Application Report 269

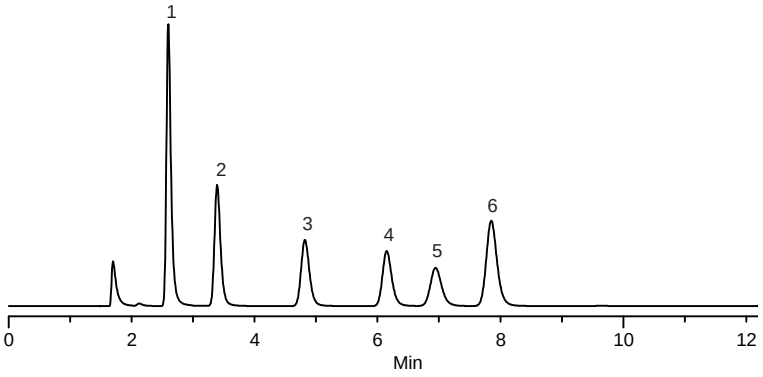
Analysis of Nucleobases Using Ascentis™ RP-Amide

This application demonstrates the suitability of the Ascentis RP-Amide for the separation of nucleobases, cytosine, uracil, cytidine, hypoxanthine, uridine and thymine using 100% aqueous conditions.

Author: Jacinth A.M. McKenzie
Acquisition System: Hitachi LC
Notebook Reference: 1550-42

Key Words

Ascentis RP-Amide 565324-U, nucleobases, cytosine C3506 71-30-7, uracil U0750 66-22-8, cytidine C9505 65-46-3, hypoxanthine H9377 68-94-0, uridine U2750 58-96-8, thymine T0376 65-71-4



G003010

Conditions

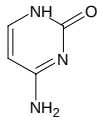
column: Ascentis RP-Amide, 15 cm x 4.6 mm I.D., 5 µm particles (565324-U)
mobile phase: 10 mM potassium phosphate, dibasic (pH 7.0 with phosphoric acid)
flow rate: 1.0 mL/min
temp: 30 °C
det: UV at 215 nm
injection: 10 µL
sample: as indicated in 10 mM potassium phosphate, dibasic (pH 7.0 with phosphoric acid)

Peak IDs

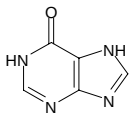
1. Cytosine (50 µg/mL)
2. Uracil (50 µg/mL)
3. Cytidine (50 µg/mL)
4. Hypoxanthine (50 µg/mL)
5. Uridine (50 µg/mL)
6. Thymine (50 µg/mL)

Structures

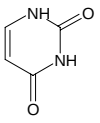
Cytosine - G003033



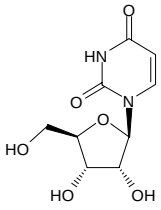
Hypoxanthine - G002743



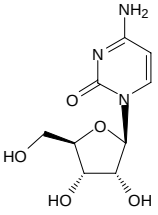
Uracil - G002739



Uridine - G002744



Cytidine - G003012



Thymine - G003011