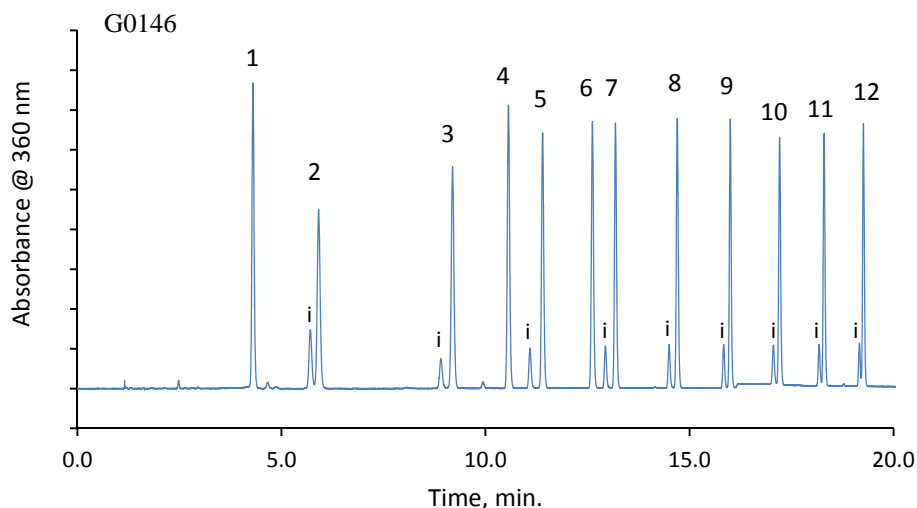


Separation of Carbonyl Compound DNPH Derivatives on HALO-5 C18



PEAK IDENTITIES:

1. Formaldehyde-2,4-DNPH
2. Acetaldehyde-2,4-DNPH
3. Propionaldehyde-2,4-DNPH
4. Crotonaldehyde-2,4-DNPH
5. Butyraldehyde-2,4-DNPH
6. Cyclohexanone-2,4-DNPH
7. Valeraldehyde-2,4-DNPH
8. Hexaldehyde-2,4-DNPH
9. Heptaldehyde-2,4-DNPH
10. Octylaldehyde-2,4-DNPH
11. Nonaldehyde-2,4-DNPH
12. Decaldehyde-2,4-DNPH

*DNPH=Dinitrophenylhydrazine
i =anti, syn, isomers of the respective DNPH derivatives

TEST CONDITIONS:

Column: HALO 90Å, C18, 5 µm, 4.6 x 250 mm
Part Number: 95814-902

Mobile Phase:

A= Water

B= 80/20 ACN/ THF

Gradient: Hold at 45%B for 5 min.

45-95%B from 5-20 min.

Flow Rate: 1.5 mL/min

Pressure: 223 bar

Temperature: 30°C

Detection: UV 360 nm

Injection Volume: 2 µL

Sample Solvent: 50:50 ACN/ Water

Response Time: 0.12 sec.

LC System: Agilent 1100 Series Quaternary

Flow Cell: 5 µl Semi-Micro, bypassed

A fast, high resolution separation of carbonyl-DNPH derivatives is performed on a HALO-5 C18 column. DNPH, or 2,4-Dinitrophenylhydrazine is used to derivatize these highly volatile and reactive carbonyl compounds. It is important to monitor the levels of these reactive compounds in the environment because they are combustion by-products found in air, water and soil.

STRUCTURES:

