For wide variety of samples, trapping onto a suitable absorbent and subsequent thermal desorption offers the best sample introduction technique to deal with these type of matrices. With suitable care, this technique introduces a sample which most closely matches the original sample composition.

The Model 3250 is based upon a design refined over 17 years by Microanalytics. The original design required manual switching of carrier flows. The introduction of the superior robotics capabilities of the LEAP/CTC robotic autosampler allowed for the complete automation of the purge/desorb/inject cycles.

The 304SS desorption tubes are double passivated with a proprietary process that results in a virtually unbreakable design with better-than-glass inertness. A simple adapter ring and standard 2cc autosampler vial caps allows the PAL robotics to magnetically transfer and move the desorption tubes.

One of the most revolutionary aspects of the Model 3250 design is the ability to desorb the sample directly into the head of the analytical column, without the use of transfer lines or cryocoolants. A proprietary flow switching system optimizes the injection transfer, resulting in sharp, well-shaped early eluting compounds without cryo-trapping, or expensive whole-oven cryo-cooling. The use of the Agilent standard split/splitless inlet eliminates the costly PTV type inlet commonly used on other thermal desorption systems.

Sample types associated with odor, aroma or malodor analysis frequently present a difficult chromatographic challenge due to the sheer complexity of the sample. Materials such as tobacco, chocolate, coffee and others may have over 1000 components in the headspace alone. The analytical challenges are compounded by the widely varying concentration of these components, and the fact that many of them have little to no impact on the overall aroma/flavor profile of the material. Headspace trapping and subsequent thermal desorption offers a powerful analytical tool for these types of samples.

The Model 3250 offers capabilities such as:

- Automated purge/desorption/injection processes.
- Up to 78 samples may be loaded in a standard VT-78 tray for analysis (tray adapters included).
- Direct desorption into the column, no cryo-coolant or expensive PTV inlet necessary.
- Adaptable to a standard Agilent Technologies split/splitless inlet (G1552A/G3452A).
- Quick change-over from thermal desorption mode to standard liquid injection mode (10 minutes).
- Robust stainless steel construction (inlet and sample tubes) eliminates costly breakage.
- Proprietary passivation techniques offers better than glass inertness and prevents sample degradation.
- Pre-purge mode removes residual oxygen from tube before desorption.
- Robotically controlled with the industry standard CTC/LEAP Technologies CombiPAL or DI.PAL autosamplers.
# STANDARD CONFIGURATIONS

<table>
<thead>
<tr>
<th>Model</th>
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<tr>
<td><strong>M3250-S</strong></td>
<td>Model 3250 Thermal Desorption Add-on System for Single Column GC and GC/MS Systems</td>
<td>Agilent Model 6890/7890 GC with G1552A/G3452A Split/splitless inlet with EPC One open inlet position (6890) or one open EPC position (7890). Any detector or MSD 0.32mm or greater ID column (flow rate 2.0 cc/min or greater) LEAP Technologies/CTC CombiPAL or DI.PAL robotics autosampler Cycle Composer™ or Cruise Control™ software One tray holder VT78 tray</td>
<td>Inlet Interface for split/splitless Inlet Pneumatics module for carrier gas control and routing. Desorption flow carrier gas adapter and oven mounting kit Sampling kit with desorption tubes, caps and tray adapters Desorption tube capper All necessary cabling</td>
</tr>
<tr>
<td><strong>M3200-MD</strong></td>
<td>Model 3250 Thermal Desorption Add-on System for Microanalytics Model 2100 Multidimensional GC/MS-Olfactory Systems Special system for Microanalytics Model 2100 AromaTrax™ systems</td>
<td>All of the above</td>
<td>MultiTrax Version 8.00 Multidimensional controller software upgrade for thermal desorption automation.</td>
</tr>
<tr>
<td><strong>M3200-C</strong></td>
<td>Model 3250 Thermal Desorption System - Complete Sample Introduction System</td>
<td></td>
<td>This complete system allows the user to utilize almost every sample introduction option available, including automated liquid injection, SPME immersion, SPME headspace, direct heated headspace, and thermal desorption in one easy-use system. Includes the Model 3200S or MD system (as required) and the LEAP Technologies RePAL robotics autosampler and mounting kit. This kit also include Cruise Control™ software and all necessary macros and methods.</td>
</tr>
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</table>

**Model 3300—Configuration and Sampling Options**

**M3300-S** Model 3300 Remote Sampling System for Model 3250 Thermal Desorption System

The Model 3250 system may also be configured as a remote, automated sampling system. This allows the robotics to sample from a headspace stream at timed intervals and capture the samples onto a variety of substrates in pre-packed desorption tubes. The system automatically seals and stores the tubes for transport to the laboratory and subsequent analysis by a Model 3250 system. Call or email for details.

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Gas Chromatography Systems and Services

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