Confirmation of Mass Information for Chlorhexidine

Chromaster 5610 MS detector is a new mass detector, designed for LC users, and it is different from conventional mass spectrometers. With this detector and a syringe pump, a sample solution is introduced directly to 5610 MS Detector and the mass information can be obtained. This time, the analysis example of chlorhexidine, a main component of antibacterial disinfectants, is introduced here. A protonated mollecular ion could be confirmed by simple operation.

5610 MS Detector

Infusion measurement of Chlorhexidine

■ Analytical Conditions

Table 1 MS Detector Setting Conditions

Ionization method	ESI
Ionization mode	Positive
Ionization voltage	2300 V
Measurement mode	Scan
Gas flow rate	0.7 L/min
IS/AIF temperature	100 ˚C / 120 ˚C
Pump flow rate	2 µL/min

■ Sample Preparation

Chrolhexidine : $C_{22}H_{30}Cl_2N_{10}$

Concentration : 1 mg/mL Solvent : CH_3OH

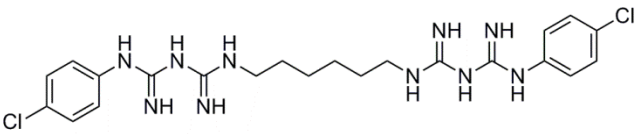

Fig. 1 Structure Formula of Chrorhexidine

■ MS Spectrum

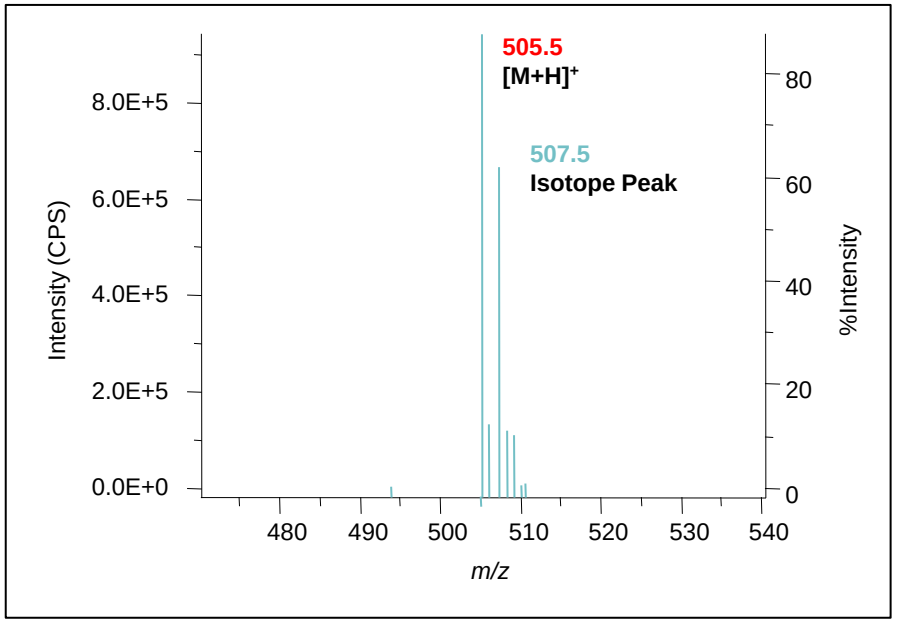

Fig. 3 **Mass Spectrum of Chlorhexidine**

■ Measurement Method

By connecting the syringe pump and MS Detector, the sample solution is directly delivered.

A protonated molecular ion, $[M+H]^+$, and an isotope peak were observed. MS information can be obtained by a few milliliters sample volume, by saving the effort of starting up LC.

Main system configuration: Chromaster 5610 MS Detector, Syringe pump, Data processing unit

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