COMPANY BACKGROUND
VG Instruments was formed in 1962 (Vacuum Generators Limited) to provide ultra-high vacuum components and systems. In 1970, VG Microscopes was formed to specialise in miniature quadrupole mass spectrometers. The second generation of the TRIO -1 in 1986, the TRIO 1000, saw the introduction of the PC-based data system and LabBase instrument control software. In 1988, VG Instruments and VG Masslab of Altrincham merged to form VG Instruments Limited, along with VG Data Systems. The rationale behind the repeated formation of small companies was Bernard Isotopes, VG Organic, VG Quadrupoles and VG Inorganic.

SINGLE QUADROPOLES
The first quadrupole mass filters from the VG stable were launched in 1971 by VG Quadrupoles, with the QDa being introduced in 1984 as the VG BioQ. The QDa was marketed primarily for diagnostic (IVD) applications, with an initial focus on neonatal in vitro (niV) analysing particles/neutrals. In 2010, a breakthrough in ion optical design was made with the introduction of the StepWave ion guide, specifically designed for MS/MS and APGC interface. The Xevo TQ also contained the T-Wave collision cell, which allowed for the ability to trap and release ions in the LC/MS so the Xevo TQ could be used with low performance systems, without affecting the mass accuracy.

TANDEM QUADROPOLES
The first tandem instrument from VG Microscopes was the QDa, which was introduced in 1984, and was the last EICQ Atmospheric Pressure Ionization Tandem Quadrupole, with all future tandem quadrupoles benefiting from being manufactured with a controlable LC flow rates of up to 1 mL/min 6mm I.D. columns. The introduction of the StepWave ion guide, specifically designed for APGC interface. The Xevo TQ also contained the T-Wave collision cell, which allowed for the ability to trap and release ions in the LC/MS so the Xevo TQ could be used with low performance systems, without affecting the mass accuracy.

REFERENCES:
R H Bateman in K R Jennings (Ed.) A History of European Mass Spec-