AGH Research Offer

GC-MS/TCD Gas Chromatograph – Shimadzu GCMS-QP2020(EI)

Technical description:

Gas chromatograph equipped with MS and TCD detectors intended for qualitative and quantitative analysis of gas phase composition.

Configuration:

MS – carrier gas: He, column: Agilent J&W HP-PLOT/U; l=30m; d=0.53 mm, temperature range: 60 – 190 ºC),

TCD – carrier gas N_2: packed column: molecular sieve: Mole Sieve 5 Å, 13X, T_{max} = 500 ºC)

Calibration: H_2(N_2), CO_2 (He), CO (He), CH_4(He), C_2H_6(He), C_2H_4 (He)

Trade name: Shimadzu GCMS-QP2020(EI)

More details: /equipment/chromatograf-gazowy-gc-mstcd-shimadzu-gcms-qp2020e/

Access type: External

Type of accreditation / certificate: Not applicable

Contact person: Mech Krzysztof

Contact person url: https://skos.agh.edu.pl/osoba/krzysztof-mech-7959.html

Responsible body: Academic Centre for Materials and Nanotechnology

Group / laboratory / team: Department of Semiconductors Photophysics and Electrochemistry

Last update date: March 10, 2025, 1:33 p.m.

Year of commissioning: 2019

IDUB research areas:

(PRA 7) Design, production, and testing of modern materials and the technologies of the future based on a multidisciplinary approach combining materials engineering with chemistry, physics, mathematics, and medicine

Research capabilities:

Quantitative and qualitative anlysis of gas phase composition

Measurement capabilities:

Oven:

- Range: from room temperature to 450 ºC

Injector:

- split/splitless type

Detectors:

MS - quadrupole mass detector:

- ionisation type: „electron impact” (EI)

- mass range m/z = 1.5 – 1090

- working mode: Scan, SIM oraz Scan/SIM

TCD:

- Sensitivity 20000 mV x ml/mg

- Temperature range: up to 400 ºC

Conditions for providing infrastructure: