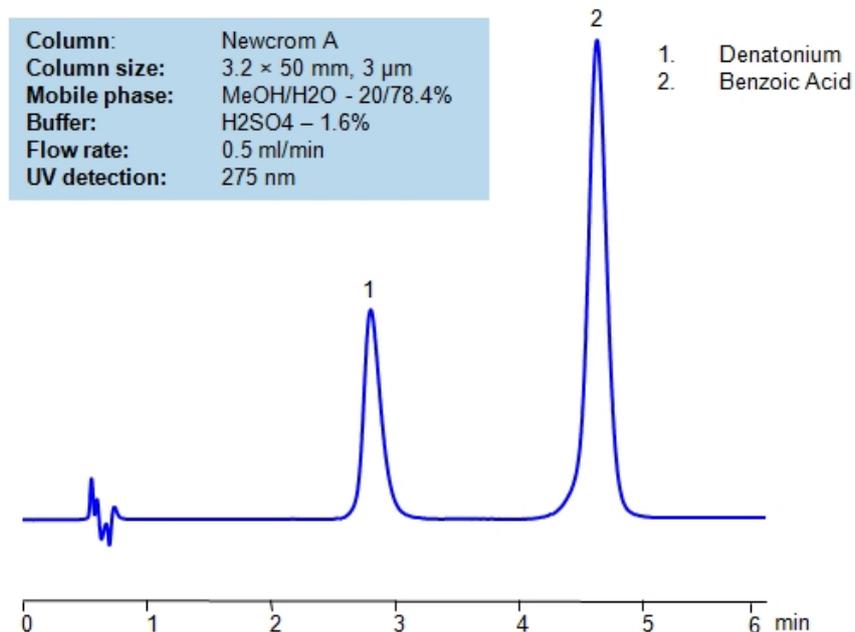


HPLC Separation of Denatonium benzoate on Newcrom A Column



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

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 an incredibly bitter taste. In France and Italy it is mandatory to add Denatonium to antifreeze. It has the chemical formula C₂₈H₃₄N₂O₃ .

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.

Denatonium benzoate , Benzoic Acid can be retained and analyzed using the Newcrom A 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.

Method Parameters

Column	Newcrom A, 3.2 x 50 mm, 3 µm, 100 Å, dual ended
Mobile Phase	MeOH/H ₂ O – 20/78.4%
Buffer	H ₂ SO ₄ – 1.6%
Flow Rate	0.5 mL/min
Detection	UV 275 nm

Quelle: <https://sielc.com/hplc-separation-of-denatonium-benzoate-2>