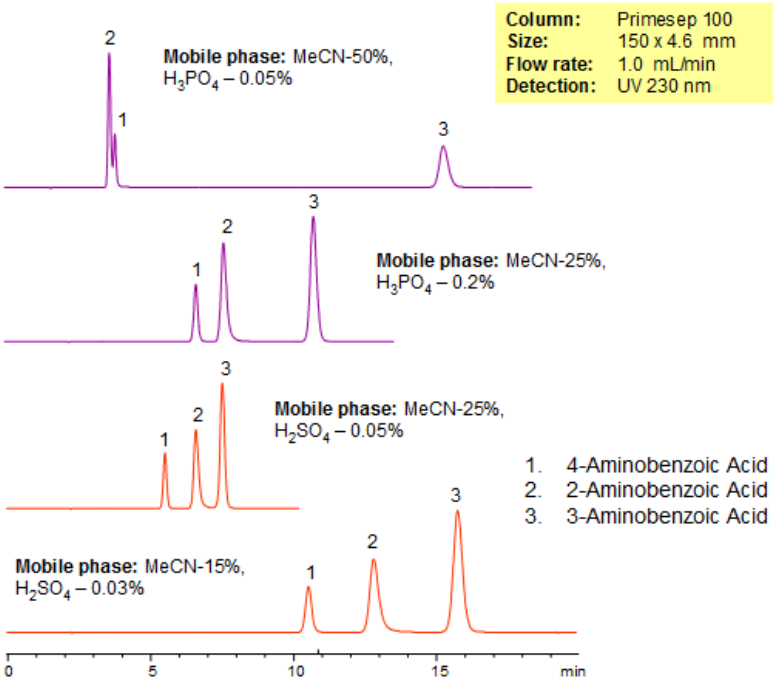
HPLC Separation of Isomers of Aminobenzoic Acid



Aminobenzoic Acid is an organic acid that can be found in folic acid vitamins, grains, eggs, milk, and meat. Because it absorbs the UV light, it is used in sunscreen wi th SPF15or greater . The acid can cause damage to DNA and skin irritations in rare cases. Primesep 100, a reverse phase column , contains embedded acidic ionizable groups and can retain aminobenzoic acid. The method is UV compatible and can be used as a general approach for analyzing similar compounds.

Isomers of organic compounds usually have very similar properties. Separation of such isomers by HPLC requires intensive screening of various columns and mobile phase conditions. In case of hydrophilic compounds, this task becomes even more challenging due to the lack of or limited retention on traditional reversed-phase (C18 or C8) HPLC columns. Three isomers of aminobenzoic acid (2-aminobenzoic acid, 3-aminobenzoic acid and 4-aminobenzoic acid) were successfully separated on a Primesep 100 reversed-phase/cation-exchange column. Baseline separation within 10 minutes was achieved and produced a perfect peak shapes for all three analytes. The method can be used a generic approach for separation of ionic hydrophobic and ionic basic isomers by mixed-mode chromatography.

Method Parameters

Column	Primesep 100, 4.6×150 mm, 5 µm, 100 Å
Mobile Phase	MeCN
Buffer	H3PO4, H2SO4
Flow Rate	1.0 mL/min
Detection	UV, 230 nm

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