



### ■ Analysis with the EI Scan Mode

The MMPB chromatogram obtained by the scan mode EI (electron ionization) method is shown below. (Refer to Table 1 for analytical conditions.)

In the mass spectrum obtained by the EI method, molecular ions cannot be obtained and the mass number of the strong peak is small, possibly

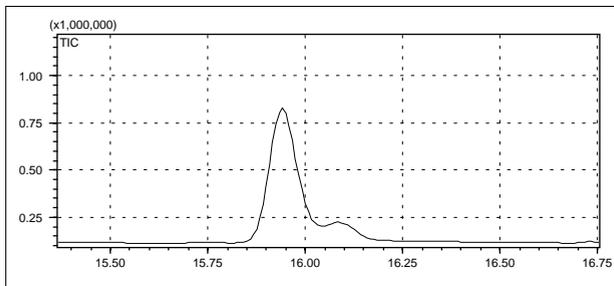


Fig.3 MMPB Total Ion Chromatogram by EI method

overlapping with impurity peaks. Furthermore, MMPB and MMPB-d<sub>3</sub> (internal standard substance) generate extremely similar mass spectra, making separation quite difficult. Therefore the CI (chemical ionization) method was attempted.

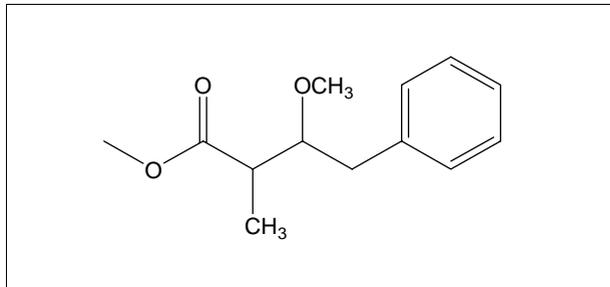


Fig.4 MMPB Structure

### ■ Analysis with the CI SIM Mode

An example of analyzing MMPB and MMPB-d<sub>3</sub> using the SIM method is shown at right.

Isobutane was used as a reaction gas. The target ions were the quasi-molecular ion (MH)<sup>+</sup> at m/z = 223 for MMPB, and m/z = 226 for MMPB-d<sub>3</sub>. (Refer to Table 1 for analytical conditions.)

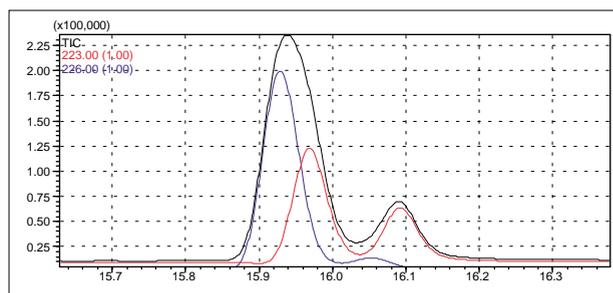


Fig.5 SIM Chromatograms with CI method

### ■ Calibration Curve

The calibration curve was created by preparing MMPB solutions of three different concentrations (24ppb, 120ppb and 600ppb). (SIM mode analysis; See Table 1 for analytical conditions.) A calibration curve with

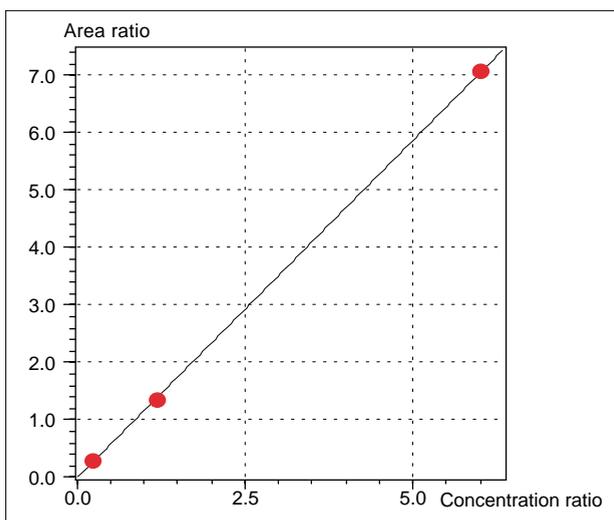


Fig.6 Calibration Curve

good linearity was obtained. 100ppb of MMPB-d<sub>3</sub> was added to each solution as the internal standard substance.

Compound Name : MMPB

m/z : 223

f(x)=1.168354\*x+0.000000

Correlation coefficient (R) =0.999972

Contribution ratio (R<sup>2</sup>)=0.999943

Mean RF : 1.16 RFSD : 0.03 RFRSD : 2.48

Calibration curve : Linear

Zero intercept : Yes

Weighting : None

Internal standard method

#	Concentration ratio	Mean area ratio
1	0.240	0.28
2	1.200	1.36
3	6.000	7.02