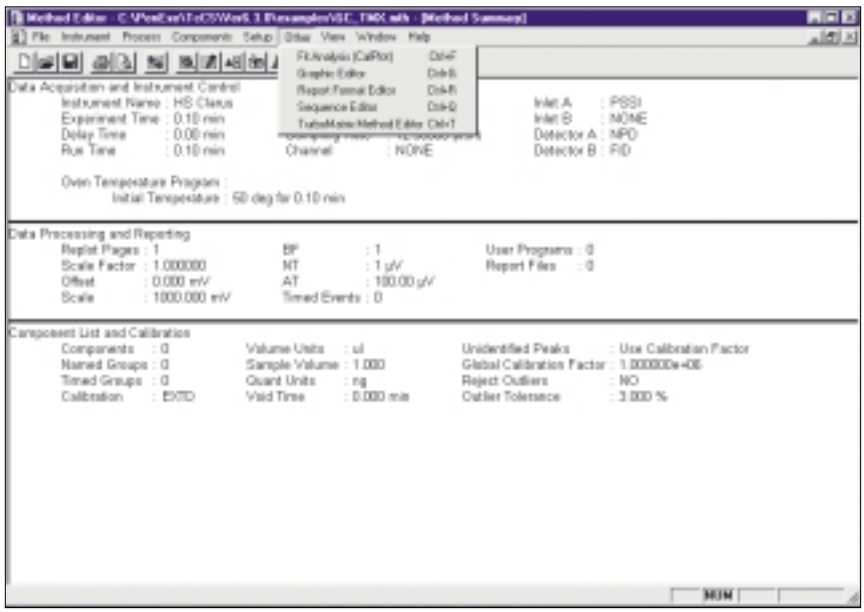

Figure 2. TotalChrom 6.3 Method Editor includes a function to invoke the TurboMatrix RCS Method Editor.

3. TotalChrom will send a command to the RCS module, instructing it to set up the newly created sequence on the TurboMatrix HS sampler. The Start command may be issued automatically or by the user, as specified in the Setup dialog.

Reading of injection-log information – accurate reading of vial number

TotalChrom 6.3 receives the vial number directly from the RCS module at the moment the injection takes place and stores it in the raw data files.

Skipped vial prevention

The RCS module informs TotalChrom 6.3 about a missing vial as soon as the TurboMatrix HS sampler reports that it cannot inject from the vial. This ensures reliable assignment of TurboMatrix vial numbers to TotalChrom data files.

Ever increasing capabilities

TotalChrom 6.3 extends the reliability and enhances features to benefit both GC and HPLC users.

The new Data Review & Approve feature is ideal for laboratories with high sample workloads (Figure 4). From a single TotalChrom screen, it is now possible to review an entire sequence of runs and quickly and easily move between the chromatogram and the summary report, examining the results. If the laboratory procedures require it, electronic signoffs can be enabled to document that the data has been reviewed by the appropriate person – or multiple people.

Ongoing improvement keeps TotalChrom at the forefront of chromatography data handling.

Continuing its 50-year tradition of GC innovation, PerkinElmer is the only supplier that manufactures and sells a complete single-vendor solution – from sample handling to data handling.

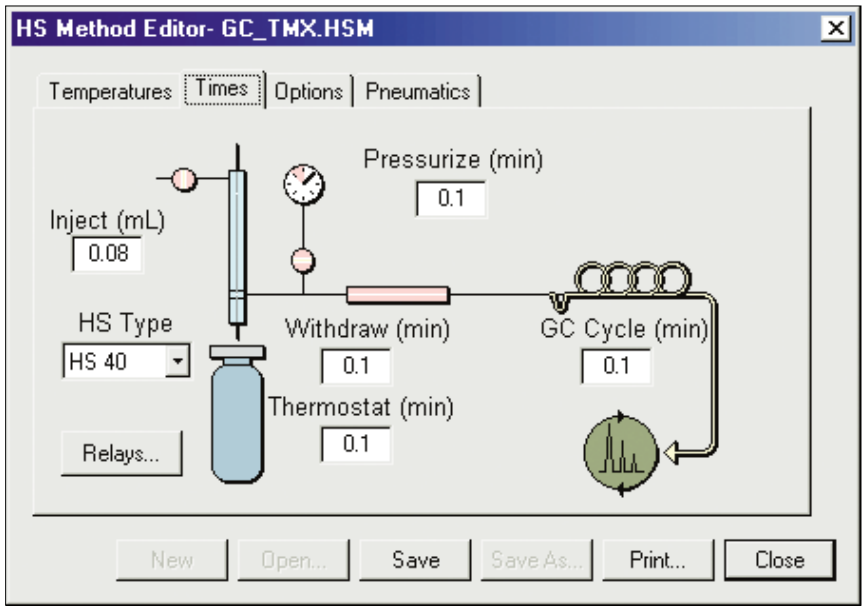

Figure 3. The RCS Method Editor allows setup of TurboMatrix method parameters.

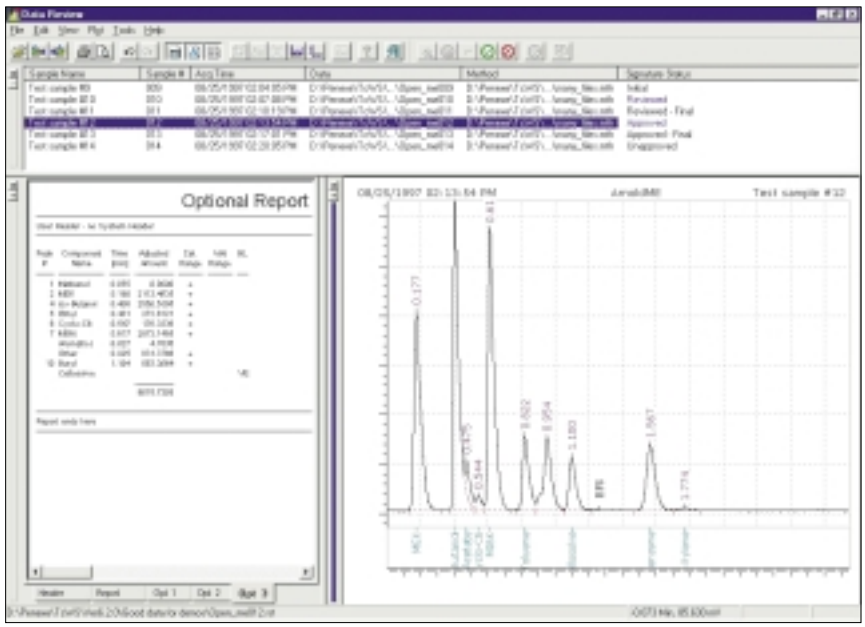

Figure 4. The Data Review feature allows validation of high volumes of sample data.

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