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To: Nagase America Corp.

Specifications

PULLULAN FOOD GRADE

Definition	Water-soluble polysaccharide consisting of consecutive maltotriose units bound by α-1, 6 glucosidic linkages
Storage	Keep at ambient temperature in a dry place.
Shelf Life	Twelve (12) months from the production date
Package	Polyethylene bag in a carton box (Net 10kg)

Variables	Specifications
Description	A white to off-white powder, odorless and tasteless
Identification	
(1) Viscosity	Dissolve 10g of Pullulan in 100mL of water with stirring by adding in small portions: a viscous solution is produced.
(2) Reactivity with pullulanase	Mix 10mL of the viscous solution obtained in (1) with 0.1 mL of pullulanase TS, and allow to stand: the substantial loss of viscosity is observed.
(3) Reactivity with Polyethylene glycol	To 10mL of a solution of Pullulan (1 in 50) add 2 mL of Polyethylene glycol: a white precipitate is formed immediately.
Kinetic viscosity	100 – 180 mm^2/s (10%, 30 °C)
pH	5.0 - 7.0 (10%)
Heavy metals (as Pb)	Not more than 5.0μg/g
Lead	Not more than 0.1μg/g
Arsenic (as As_2O_3)	Not more than 2.0μg/g
Total nitrogen	Not more than 0.05%
Mono-, di-, and oligo-saccharides	Not more than 10.0%
Loss on drying	Not more than 6.0% (1 g, 90 °C, in vacuum, 6 hrs)
Residue on ignition	Not more than 1.5%
Total aerobic microbial count	Not more than 300 CFU/g
Escherichia coli	Negative
Particle size	Not more than 1.70 mm

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