

LK Technologies Thermal Desorption Spectrometer (TDS) and Supporting System Tool

Thermal Desorption Spectrometer- MODEL TDS1000

This is a basic surface science tool that enables the researcher to obtain quantitative information on chemical species which desorb from the sample when heated. Typical temperature ranges are room temperature to 1200K.

The basic spectrometer consists of a Thermal Desorption Spectroscopy (TDS) tool that can be attached to any vacuum chamber. It detects the desorbing mass signal from the sample and uses a specially shielded mass spectrometer and control software to obtain high sensitivity data of mass signal versus sample temperature. The tool also contains the power supply to drive the sample heater and monitor sample temperature. LK can supply a sample holder and heater or the customer may supply his own.

Supporting Vacuum System – LK has supplied major semiconductor companies with a complete system tool as described below. The system can also be supplied for basic surface science and catalysis research. Please contact the company for a quotation that meets your requirements.

1. Thermal Desorption Chamber with ion gauge
2. 250 L/S turbo pump with dry backing pump
3. XYZR Sample Manipulator
4. 1-200 amu Quadrupole mass spectrometer with shield and motion control
5. Transferable sample holder and heater for up to 1.00 x 1.00 inch sample size
6. Load lock and specimen transfer system with 70 L/S turbo pump
7. Gas Manifold system for up to 3 gases with mechanical pump, gauge, leak valve
8. System integration includes bake out system, stainless steel support framework, Electronics racks, safety interlocks
9. Temperature control and Data system with integrated mass spectra vs. temperature output, time
10. Titanium sublimation pump
11. Optional analysis chamber, manipulator and 250 L/S ion pump