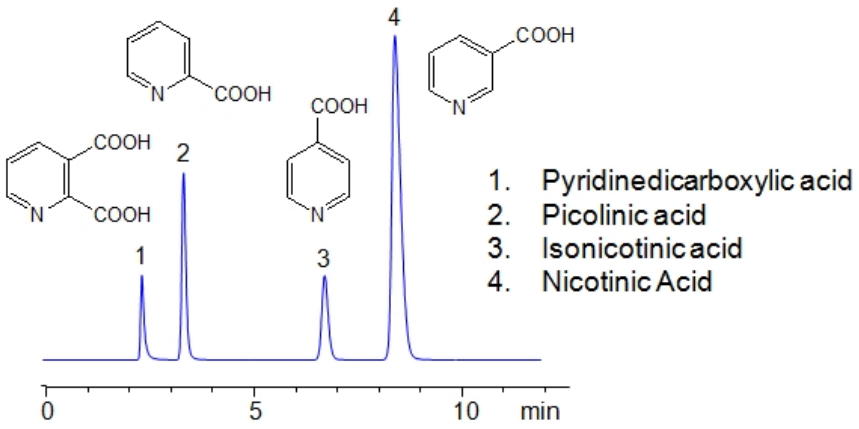
HPLC Separation of Pyridinecarboxylic Acids

Column:	**Primesep 100**
Column size:	150 x 4.6 mm
Mobile phase:	MeCN -10%, H_2SO_4 -0.05%
Flow rate:	1.0 ml/min
Detection:	UV 250 nm



Pyridinecarboxylic acids exist as three isomers with different position of carboxylic acid relative to nitrogen in pyridine. Three isomers of pyridinecarboxylic acid (picolinic or 2-pyridinecarvoxylic acid, niacin or 3-pyridinecarboxylic acid, isonicotinic or 4-pyridinecarboxylic acid), along with pyridinedicarboxylic acid, are separated on a Primesep 100 column. Pyridinecarboxylic acids have a similar empirical formula, and are very similar in terms of hydrophobicity and ionic properties. Small differences in these properties are enough to achieve good separation on cation-exchange mixed-mode HPLC column like Primesep 100. Retention time for all compounds is controlled by the amount of acetonitrile and amount of ions in the mobile phase. Ions in the mobile phase can be created by organic and inorganic acids and corresponding salt buffers. Various detection techniques can be used for monitoring pyridinecarboxylic acids. Other ionizable isomers can be successfully separated on mixed-mode columns.

Method Parameters

Detection	UV Detection

Quelle: https://sielc.com/Application-HPLC-Separation-of-Pyridinecarboxylic-Acids

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