IC Application Note No. M-4

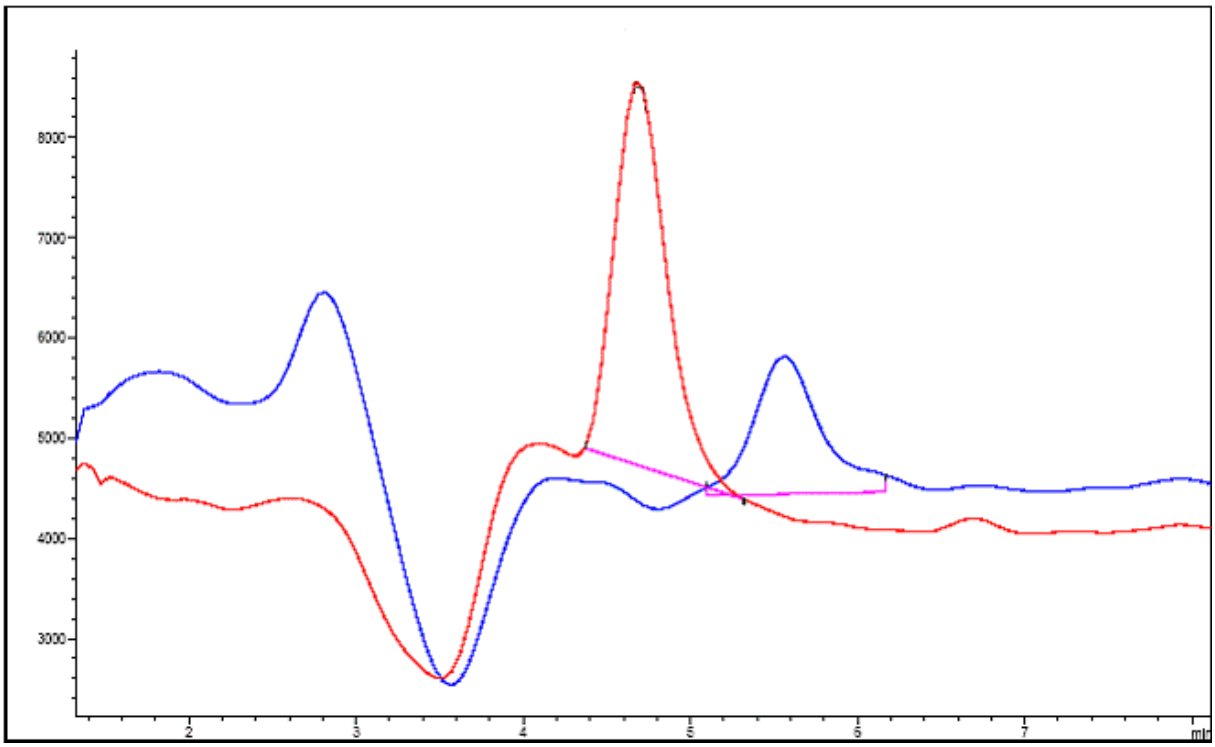
Title:	**Traces of bromide and bromate in drinking water by IC-MS, determination of the Method Detection Limit (MDL)**

***Summary*:**	Determination of bromide and bromate in drinking water applying anion chromatography with MS detection.

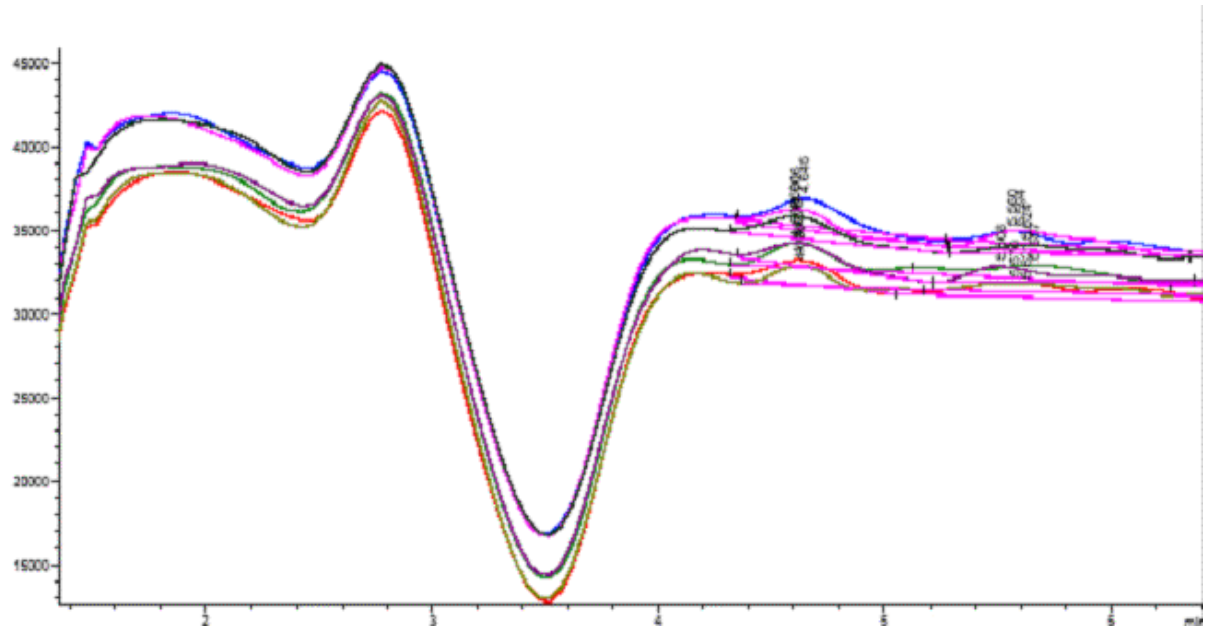
Sample:	Drinking water
Sample Preparation:	Direct injection

Column:	6.1006.510 Metrosep A Supp 5 – 100
Eluent:	25 mmol/L lithium hydroxide 25% acetonitrile
Suppressor:	Metrohm Suppressor Module (MSM, 100 mmol/L sulfuric acid, 2% acetonitrile)
Flow:	0.7 mL/min
Injection Volume:	100 µL

MS detection: Extracted ion chromatogram for bromate (m/z = 127, red) and bromide (m/z = 79, blue)



MS detection: Total ion chromatograms used for the determination of the Method Detection Limit



Results:	Bromate µg/L	Bromide µg/L
MDL – 1	0.1630	0.1790
MDL – 2	0.1688	0.1800
MDL – 3	0.1720	0.1800
MDL – 4	0.1687	0.1885
MDL – 5	0.1720	0.1848
MDL – 6	0.1679	0.1854
MDL – 7	0.1700	0.1799
Average	**0.16891**	**0.18252**
Standard Deviation	**0.00306**	**0.00368**
Method Detection Limit (MDL)	***0.0096***	***0.011***