

AutoDesorb PC Software Control

The AutoDesorb software is fully integrated with the Agilent ChemStation™ software. The entire GC or GC/MS process as well as the desorption process is started from the ChemStation windows. The Agilent ChemStation windows are used for the GC and MS operation as well as sample information and the AutoDesorb windows are used for thermal desorption method setup and for monitoring sample analysis. Thermal Desorption Methods and Operation Methods are developed in the AutoDesorb windows and saved into the Agilent ChemStation Method. Methods can be changed between subsequent samples to provide different desorption parameters for different samples or the same method can be used for all samples.

The AutoDesorb™ software is designed to be graphical and easy to use. Sample information need only be entered once. All data such as sample name and vial number are entered into the Agilent ChemStation sample run window or the sequence run window.

The AutoDesorb software system provides for the visualization and control of all the thermal desorption operations including sample purging and injecting times, desorption temperatures and times, GC start times and Cryo-Trap™ heating and cooling parameters. A user-friendly Graphical Interface displays the pictorial as well as digital status of the thermal desorption system operation and GC Cryo-Trap operation. Changes made to the thermal desorption methods can be saved to the Agilent ChemStation Method. All the AutoDesorb setup and operational parameters are displayed on 4 graphics Windows screens. Other screens enable system setup and setting of system limits.

The first of these windows is the AutoDesorb™ Status Window (Figure 1) which displays graphically and digitally the current status of the AutoDesorb™ system. The graphic display visually demonstrates the mechanical operation of the AutoDesorb™ system as it occurs. The digital display also lists the current thermal desorption system conditions including sample name and vial number, desorption and cryo-trap temperatures, GC inlet pressure and the GC valve status.

The second screen is the Temperature Settings Screen (Figure 2). Method setup is done here as well as monitoring the current status of the thermal desorption block heaters and cryo-trap temperatures. Up to 3 temperature ramps and hold times for the desorption block heaters are permitted in the method. Both the heating and cooling temperatures for the Cryo-Trap are also entered here. The user entered method can then be saved to the Agilent ChemStation method file and used for the analysis of subsequent samples. The graphics display visually shows the temperature profiles for the thermal desorption blocks and the cryo-trap on a time scale during the analysis in real time.

The third screen is the Time Settings Screen (Figure 3). Method setup is done here as well monitoring the current status of Purge Gas Time, Injection Time, Desorption Time, Cryo-Trap cool and heat times and the GC Start Run Time. On the bottom section of this window are entered the times for the various thermal desorption and Cryo-Trap processes. The GC start time can be set at anytime from the time of injection until after the desorption process is complete. The graphic display shows the relative times of each of these events. During the actual desorption process, a time bar shows the actual time position of the thermal desorption process.

Additional windows include the sample log window for displaying the sample analysis history and System Limits screen for entering the maximum conditions of the AutoDesorb™ system.

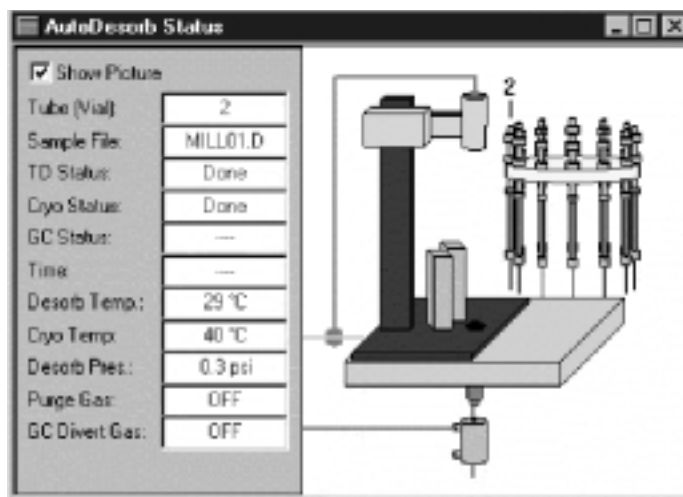


Figure 1 - AutoDesorb Status Window

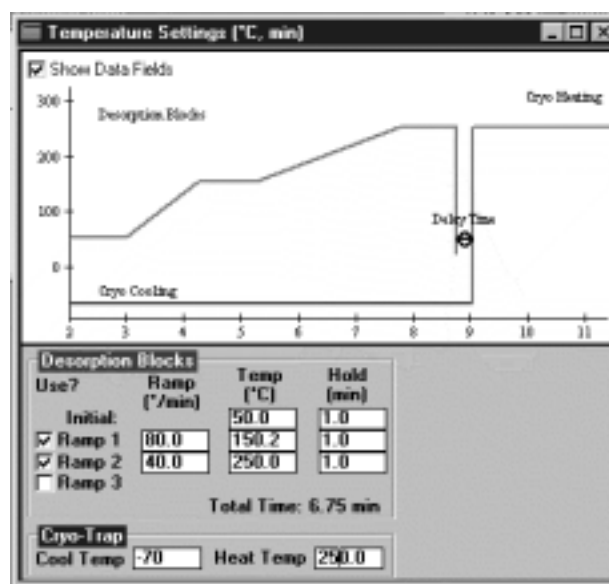


Figure 2 - AutoDesorb Temperature Settings Window

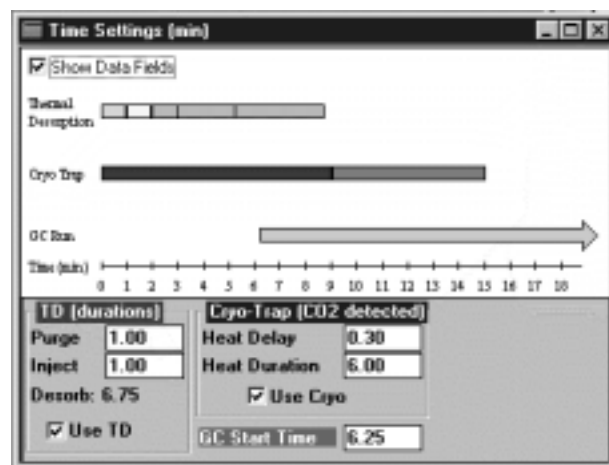


Figure 3 - AutoDesorb™ Time Settings Window