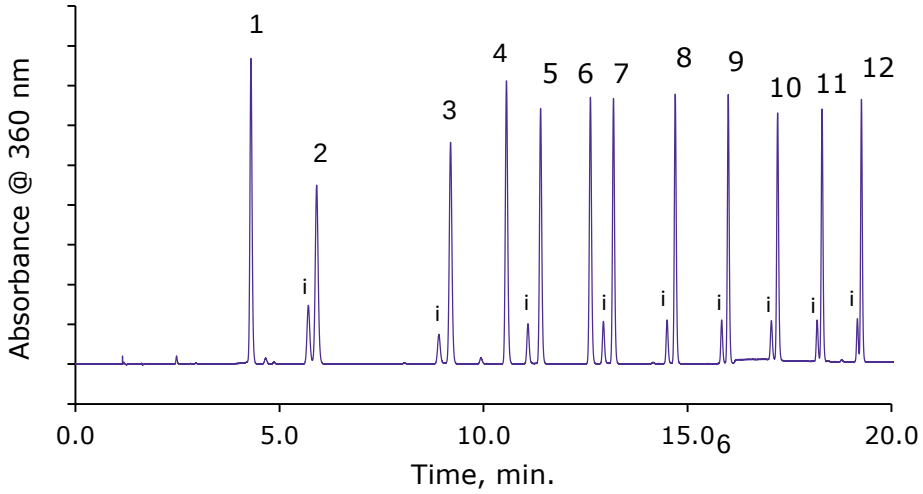
HPLC Analysis of Carbonyl Compound DNPH Derivatives on Ascentis® Express C18, 5 µm



Peak Number	Compound
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=Dinitrophenylhydrazone
i =anti, syn, isomers of the respective DNPH derivatives

Conditions:

column: Ascentis® Express C18, 25 cm x 4.6 mm I.D., 5 µm
mobile phase: [A] Water; [B] 80:20 Acetonitrile:Tetrahydrofuran
gradient: Hold at 45% B for 5 min; 45% B to 95% B in 15 min.
flow rate: 1.5 mL/min
column temp.: 30 °C
detector: UV, 360 nm
injection: 2 µL
sample: DNPH-labeled carbonyl compounds, varied concentration, 50:50 Water:Acetonitrile

Description:

Dinitrophenylhydrazine is commonly used to derivatize carbonyl compounds. These carbonyl compounds are byproducts of combustion that can be found in air, water and soil. Since they are highly volatile and reactive, it is important to monitor their levels in the environment. The Ascentis® Express C18 is ideal for such separations, providing a fast run time and excellent resolution.

Materials:

Product Part Number	Description
50538-U	Ascentis® Express C18, 25 cm x 4.6 mm I.D., 5 µm
34851	Acetonitrile
270733	Water
34865	Tetrahydrofuran

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