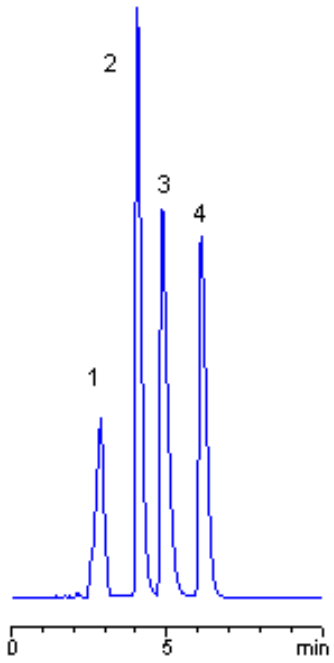
Mixed-Mode HPLC Separation of Tertiary Amines on Primesep 200 Column

Column: Primesep 200
Column size: 150 x 4.6 mm
Mobile phase: MeCN/H_2O/TFA–20/80/0.15
Flow rate: 1.0 ml/min
Injection: 5 ul
Sample: 3.0 mg/ml each
Detection: ELSD, 35ºC

1. Trimethylamine
2. Triethylamine
3. Diisopropylethylamine
4. N,N-Dimethylbenzylamine



Tertiary amines are compounds derived from ammonia. Amines with short alkyl (triethylamine, trimethylamine, diisopropylethylamine) chain are not hydrophobic enough to retain well in reverse phase chromatography. Slight hydrophobicity and strong basic properties of tertiary amines provide enough interaction with mixed-mode stationary phases to guarantee good retention on a Primesep 200 column. Tertiary amines can be separated by dual interaction based on minimal difference in hydrophobic and basic properties. This application can be used for analysis of complex mixtures of tertiary amines. ELSD and LC/MS detection can be applied. Various buffers compatible with specified detection technique can be employed (TFA for ELSD, ammonium acetate or ammonium formate for LC/MS) Compounds with the nitrogen atom next to carbonyl are called amides and are not basic in nature. Mixed-mode cation-exchange stationary phases are not interacting with amides by ion-exchange mechanism.

Method Parameters

Detection	ELSD Detection

Quelle: https://sielc.com/Application-Mixed-Mode-HPLC-Separation-of-Tertiary-Amines-on-Primesep-200-Column

AugustaChrom - Dr. Roland Kießwetter
Tel.: +49 821 599 783 70
Fax: +49 821 599 783 71
E-Mail: info@hplc-shop.de