Acros Organics BV (Thermo Fisher Scientific)
Janssen Pharmaceuticalaan 3a
Geel,
2440, Belgium

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek. Certificate Number. 2317548

Catalogue Number	27614
Lot Number	A0469001
Description	Polyvinylpyrrolidone,average M.W. 3500, K12
CAS Number	9003-39-8
Quality Test/Release Date	20/Jan/2025
Suggested retest date	20/Jan/2028
Country of Origin	UNITED STATES OF AMERICA
Declaration of Origin	synthetic

Result Name	Units	Specifications	Test Value
Appearance (Color)		White to yellowish-white	White
Appearance (Form)		Powder or flakes	Powder
Infrared spectrum		Conforms	Conforms
Identification		Passes test	Passes test
Nitrogen (N)	%	11.5 to 12.8 (on anhydrous substance)	12.0 (on anhydrous substance)
Water	%	=<5.0 (K.F.)	0.03 (K.F.)
Heavy metals (as Pb)	ppm	=<10	=<1
Sulfated ash	%	=<0.1	=<0.01
pH		3.0 to 5.0 (5 % in water)	3.8 (5 % in water)
Aldehyde	%	=<0.05	0.0068
Hydrazine (N2H4)	ppm	=<1	=<1
HPLC	ppm	=<10 1-Vinylpyrrolidin-2-one	1.7 1-Vinylpyrrolidin-2-one
HPLC	%	=<3.0 2-Pyrrolidone	=<0.01 2-Pyrrolidone
Peroxides	ppm	=<400 (Titanyl sulphate method)	29 (Titanyl sulphate method)
Appearance of solution		(5 % in water at 25°C) Free of haze	(5 % in water at 25°C) Free of haze
Appearance of solution		(Ph. Eur.) Clear and not more intensely colored than ref. B6	(Ph. Eur.) Clear and not more intensely colored than ref. B6
Appearance of solution		(Ph. Eur.) Clear and not more intensely colored than ref. BY6	(Ph. Eur.) Clear and not more intensely colored than ref. BY6
Appearance of solution		(Ph. Eur.) Clear and not more intensely colored than ref. R6	(Ph. Eur.) Clear and not more intensely colored than ref. R6
K-value		10.2 to 13.8 (5 % solids w/v aq. soln.)	12.7 (5 % solids w/v aq. soln.)

Geert Torfs
Supervisor, QC

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.