



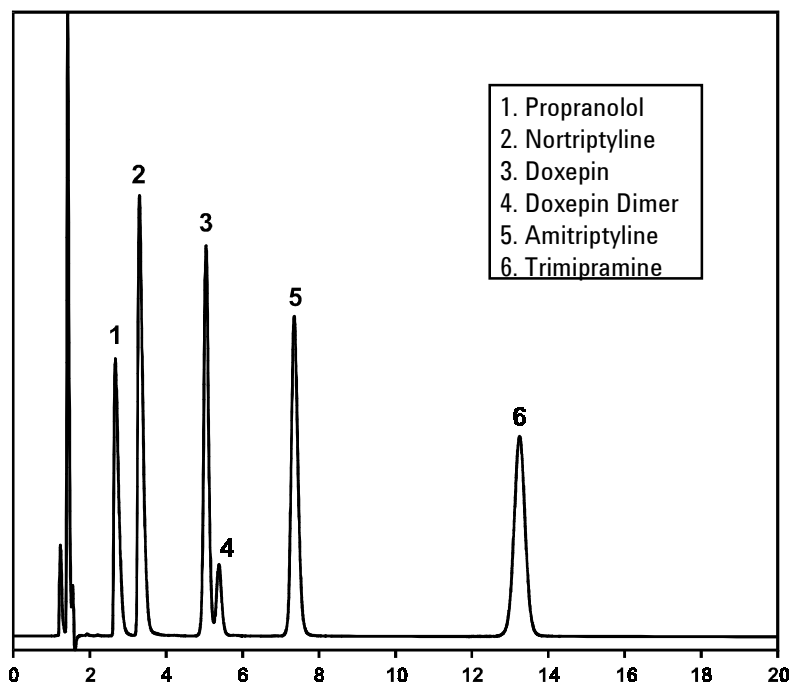
Tricyclic Antidepressants Separation with Excellent Peak Shape Using XDB-C8 and THF-Containing Mobile Phase

Application
Pharmaceutical
Robert Ricker

Tricyclic antidepressants (TCAs) are a common class of pharmaceutical compounds. Although TCAs are often separated by HPLC, older column technology limited its application in the neutral pH-range, due to broad and tailing peaks. New technologies, such as **eXtra Dense Bonding** and double end-capping allow separation of these compounds at pH 7, with dramatically improved peak shape. In comparison to other organic solvents as modifiers, THF was found to provide the best peak shape.

Highlights

- The extra densely bonded XDB-C8 provides excellent peak shape for acids, bases, and neutrals, due to more-complete coverage of the silica surface.
- The excellent peak shape demonstrated by THF in this separation, suggests that the chromatographer explore use of several solvents in developing separations.



Conditions:
ZORBAX Eclipse XDB-C8 (4.6 x 150 mm, 5 µm) (Agilent P/N: 993967-906)
Mobile Phase: 38% THF; 62% 25mM Potassium Phosphate, pH 7
Injection 10 µL, 1 mL/min, 23°C, Detect. UV (254 nm)



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