

## **Analytical determination of nicotine in tobacco leaves by gas chromatography-mass spectrometry**

### **Abstract**

A preliminary investigation using gas chromatography–mass spectrometry (GC–MS) to analyze the nicotine contained in tobacco leaves was carried out. Nicotine in commercially available cigarettes and tobacco leaves was extracted with methanol and determined by GC–MS. The detection limit was at the ppm level for nonselective monitoring and the nanogram level for nicotine selective detection. This system provided a simple analytical method for the analysis of nicotine in tobacco leaves. Compared to currently utilized methods, the GC–MS provided advantages of high sensitivity, nicotine specific detection and lower instrumentation cost.