



The Agilent 5975T Low Thermal Mass (LTM) GC/MSD, together with a Thermal Separation Probe (TSP) and DRS software, provide fast, accurate data analysis of blood analysis. The system provides a fast, accurate solution for liquid and solid samples with complex matrix.

Drugs abuse detection is always an important project in forensic area. Forensic toxicologists are routinely confronted with the difficult problem of detecting and quantitating a wide range of drugs in cases of fatal doses of drugs in whole blood because of the drugs universality and blood complexity. However because most drugs and their metabolites are among the structures which can be analyzed by GC/MS, the 5975 LTM GC/MSD may be used for the analysis of many drugs.

The rugged high performance Agilent 5975T LTM GC/MSD is easily transported to onsite locations or used in a lab. With its quick ramp heating oven rate and fast cooling cycle, the instrument with a LTM column provides an ultra-fast sample cycle. The Thermal Separation Probe (TSP) not only greatly reduces sample preparation time, it helps protect the entire instrument from matrix contamination.

## **Key Benefits**

- The Agilent 5975T Low Thermal Mass (LTM) GC/MS provides rapid temperature ramps and cool down
- The Agilent TSP minimizes sample preparation time for fatal doses of drugs in whole blood
- provides quick data handling method for extracting targets from complex matrix backgrounds









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## Blood Analysis Using an Agilent 5975T + TSP



Peak identification

.8765	Barbital
2.3049	Amobarbital
2.4384	Secobarbital
3.1265	Cocaine
3.2050	1-Piperidinepropanol, <i>a</i> -cyclopentyl- <i>a</i> -phenyl-
3.2407	Promethazine
3.2788	SKF525
3.3232	Oxazepam
3.4365	Lorazepam
3.4782	Diazepam
3.563	Chlorpromazine
3.5645	Chlorprothixene
3.5950	Chlordiazepoxide
3.9862	Papaverine
1.024	Clozapine
1.0243	Clonazepam
1.0971	Estazolam

Figure 1. TIC of drugs standards based on fast moving method.



*Figure 2.* Drug identification by direct blood sample injection with an Agilent 5975T + TSP.

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