Application Report 127

Analysis of Xanthines Using Ascentis™ C18

This application demonstrates the suitability of Ascentis C18 for the efficient separation of the xanthines 1-methylxanthine, 7-methylxanthine, 1,7-dimethylxanthine, and β-hydroxytheophylline by HPLC.

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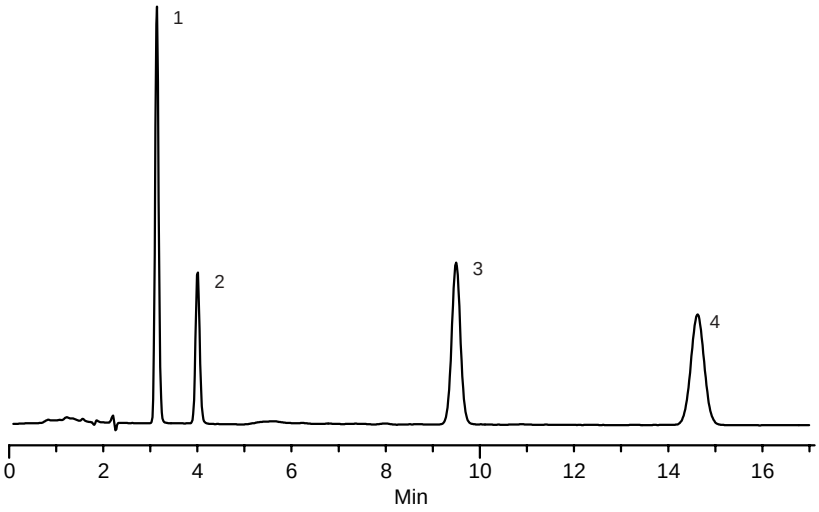
Acquisition System: Waters Alliance 2690 ID 9371

Notebook Reference: 1486-87

Key Words

Ascentis C18, 1-methylxanthine, M3275, 6136-37-4, 7-methylxanthine, M9890, 552-62-5, 1,7-dimethylxanthine, D5385, 611-59-6, β-hydroxytheophylline, H9006, 519-37-9, 581324-U



G002465

Conditions

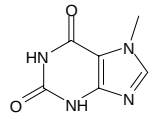
column:	Ascentis C18, 15 cm x 4.6 mm I.D., 5 µm particles (581324-U)
mobile phase:	94:6, 10 mM monobasic potassium phosphate (pH 3.0 with phosphoric acid):methanol
flow rate:	1 mL/min.
temp.:	35 °C
det.:	UV at 220 nm
injection:	10 µL
sample:	50 µg/mL each in mobile phase

Peak IDs

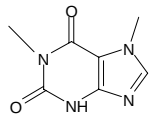
1. 7-methylxanthine
2. 1-methylxanthine
3. 1,7-dimethylxanthine
4. β-hydroxytheophylline

Structures

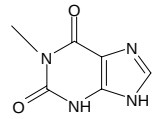
7-methylxanthine - G002466



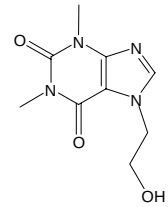
1-methylxanthine - G002467



1,7-dimethylxanthine - G002468



β-hydroxytheophylline - G002469



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