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CERTIFICATE OF ANALYSIS

Product name	Hydroxyethyl Starch130/0.4		
Batch No.	19020113	Mfg. Date	2019.02.03
Report Date	2019.02.12	Exp. Date	2021.02
Package	25kg/drum	Quantity	1650kg

Inspection Items	Accepted Standard	Results
Appearance	White or off white powder	Off white powder
Optical rotation	+ 182.0°~ + 192.0°	+ 188°
clarity and color of solution	λ 400nm absorbance <0.05,turbidity not deeper than NO2 standard	Complies
Identification	(1)To complies positive reaction	Complies
	(2) complies with standard	Complies
pH	4.5-6.5	5.0
Intrinsic viscosity $[\eta]$	13.0-17.0	14.8
Heavy metals	≤ 10 ppm	Complies
Loss on drying	$\leq 5.0\%$	2.3%
Sodium chloride(NaCl)	$\leq 0.75\%$	0.05%
MS	0.38-0.45	0.41
Glycol	$\leq 0.062\%$	Complies
Ethylene oxide	$\leq 0.001\%$	Complies
Chlorethyl alcohol	$\leq 0.0005\%$	Complies
Molecular Weight (MW) and molecular weight distribution		
-Medium Mw	110000-150000	128200
-Mw at 10 per cent highest	≤ 380000	275450
Mw at 10 per cent lowest	≥ 15000	42515
Bacterial endotoxins	≤ 10 EU/g	Complies
Undue toxicity	Should complies	Complies
Microbial limit	Should complies	Complies
Assay	$\geq 98.5\%$ (on dry base ,deducts the sodium chloride)	99.8%
Conclusion : Complies with enterprise standard		

Analyst :shilijuan

Checker:wuaho

Supervisor :lichao