

Separation of Tricyclic Antidepressants and Metabolites

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Tricyclic anti-depressants (TCA) are an important class of pharmaceuticals for the treatment of depression. Analyse of TCA's and their various metabolites in a single chromatographic run can be very beneficial to research and clinical analysis of these compounds. For routine analysis, it is important that both active compounds (Amitriptyline and Nortriptyline) elute later than the 4 metabolites.



Highlights

- With the addition of TEA, good peak shapes can be obtained for very basic compounds, even at pH 6.2.
- Change in the pore-size and surface area of a column packing can sometimes be helpful in obtaining the desired separation.
- Use additional caution when using silica-based columns at pH> 6 since the silica will dissolve much more quickly.

Conditions: ZORBAX SB-C18 (3.5µm; 4.6 x 150 mm, Agilent P/N: 863953-902) ZORBAX 300 SB-C18 (4.6 x 150 mm, Agilent P/N: 883995-902) Mobile Phase: 40:60, 25mM Phosphate Buffer, 10mM triethylamine, pH6.2:ACN 1.2 mL/min, Detect. UV(254 nm)



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<u>NOTE</u>: For Investigational / Research only. The performance characteristic for this procedure has not been established. Not for *in vitro* diagnostic procedures.