

SPECIFICATIONS FOR THE PURCHASE OF Gas Chromatograph/Mass Selective Detector

PART 1— GENERAL

1.01 SUMMARY

- A. Section includes for a GC/MSD: Gas Chromatograph/Mass Selective Detector for the Drug Chemistry Section at the MS Crime Lab.
- B. Work includes but is not limited to the following:
- Labor
 - Equipment and material to order
 - Receiving and installing the GC/MSD's as specified herein.

PART 2 — PRODUCTS

2.01 GC/MSD: GAS CHROMATOGRAPH/MASS SELECTIVE DETECTOR

A. Detailed specifications:

1. **Auto-sampler;** Bid package must include high throughput auto liquid sampler and provide auto-sampler tray for at least 100 samples. Auto-sampler should include self-alignment, Agitator/mixer capability, controllable by chromatography software to include programmability for multiple rinses/washes to prevent carryover between samples. In addition bid should include and notate specific capabilities:
 - a. Variable sampling depth
 - b. Variable syringe injection volume
 - c. Multiple size/capacity syringe capability to include 10 microliters
2. **Gas Chromatograph**
 - a. Carrier Gas: The gas chromatograph should be optimized for helium as a carrier gas, however provide for the option of helium saving capability and/or be able to be converted to hydrogen as a carrier with appropriate safety features. The bid should itemize each option available that is included in the quote.
 - b. Column: The system bid should include a capillary 30 meter 0.25mm ID x 0.25 df DB5 inert or high performance low bleed column for maximum sensitivity and performance in mass spectrometers.
 - c. Inlet should be outfitted with Dean's Switch, Swafer, or similar

technology.

- d. Inlet should have an electronic programmable pressure control S/SL inert inlet with programmable temperature control. Standard deviation of component retention time deviation should be less than or equal to 0.0008 min.
- e. Critical set points, pressures, temperatures, maintenance notifications should be readily apparent to the operator through either the instruments or operating chromatography software.
- f. Oven must be capable of rapid heating and rapid cooldown to ensure the most efficient operating times between samples. Bid shall include detail oven specifications.

3. **Mass Spectrometer**

- a. Bid must include a turbo pump capable of removing 255L/sec minimum of helium.
- b. Mass spectrometer should allow for rapid removal of source for cleaning and replacement of filaments. Specifications for venting, lack of need for venting, and time to removal shall be included in the bid.
- c. Mass Range must meet or exceed 1.6 – 1050 AMU with fast scanning capability to meet or exceed 20,000 u/sec.
- d. Detector must be electron impact ionization capable of simultaneous full scan /SIM operation and the instrument must be able to be upgraded to CI. Must include dual filaments and be capable of being heated to 350°C.
- e. The mass filter shall be of quadrupole design and may contain pre-filters but not an ion trap.

4. **Chromatography Data System**

- a. The chromatography data system should contain a data analysis component where the operator can manipulate the analysis of data files through a server from a remote location/office and does not require the analyst to physically be present at the instrument for data reduction and report production.
- b. The latest editions of the commercial libraries to be provided and installed with each system are to include: Wiley and NIST, Maurer-Pfleger-Weber, and Wiley Designer Drugs.

5. **Installation/Maintenance**

- a. Installation shall be included in the bid. The instrument shall be fully operational and meet or exceed manufacturer published specifications after install. A field report is to be provided with proof of operational functionality. A minimum of two days on-site training will be included.
- b. Bidder shall indicate length of guaranteed support life and include in the bid a service maintenance contract for 1 year beyond warranty period.

**MS Department of Public Safety
BID FORM
Bid# 316000670**

VENDORS ARE REQUIRED TO USE THIS BID FORM

(Vendors must mail one original copy to MDPS and is encouraged to submit one electronic copy via MAGIC.)

| <u>Description</u> | <u>Single Item Price</u> |
|---|--------------------------|
| Gas Chromatograph/Mass Selective Detector | \$ _____ |
| Chromatography Data System | \$ _____ |
| Commercial Libraries | \$ _____ |
| Installation/Maintenance | \$ _____ |
| On-Site Training | \$ _____ |
| Total | \$ _____ |

Please attach any information with this bid form on the make and model of the GG/MSD that you are offering. The MS Crime Lab may not purchase all items listed on this form.

VENDOR INFORMATION (Please Complete All Sections Below)

Company Name: _____

Company Address: _____

Telephone Number: _____ Fax Number: _____

Email: _____

Company Representative Name (Print): _____

Company Representative Signature: _____

Date: _____