

Application Report 20

US EPA Method 552.2 Haloacetic Acids on Equity-1701

Haloacetic acids are the byproducts of the chlorination of drinking water. They are formed when chlorine reacts with organic matter. Concern with long-term exposure to these compounds has led to periodic testing of many public water supplies. US EPA Method 552.2 describes the analysis of 11 of these compounds in drinking water. In this application, all 11 compounds, plus an internal standard, were separated on the Equity-1701. The resolution of dalapon and DCAA was achieved while still keeping the run to less than 35 minutes.

Key Words

haloacetic acids, Method 552.2, 28372-U, 47788, 46970-U, 47663-U, 47669-U

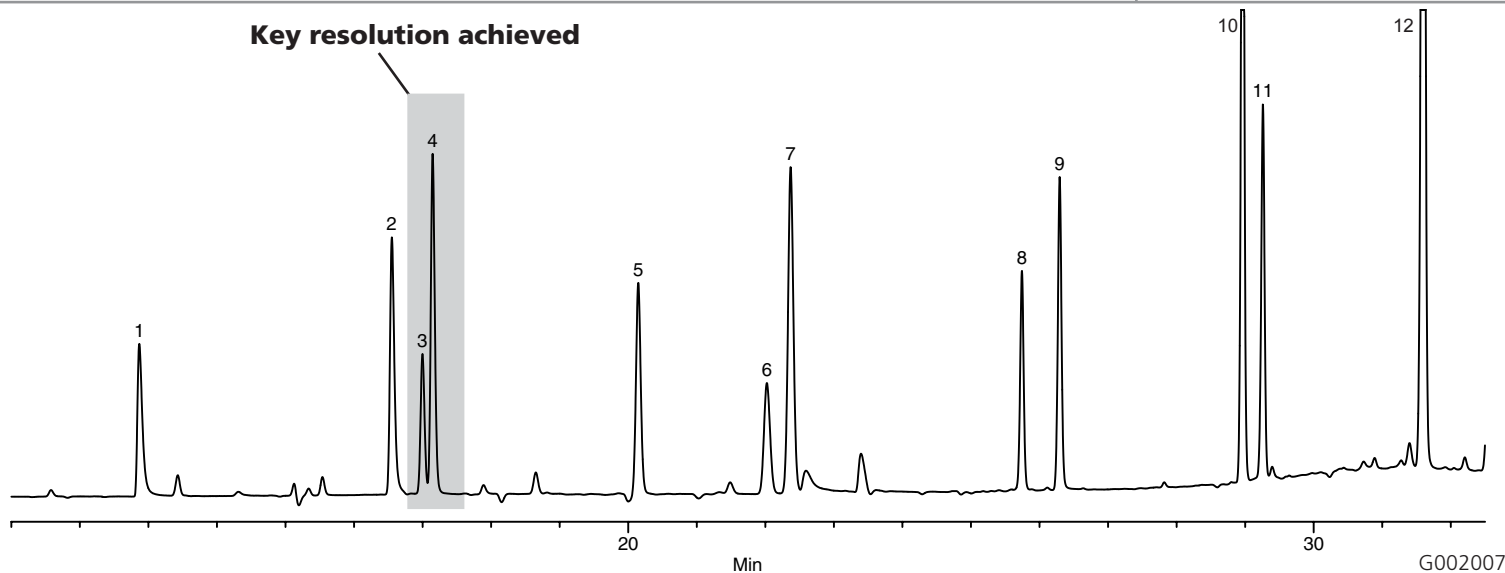
Author: K. Stenerson

Raw Data File Name:

C:\HPCHEM\DATA\1\CAA00010.D
(HPCS 53)

Acquisition System: GC 1902

Key resolution achieved



Conditions

Column: Equity-1701, 30m x 0.25mm ID, 0.25mm
Cat. No.: 28372-U
Oven: 40°C (10 min) to 75°C (5 min) to 150°C (5 min)
Inj.: 200°C
Det.: ECD, 260°C
Flow: Helium, 25cm/sec @ 35°C
Injection: 2µL, splitless (0.5 min)
Liner: 4mm ID single taper
Sample: 12 component mix, 30-200ppb in MTBE

Peak IDs

1. Monochloroacetic acid (MCAA), 30ppb
2. Monobromoacetic acid (MBAA), 20ppb
3. Dalapon, 20ppb
4. Dichloroacetic acid (DCAA), 30ppb
5. Trichloroacetic acid (TCAA), 10ppb
6. 1,2,3-Trichloropropane (internal standard), 50ppb
7. Bromochloroacetic acid (BCAA), 20ppb
8. Bromodichloroacetic acid (BDCAA), 200ppb
9. Dibromoacetic acid (DBAA), 10ppb
10. Chlorodibromoacetic acid (CDBAA), 50ppb
11. 2,3-Dibromopropionic acid (surrogate), 25ppb
12. Tribromoacetic acid (TBAA), 100ppb

(all compounds except internal standard were methylated)