

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-06-25 10:46:17  
Date of Next Testing: 2025-06-14 10:46:17  
Product Name: **Polyvinylpyrrolidone**  
CAS Number: 9003-39-8  
Specifications & Purity: average Mw 24000,K23-27  
Lot #: F2308166  
SKU #: **P110609**  
Analysis: **226405**

Parameter	Limit Values	Result
Hydrazine(N <sub>2</sub> H <sub>4</sub> )	0-1 (ppm)	1.00 ppm
Peroxide(as H <sub>2</sub> O <sub>2</sub> )	0-400 (ppm)	0.60 ppm
Water by Karl Fischer	0-5 (%)	3.40 %
2-pyrrolidone	0-3 (%)	1.20 %
Sulfate Ash	0-0.1 (%)	0.05 %
Heavy metals	0-10 (ppm)	0.00 ppm
Formic Acid	0-0.5 (%)	0.04 %
PH	3-5	3.80
NVP	0-10 (ppm)	0.43 ppm
Nitrogen by Elemental Analysis	11.5-12.8 (%)	12.10 %
Aldehydes	0-0.05 (%)	0.01 %
K value	23-27	24.80
Infrared spectrum	Conforms to Structure	Conforms to Structure
Appearance (p110609)	White,Off-White Hygroscopic Powder,Crystals,Flake	White,Off-White Hygroscopic Powder,Crystals,Flake



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A handwritten signature in black ink that reads "John Su". The signature is written in a cursive, flowing style.

John Su  
QA & QC Manager