Product Specifications

Hyaluronic Acid, plant-derived (PhytoHyaluronic™ Acid)

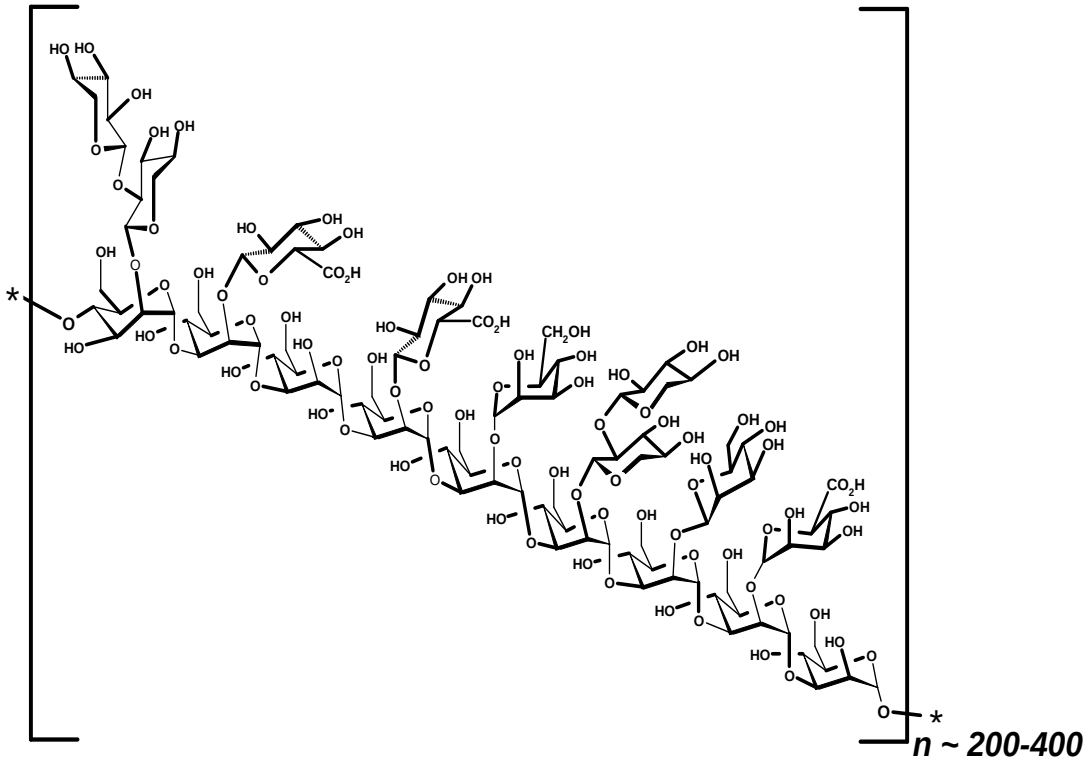
CAS **778577-37-0**

INCI Name: *Tremella fuciformis sporocarp* polysaccharide

CFTA Name: Tremella Hyaluronic Acid

Composition: An α-(1-3)-Mannose Polysaccharide backbone with Fucose, 3β-Glucuronic Acid, double-Xylose, peptide and nucleic acid subunits.

Structure:



Mol. Formula	**N/A**	**Mol. Wt.**	> 1.0 x10^6 Daltons
Source	*Tremella fuciformis sporocarp*		

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Test	*Specification*
Identity (UV-Vis)	Carbohydrates (pentoses, hexoses) suffer dehydration in strong acid resulting, respectively, in formation of Furfuraldehyde and 5-Hydroxy-furfuraldehyde, whose subsequent condensation with any of a variety of phenols produces a highly colored phenol-furfural intermediate with an intense absorption between 400-600 nm.
Glucuronic Acid	Sulfuric Acid – Carbazole test results in an intense absorption at 535 nm - or - Sulfuric Acid – *m*-Phenylphenol test results in an intense absorption 520 nm
Appearance	White to pale-yellow powder
Organoleptic	
Taste	Tasteless
Odor	Odorless
Assay	
Total saccharides (Phenol-Vitriol test)	> 80%
Glucuronic Acid (Sulfuric Acid - Carbazole *or* - *m*-Phenylphenol test)	13-30%
Nitrogen (Kjeldahl)	< 0.5%
LOD (105 °C, 4 h)	< 10%
pH (0.5% in water)	5.0 – 7.0 [glass electrode]
Absolute Viscosity (0.5% aq. soln.)	1.0 -1.8 Pa·S [Brookfield viscometer, spindle # 63, 30 rpm @ 25.0 °C]
Particle size (ASTM)	≥ 80 mesh
Residue on Ignition, USP <281>	< 10%
Mol. Wt.	
(a) Ubbelohde viscometer	> 1.0×10^6 Da (Viscosity-Average MW)
(b) GPC/SEC (Light scattering /RI detection)	> 2.0×10^6 Da (Weight-Average MW)
(c) MALDI-ToF	> 1.3×10^6 Da (parent oligomer)
Transparency (0.5% aq. solution @ 400 nm)	> 90%

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Test	*Specification*
Residual Solvent	
EtOH	< 1,000 ppm
Microbiological Specification	
Total Aerobic, USP <61>	< 100 cfu/g
*Coli*form	< 30 MPN/100 g
Staphylococcus aureus	ND
Salmonella	ND
Shigella	ND
Streptococcus hemolyticus	ND
Mold, USP <61>	< 10 cfu/g
Aflatoxins (GB/T 5009.23-2006)	
B_1	< 0.5 µg/Kg
B_2	< 0.125 µg/Kg
G_1	< 0.5 µg/Kg
G_2	< 0.125 µg/Kg
Endotoxins, USP <151>	TBD
Heavy metals, USP <231>	
As	< 1.5 ppm
Pb	< 2 ppm
Hg	< 0.6 ppm
Cd	< 0.3 ppm
Cr	< 0.2 ppm
Ni	< 0.01 ppm
Sb	< 0.01 ppm
Metals, USP <851>	
Na	< 10 ppm
K	< 500 ppm
Mg	< 100 ppm
Zn	< 10 ppm
Nutritional Content	
Energy	~ 363 Kcal/100 g
Protein	~ 0.76 g/100 g
Fat	~ 0.24 g/100 g
Carbohydrates	~ 90/100 g

Storage: Maintain in cool, dry containment.

Non-GMO: This product is derived from a non-GMO vegetal source as designated under EP regulations 1829/2003 and 1830/2003.

TSE/BSE: The source of this product is pure *Tremella fuciformis sporocarp*. During production, storage and transport, all contact with any material of animal origin was excluded. Therefore, the requirements set forth in of the EP Comm. Directive 1999/82/EEC, CPMP/BWP/1230/98, and EP 01/2008: 50208 do not apply.