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

Application

Pharmaceutical

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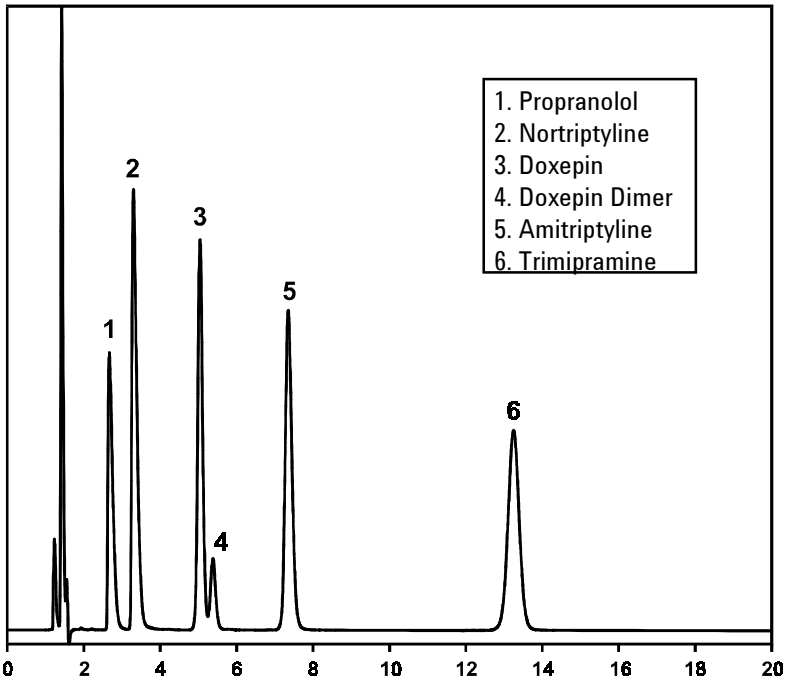
Tricyclic antidepressants (TCAs) are a common class of pharmaceutical compounds. Although TCAs are often separated by HPLC, older column technology limited its application in the neutral pH-range, due to broad and tailing peaks. New technologies, such as e**X**tra **D**ense **B**onding and double end-capping 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.



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 10µL, 1mL/min, 23°C, Detect. UV (254 nm)

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.*

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