

**Analysis of Chloride Compounds in Gasoline using NCI**

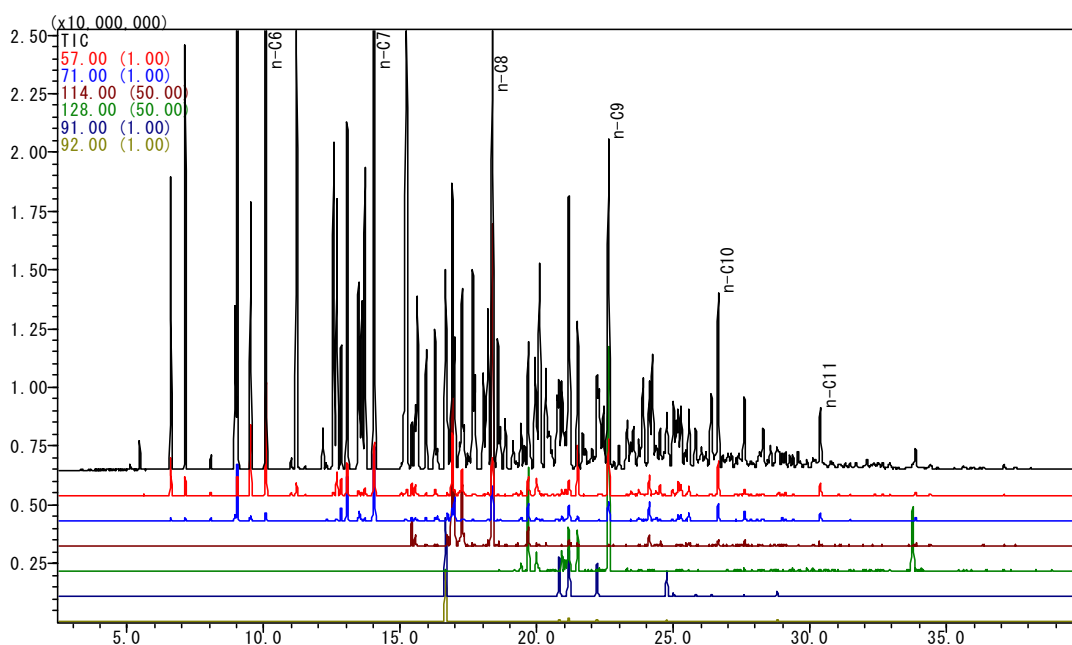
NCI (negative chemical ionization) is known to be highly sensitive for halides. Another merit of this method is the possibility of analysis without the influence of interfering components.

This data sheet presents an analysis example of chloride compounds in gasoline. The concentrations

of the chlorides is on the order of several parts per million (ppm). Normally, gasoline is analyzed with split injection. In this example, a small split ratio is adopted because the concentrations of the target substances are small.

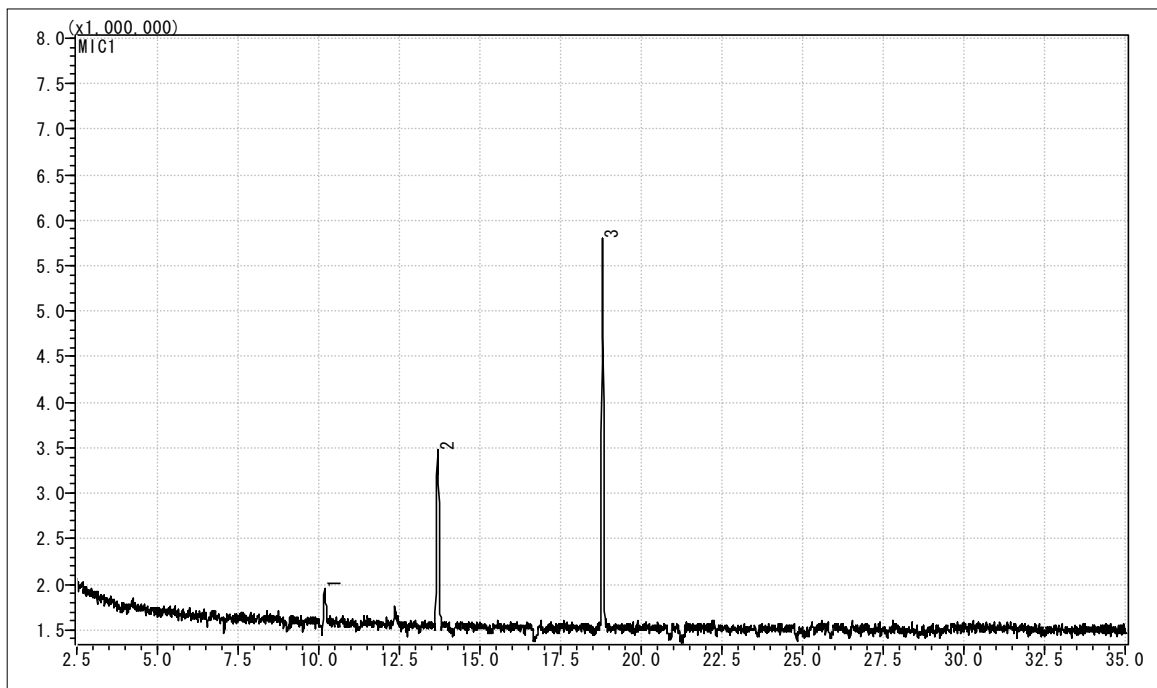
**1 Analytical conditions for GC-MS**

<b>Equipment</b>	:GCMS-QP2010
<b>Column</b>	: HR-1 (60m x 0.25mm i.d. df=1.00μm)
<b>Column time program</b>	:40°C (2min) - 5°C/min - 250°C (10min)
<b>Carrier gas</b>	: He 100kPa
<b>Injection temp.</b>	: 250°C
<b>Injection method</b>	:Split 100:1 NCI 5:1
<b>Interface temp.</b>	: 200°C
<b>Ion source temp.</b>	: 200°C
<b>Scan</b>	:m/z 35-300 (interval 0.5sec) NCI m/z 10-300
<b>Reagent gas</b>	:CH4



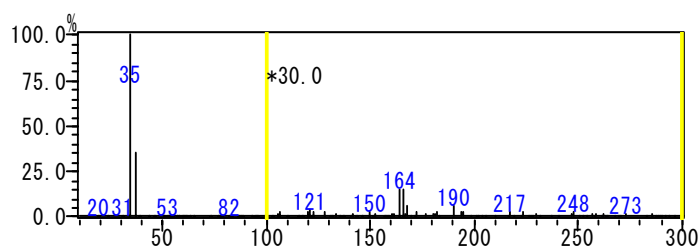
**Fig.1 Mass Chromatogram of EI**

A mass chromatogram with the split ratio set at 100:1. This data is from measurement by SEI.



**Fig.2 MIC Chromatogram of NCI (m/z 35-37)**

This figure shows the MIC of m/z 35-37. Three main peaks are visible. Peak (3) is inferred as tetrachloroethylene ( $C_2Cl_4$  MW:164).



**Fig.3 Mass spectrum of peak 3 ( $C_2Cl_4$  MW:164)**

**SHIMADZU CORPORATION** International Marketing Division

3. Kanda-Nishikicho 1-chome, Chiyoda-ku, Tokyo 101-8448, Japan

Phone: 81 (3) 3219-5641 Fax: 81 (3) 3219-5710

Cable Add. **SHIMADZU TOKYO**