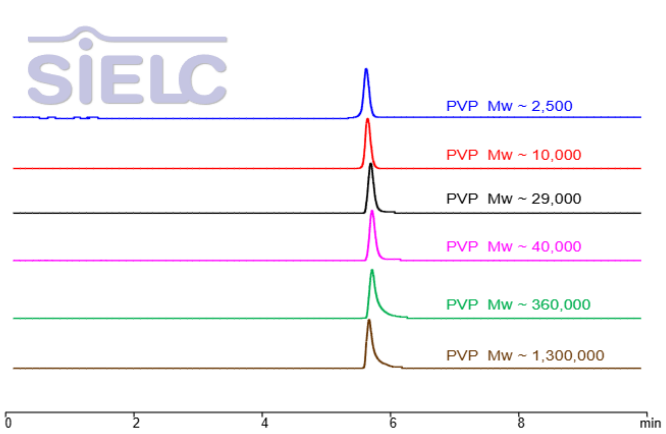
HPLC Method for Separation of PVP on PVP Column



Column:	PVP
Column size:	2.1 × 50 mm, 5 µm, 100A
Column part number:	PVP-21.050.0510
Mobile phase:	Step gradient from H_2O/MeCN (100:0) to H_2O/MeCN (50:50) after 2 minutes
Buffer:	Step gradient Ammonium Acetate pH 4.0 from 2 mM to 20 mM after 2 minutes
Flow rate	0.4 ml/min
Detection:	ELSD, the nebulizer and evaporator temperatures 40°C, with a gas flow rate of 1.6 Standard Liters per Minute (SLM)
Concentration:	1 mg/ml
Injection Volume:	5 µL
Diluent:	MeCN/H2O – 50/50%
Limit of Detection:	PVP 2 ppm

High Performance Liquid Chromatography (HPLC) Method for Analysis of PVP

Polyvinylpyrrolidone (PVP)

Polyvinylpyrrolidone (PVP) is a versatile synthetic polymer widely used in life sciences and biochemical research. As a water-soluble compound, it performs multiple critical functions, including:

Its role as a protective colloid is especially important for stabilizing proteins, enzymes, and other sensitive biological molecules. This makes PVP particularly well-suited for forming stable complexes with iodine in pharmaceutical and medical formulations.

PVP can be retained and analyzed using the PVP column. The analysis utilizes an step gradient method with a simple mobile phase consisting of water, acetonitrile (MeCN), and ammonium acetate. Detection is performed using ELSD.

Method Parameters

Column	PVP, 2.1 x 50 mm, 5 µm, 100 Å, dual ended
Mobile Phase	Step gradient MeCN/H2O
Buffer	Ammonium Acetate pH 4.0 – 20 mM
Flow Rate	0.4 mL/min
Detection	ELSD
Limit of Detection	PVP2.0 ppm

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Quelle: https://sielc.com/polyvinylpyrrolidone