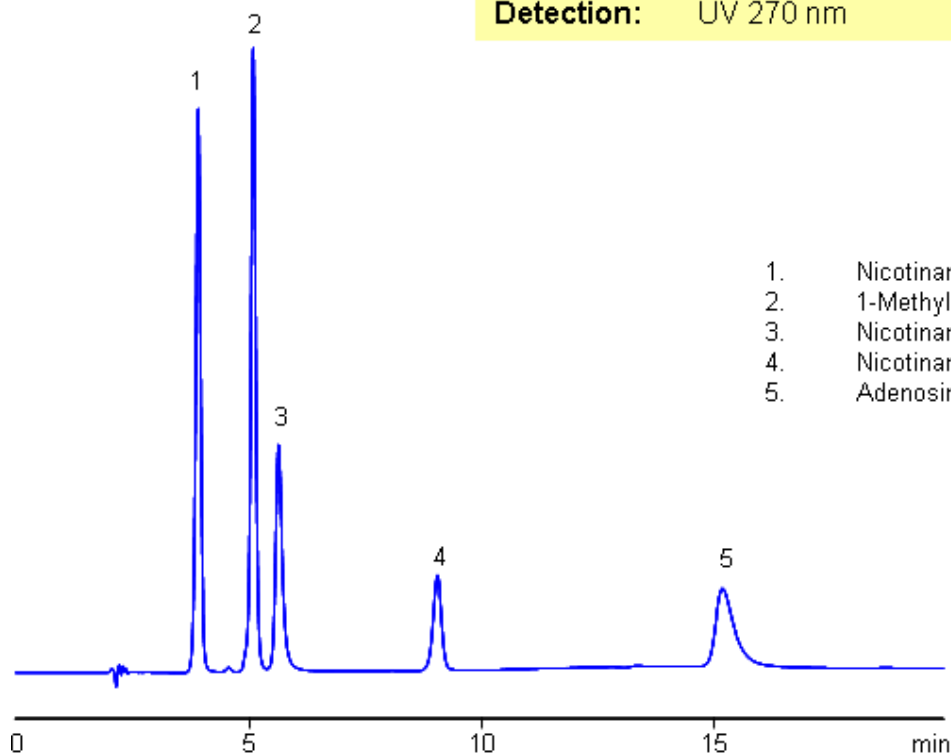


Separation of Nicotinamide and Related Substances

<https://sielc.com/Application-Separation-of-Nicotinamide-and-Related-Substances>

Chromatogram

Column: Obelisc R
Size: 4.6 x 150 mm
Mobile phase: MeCN gradient 5% to 20% in 10 min ,
10 min hold, AmAc pH 5.0 gradient
from 5 mM to 80 mM in 10 min, 10 min
hold
Flow: 1.0 mL/min
Detection: UV 270 nm



1. Nicotinamide (NAM)
2. 1-Methylnicotinamide (MNA)
3. Nicotinamide Adenine Mononucleotide (NMN)
4. Nicotinamide Adenine Dinucleotide (NAD⁺)
5. Adenosine monophosphate (AMP)

Description

A complex mixture of nicotinamide and related impurities was separated on Obelisc R mixed-mode column. Nicotinamide, methylnicotinamide, nicotinamide adenine mononucleotide, nicotinamide adenine dinucleotide, and adenosine monophosphate were baseline resolved in a 15 minute long method. This mixed-mode approach can be used for analysis of other nucleotides. Obelisc R trimodal column separates this complex mixture based on reversed-phase, cation-exchange and anion-exchange mechanisms. Retention is controlled by amount of ACN, buffer concentration and buffer pH. Additional selectivity can be gained by exploring various buffers within the same pH