



Confirmation of Mass Information for Diabetes Oral Drugs

Chromaster 5610 MS detector is a new mass detector, designed for LC users, and it is different from conventional mass spectrometers. By using this detector with low flow rate syringe pump, a sample solution is introduced directly to 5610 MS Detector and the mass information can be obtained easily. This time, vildagliptin, pioglitazone, and linagliptin were analyzed as the model samples and the results are introduced here.



5610 MS Detector

Infusion measurement of diabetes oral drugs

Analytical Conditions

Table 1 MS Detector Setting Conditions

Ionization method	ESI
Ionization mode	Positive
Ionization voltage	2300 V
Measurement mode	Scan
Gas flow rate	0.6 L/min
IS/AIF temperature	70 °C / 120 °C
Pump flow rate	2 µL/min

Sample Preparation

Concentration : 10 µg/mL each
 Solvent : 10 mM HCOONH₄:CH₃CN:
 HCOOH = 500:500:1

Measurement Method

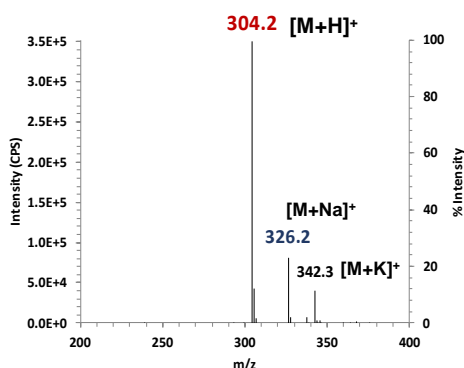
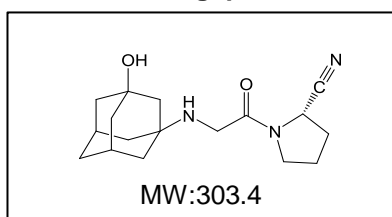
By connecting the syringe pump and MS Detector, the sample solution is directly delivered.



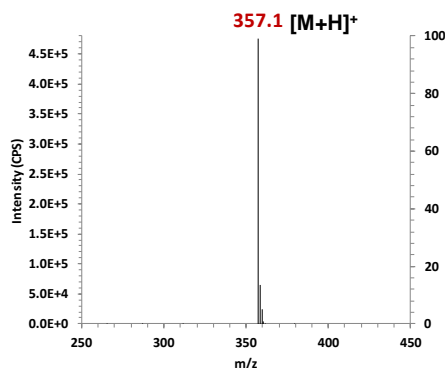
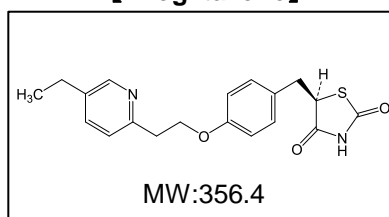
Structural formula and MS Spectrum

Protonated molecular ions [M+H]⁺ as well as several adduct ions were observed.

【 Vildagliptin 】



【 Pioglitazone 】



【 Linagliptin 】

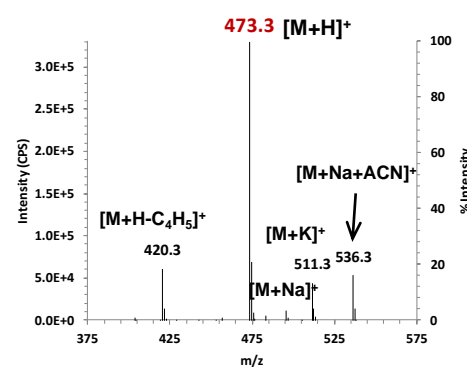
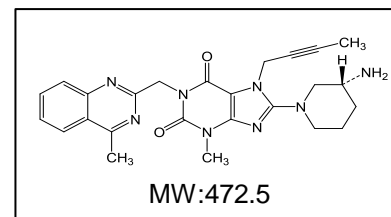


Fig. 1 Structural formula and MS Spectrum of Diabetes Oral Drugs

Main system configuration: Chromaster 5610 MS Detector, Syringe pump

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