Title (en)

Method for the massspectrometric analysis of a gas mixture, and mass sprectrometer for carrying out the method

Title (de)

Verfahren zur massenspektroskopischen Untersuchung eines Gasgemisches und Massenspektrometer zur Durchführung dieses Verfahrens

Title (fr)

Méthode d'analyse d'un mélange de gaz par spectrométrie de masse et spectromètre de masse utilisé dans ce but

Publication

EP 0321819 B2 20020619 (DE)

Application

EP 88120710 A 19881212

Priority

DE 3743718 A 19871223

Abstract (en)

[origin: EP0321819A2] For the mass spectrometric analysis of gas mixtures, use is made of a mass spectrometer having a quistor in which ions of the gas mixture whose charge/mass ratio is in a prescribed range are stored owing to the generation of an electromagnetic field. By changing the field parameters, the ions are successively forced to leave the ion trap. In this process, the intensity of the ionic current leaving the ion trap is measured as a function of the change in field parameters. In order to improve the resolution, use is made of a quistor in which the ratio Q of the radii of the inscribed electrode apex circles to the distance satisfies the condition Q </= 3.990, where <IMAGE> where Re = radius of the apex cross-section of the end electrodes (3, 5), Rr = radius of the apex cross-section of the annular electrode (4), z0 = distance of the apex of the end electrodes (3, 5) from the centre of the quistor and r0 = distance of the apex of the annular electrode (4) from the centre of the quistor. <IMAGE>

IPC 1-7

H01J 49/38; H01J 49/42

IPC 8 full level

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CPC (source: EP US)

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Cited by

DE19751401B4; EP0512700A1; DE10028914C1; US5206506A; DE4324224C1; EP0684628A1; US6297500B1

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