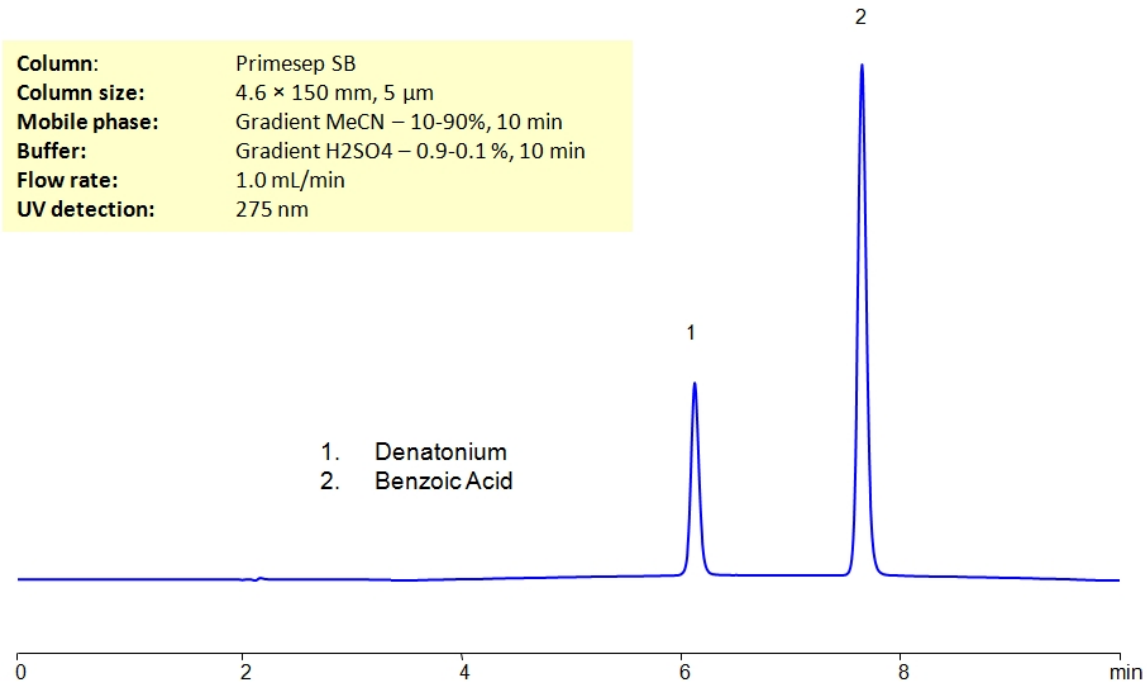
HPLC Separation of Denatonium benzoate on Primesep SB Column



High Performance Liquid Chromatography (HPLC) Method for Analysis of Denatonium benzoate

Denatonium benzoate , also known as Denatonium, is the bitterest chemical that is safe to be ingested. It is often used as a bittering agent to antifreeze, detergents, and cosmetics to prevent consumption. Even low concentrations of it can cause am incredibly bitter taste. In France and Italy it is mandatory to add Denatonium to antifreeze. It has the chemical formula C28H34N2O3 .

Denatonium benzoate can be retained and analyzed using the Primesep SB stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) with a sulfuric acid buffer. Detection is performed using UV.

Benzoic Acid is an organic compound with the chemical formula C7H6O2 . It is considered to be the simplest aromatic carboxylic acid. In nature, it can be found in many plants, especially berries. It is used for food preservation of food, as it can inhibit growth of bacteria and mold. While it is safe in food, it can cause irritation to skin, eye, and respiratory systems.

Method Parameters

Column	Primesep SB, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	Gradient MeCN – 10-90%, 10 min
Buffer	Gradient H2SO4 – 0.9-0.1%, 10 min
Flow Rate	1.0 mL/min
Detection	UV, 275 nm

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