

Gas chromatograph with BID/TCD

Description/Parameters:

Shimadzu Tracera - 2010 Plus gas chromatograph for trace analysis of substances in the gas phase. The system is equipped with a barrier discharge ionization detector (BID), a thermal conductivity detector (TCD) and a ShinCarbon column for the separation of permanent gases and low hydrocarbons without the need for cryogenic cooling. The BID detector shows 100 times higher sensitivity than the TCD. Precise injection is ensured by an automatic helium-rinsed valve with a 0.25 ml dosing loop. LabSolution software with multi-point calibration is used to evaluate the results.

Uses/Services:

Testing of gaseous samples dosed continuously and discontinuously using a gas-tight syringe.

- Detected substances: H₂, CO, CO₂, CH₄, N₂O.
- Detection limit: ppm.
- Optimal dosage: 10 cm³.
- Analysis time: 15 minutes.
- Carrier gas: helium at a pressure of 16.2 kPa and a flow rate of 13.5 ml/min.
- Use: Quantitative analysis of low concentrations of permanent gases and low hydrocarbons.

