

Toxicology Manual

Confirmation of Drugs of Abuse in Urine
with Ion-Trap GC/MS

What is in the Saturn Toxicology Manual?

The manual contains sample preparation and GC/MS methodology for confirmation of the SAMHSA drugs in urine after a positive immunoassay screen. The drugs are: amphetamine, methamphetamine, benzoylecgonine, morphine, codeine, 6-monoacetylmorphine, phencyclidine and the acid metabolite of tetrahydrocannabinol.

The methods follow SAMHSA guidelines on the demonstration of the effect of interfering substances and quantitation down to 40% of the cutoff levels. SAMHSA does not require instruments using full-scan MS (as opposed to SIM) to demonstrate ion ratio stability over the linear range of the method. Nevertheless, ion ratio stability is shown for the Saturn.

The following sections are included in the manual:

- ❖ Introduction with recommended instrument configuration, required laboratory supplies and reagents and instructions for preparing buffers and other solutions.
- ❖ Drug methodology for each of the SAMSHA drugs
- ❖ Appendix with instructions for the ion ratio report software and information on molecular structure of the analytes and MS fragments

Each drug methodology chapter contains 7 sections:

1. Metabolism and excretion
2. Method summary
3. Reagents and supplies
4. Preparation of calibration standards, internal standards and samples
5. Solid phase extraction and derivatization
6. Detailed GC/MS method parameters
7. Results (includes a sample ion ratio report)

What is on the Saturn Toxicology CD?

The CD contains two main folders; the first contains one subfolder for each drug method. Each subfolder contains a Saturn method file and a Saturn run file for the drug at the cutoff level

The second main folder contains the ion ratio report software with instructions on how to use it.

A readme.txt file that explains the contents of the CD and a Toxicology manual.pdf file (the entire manual in pdf format) are also included.

For More Information

For more detailed information or to purchase the Saturn Toxicology Applications Manual and CD, contact your local Varian representative.