

BACKGROUND NOISE CORRECTION IN QUADRUPOLE MASS SPECTROMETERS

ABSTRACT OF THE DISCLOSURE

5 In a quadrupole mass spectrometer, which measures ion currents of a single
mass with substantially constant RF and DC voltages during a measuring period and
measures ions of different masses by varying the RF and DC voltages, a statistical
evaluation is performed during data acquisition by a determination of the distribution of
the measured and digitized noise values around an average noise level in the mass
10 spectrometer output signal. The determined noise levels are subtracted from the signal
output values separately for each measurement period.

Figure 3