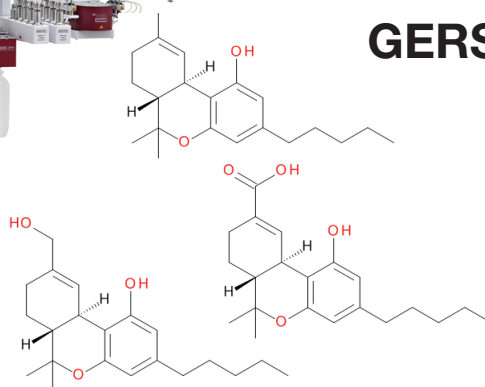



**GERSTEL**


## GERSTEL THC Solution



### Uses

The GERSTEL THC Solution is an automated solution for the quantitative determination of  $\Delta^9$ -Tetrahydrocannabinol (THC) and its metabolites 11-Hydroxy- $\Delta^9$ -tetrahydrocannabinol (THC-OH) and 11-Nor-9-carboxy- $\Delta^9$ -tetrahydrocannabinol (THC-COOH) in blood serum.

### Characteristics

- Analysis of THC, THC-OH and THC-COOH from blood serum (0.5 mL)
- Complete automation of sample preparation and injection into the GC after manual dilution and addition of internal standards:
  - Solid Phase Extraction (SPE),
  - Evaporation of the eluate,
  - Reconstitution in silylating agent (MSTFA),
  - Injection into the hot injector with inlet derivatization,
  - GC/MS analysis
- 95 samples in one sequence
- 29 samples per day
- Calibration range:
  - THC: 0.7-50 ng/mL,
  - THC-OH: 0.9-50 ng/mL,
  - THC-COOH: 7-500 ng/mL

- Upgrade to GERSTEL Opioids/Cocaine Solution possible (requires Opioids/Cocaine method kit, CIS injector for GC and upgrade to 3 mL SPE option)

### System Components

The components which are part of the system are listed below. All chemicals, the hardware and consumables required for the manual part of the sample preparation as well as the GC/MS system are not included in the scope of delivery.

Also pay attention to the specification sheets of the individual system components.

#### Hardware

- MultiPurpose Sampler MPS Dual Head, both towers equipped with gas supply
- Solid Phase Extraction SPE for 1 mL cartridges, heating and shaking function are deactivated
- Multi Position Evaporation Station mVAP with condenser pump, only one evaporation position can be used
- Standard agitator
- 2x Solvent Filling Station SFS 2
- Tray for SPE cartridges, 98 positions

- Tray on standard tray holder for samples, 98 positions
- Tray on standard tray holder for eluate vials, 98 positions
- Standard wash station, 5 positions of 10 mL each
- 10 µL syringe for injection and dosage of MSTFA, left sampler
- 2.5 mL syringe for sample preparation, right sampler
- Consumables for one sample sequence:
  - column,
  - liner,
  - vials,
  - caps,
  - SPE cartridges

### Methods

- Analysis method
- Quantification method
- Example sequence for GC MassHunter Software with integrated MAESTRO software,
- Detailed description of analysis method

### System Requirements

For operation of the THC solution the system must fulfill the following requirements.

- Coupling to an 7890 GC / 5977 MSD system (Agilent Technologies). Must be configured separately (mounting hardware as well)
- Agilent Technologies MassHunter software B.07.00.1413, other versions on request
- Use of an Agilent Split/Splitless injector mandatory
- Coupling to GC or LC systems of other manufacturers possible. The liner volume of the hot injector must be comparable to that of the Agilent Split/Splitless injector.



### Caution!

This method is for research use only, it is not for use in diagnostic procedures.



### Note:

The system can only be repaired on-site, not at GERSTEL.