

# Analysis of Amino Acids by Mass Detector

The Chromaster 5610 MS Detector is a new concept in simple detection for HPLC. Amino acids greatly affect the tastes and flavours of foods, and therefore, they are frequently analyzed in food product research and development and quality control labs. Of course, amino acid analysis is not limited to food products, but is also used for other product types such as health care, culture media, and cosmetics. In this report, an example is presented in which 17 amino acids were directly separated without labeling, and they are detected using the Chromaster 5610 MS Detector.



5610 MS Detector

## LC-MS Analysis of 17 Amino Acids

### Analytical Conditions

Table 1 MS Detector Settings

Ionization method	ESI
Ionization mode	positive
Detection method	SIM

Table 2 Analytical Conditions for HPLC

Column	Intrada Amino Acid (3 $\mu$ m) 3 mm I.D.x 100 mm (Intact Corporation)
Mobile phases	A: CH <sub>3</sub> CN / HCOOH = 100 / 0.3 B: CH <sub>3</sub> CN / 100 mmol/L HCOONH <sub>4</sub> = 20 / 80 %B = 20(0-4 min) - 100(14-16 min) - 20(16.1-30 min)
Flow rate	0.6 mL/min (Split ratio = 1:250)
Injection vol.	10 $\mu$ L

### LC-MS Analysis

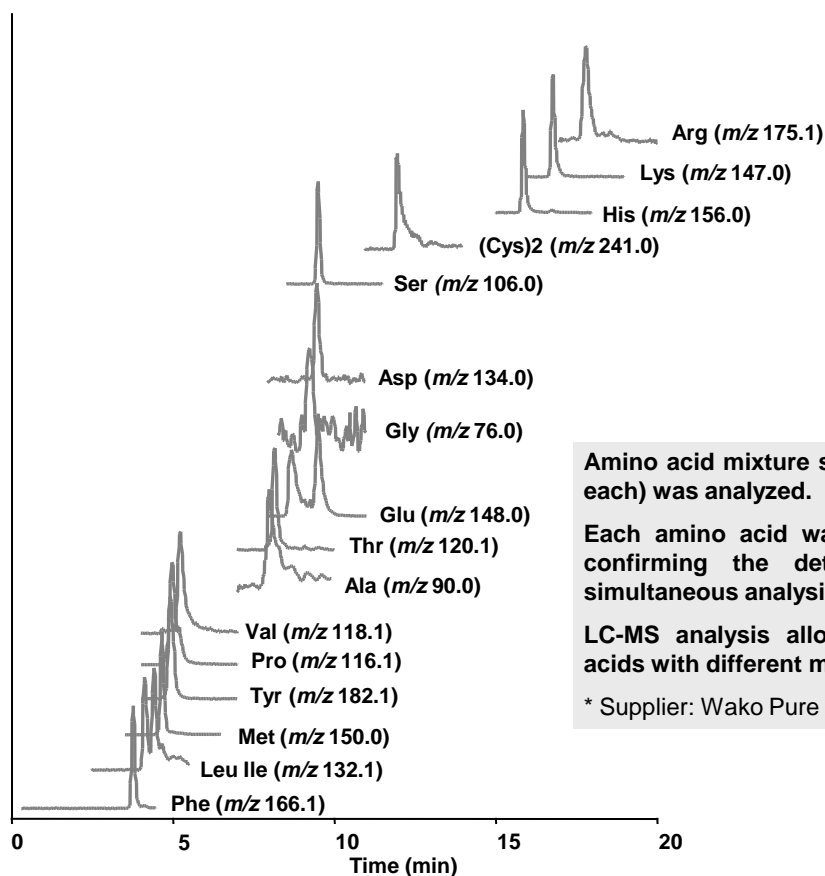


Figure 1 SIM Chromatogram of 17 Amino Acids

Amino acid mixture standard solution Type H\* (2.5  $\mu$ mol/mL each) was analyzed.

Each amino acid was analyzed by the scan mode. After confirming the detection of [M+H]<sup>+</sup> ions, 17-channel simultaneous analysis was conducted using the SIM mode.

LC-MS analysis allows the selective detection of amino acids with different masses

\* Supplier: Wako Pure Chemical Industries, Ltd.

<Main system configuration> 5110 Pump, 5210 Autosampler, 5310 Column Oven, 5610 MS Detector

NOTE: These data are an example of measurement; the individual values cannot be guaranteed.