

Title (en)

Apparatus for mass analysis of ions

Title (de)

Vorrichtung zur Massenanalyse von Ionen

Title (fr)

Appareil pour l'analyse de masse d'ions

Publication

EP 1933366 B1 20190612 (EN)

Application

EP 07405338 A 20071128

Priority

- EP 06405519 A 20061214
- EP 07405338 A 20071128

Abstract (en)

[origin: EP1933366A1] An apparatus for mass analysis of ions comprises a high current ion source (10), in particular an ion source providing at least 5 million ions/s, preferably at least 50 million ions/s, at an output of the ion source, a time-of-flight mass spectrometer (40) for analysis of ions transmitted from the ion source (10) and a filter (20) for segmenting incoming ions according to their m/q ratio into a first group of ions and into a second group of ions. The filter (20) is coupled to the ion source (10) and the filter (20) and the time-of-flight mass spectrometer are arranged in such a way that the ions of the first group are transmitted to the mass spectrometer (40) and that the ions of the second group are not transmitted to the mass spectrometer (40). Furthermore, the filter (20) is designed in such a way that the second group consists of ions belonging to one or several narrow bands of m/q. The apparatus allows for analyzing minor compound ions generated by the high current ion source (10) with good selectivity, undisturbed by major compounds.

IPC 8 full level

H01J 49/42 (2006.01); **H01J 49/40** (2006.01)

CPC (source: EP)

H01J 49/40 (2013.01); **H01J 49/4215** (2013.01)

Citation (examination)

- US 6621074 B1 20030916 - VESTAL MARVIN L [US]
- EP 1522087 A1 20050413 - LECO CORP [US]

Cited by

GB2489110B; GB2502650A; GB2502650B; GB2556830A; US11373849B2; US7935922B2; US12009193B2; US11476103B2; US11621154B2; US11367607B2; US11879470B2; WO2012123754A1; US11437226B2; US12027359B2; US11355331B2; US11538676B2; WO2013061097A3; WO2017042665A1

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