Title (en)

METHOD FOR THE DETERMINATION OF ORGANIC MATTER

Publication

EP 0195296 A3 19871125 (DE)

Application

EP 86102699 A 19860301

Priority

DE 3510378 A 19850322

Abstract (en)

[origin: US4757198A] A single-stage quadrupole mass analyzer is provided with a highly sensitive electron multiplier, a turbomolecular pump, and a mass correction lens placed between the quadrupole sensor unit and the turbomolecular pump. These components are arranged and selected to provide a substantial increase in sensitivity permitting the direct analysis of organic compounds in the gas phase in the ppb and high ppt concentration range. The placement of the mass correction lens and the area of its aperture has a pronounced effect on the detection limit, the optimum aperture area is a function of the mass of the molecules to be detected, and preferably an iris diaphragm is used to permit manual of automatic adjustment of the aperture area to a predetermined optimum for each of the different substances to be detected. Preferably the electron multiplier voltage is also variably selected and reset during the scanning of each fragment ion to optimize the signal-to-noise ratio of the electron mutiplier. The mass analyzer is sufficiently compact and economical to provide on-site analysis and the continuous monitoring or control of industrial processes.

IPC 1-7

H01J 49/04

IPC 8 full level

G01N 27/62 (2006.01); **H01J 49/04** (2006.01); **H01J 49/06** (2006.01)

CPC (source: EP US)

H01J 49/0022 (2013.01 - EP US); **H01J 49/24** (2013.01 - EP US); **H01J 49/4215** (2013.01 - EP US)

Citation (search report)

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Designated contracting state (EPC)

AT CH FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0195296 A2 19860924; **EP 0195296 A3 19871125**; AU 5489486 A 19860925; CA 1249380 A 19890124; CN 1006414 B 19900110; CN 86102624 A 19870408; DE 3510378 A1 19861002; DE 3510378 C2 19880707; JP S61269844 A 19861129; US 4757198 A 19880712

DOCDB simple family (application)

EP 86102699 A 19860301; AU 5489486 A 19860319; CA 504735 A 19860321; CN 86102624 A 19860320; DE 3510378 A 19850322; JP 6464786 A 19860322; US 91037186 A 19860922