Applications Note

# AccuTOF-GCx Series

## Introduction of latest GC/HR-TOFMS system: JMS-T200GC AccuTOF GCx - High Mass Resolution

**Introduction**

JEOL has recently announced a 4th generation GC/HR-TOFMS system, the JMS-T200GC AccuTOF GCx, in 2015. The AccuTOF-GCx offers high sensitivity, high mass resolving power, high mass accuracy, and a wide dynamic range in combination with high-speed data acquisition.

In this application note, we show the high mass resolution that can be obtained with this latest GC/HR-TOFMS system.


*Figure 1. 4th generation of the JEOL GC/HR-TOFMS system JMS-T200GC AccuTOF GCx*

**Results and Discussion**

We measured perfluorotributylamine (PFTBA) introduced through the reservoir of the heated volatiles inlet. A resolving power of 10,000 was easily obtained for the *m/z* 614 peak (Figure 2).

Next, we checked the mass separation for a doublet comprised of the peaks corresponding to $C_6F_{11}^+$ (PFK) and $C_7H_{21}O_4Si_4^+$ (GC column background). In comparison with the original 1st-generation model, the "AccuTOF GC" (with only a mass resolving power of 5,000), the 4th –generation model "AccuTOF GCX" has over 10,000 mass resolving power (Figure 3).

**Conclusion**

The AccuTOF GCX system has a mass resolving power of >10,000 that can easily be obtained for all GC/MS and direct MS measurements.

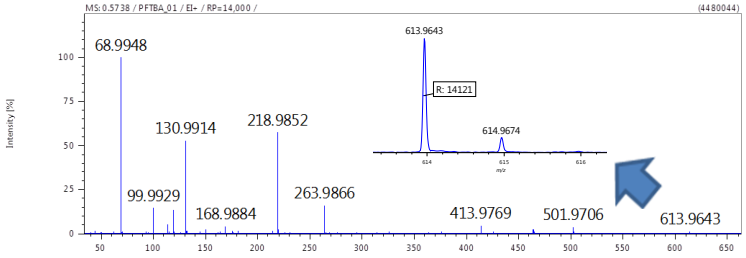


*Figure 2. PFTBA EI mass spectrum*

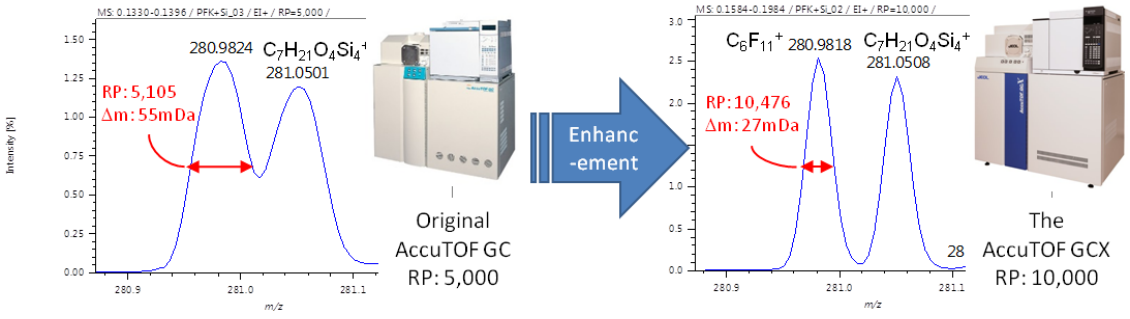


*Figure 3. Evolution of mass resolving power from the 1st -generation AccuTOF-GC to the 4th-generation AccuTOF-GCx*






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