**ABSTRACT**

Title: A method of performing a routine on a mass spectrometer

A method of performing a routine on a mass spectrometer, comprising:

providing a reference sample having known chemical properties;

generating a test mass spectrum from the reference sample using the mass spectrometer;

comparing predetermined characteristics of the test mass spectrum to predetermined performance criteria;

performing an autotune procedure on the mass spectrometer if a first characteristic of the test mass spectrum is deemed not to meet corresponding predetermined performance criteria;

performing a resolution adjustment and calibration procedure on the mass spectrometer if a second characteristic of the test mass spectrum is deemed not to meet corresponding predetermined performance criteria.

**[Figure 2]**