

TREHALOSE DIHYDRATE

EP, JP, ChP, NF, LBLE, GMP, EXCIPIENT

CAS #: 6138-23-4
Formula: $C_{12}H_{22}O_{11} \cdot 2H_2O$
F.W.: 378.33 g/mol
TRED-3250
Bio EXCIPIENT GRADE

ANALYSIS	SPECIFICATIONS
Appearance and Color	White to Almost White Crystalline Powder
Assay, Anhydrous Basis (NF/ChP/EP/JP)	98.0 – 101.0%
Appearance of Solution (EP)	Clear, Colorless
Chloride	Chloride (NF) < = 125 ppm Chloride (ChP) < = 125 ppm Chloride (EP) < = 125 ppm Chloride (JP) < = 180 ppm
Color and Clarity of Solution (NF)	A720 < = 0.050 A420 - A720 < = 0.100
Color and Clarity of Solution (ChP)	A720 < = 0.033 A420 - A720 < = 0.067
Dextrin, Soluble Starch, and Sulfite (JP)	Passes Test
Endotoxin (NF/ChP/EP)	< = 2.4 EU/g
Heavy Metals (Pb) (ChP)	< = 5 ppm
Identification, IR (NF-A/EP-A/JP-3/ChP-4)	Conforms to Reference Standard
Identification B (NF-B/EP-B/JP-1/ChP-1)	Passes Test
Identification C (NF-C/EP-C/JP-2/ChP-2)	Passes Test
Identification 3 (ChP)	Conforms to Reference Standard
Microbial Content (NF/ChP/EP)	Escherichia coli Absent/g Salmonella species Absent/10g TAMYC < = 100 CFU/g TYMC < = 100 CFU/g
Nitrogen (NF/JP)	< = 50 ppm
Specific Optical Rotation, 20°C (NF/ChP/EP/JP)	+197° to +201°

ANALYSIS	SPECIFICATIONS
pH (NF/EP/JP), Acidity (ChP)	4.5 – 6.5
Related Substances	Impurity A (EP) < = 0.5% Impurity B (EP) < = 0.5% Any Unspecified Impurities (EP) < = 0.2%
	Total Impurities (EP) < = 1.0% Total Impurities with RRT <1.0 (NF/JP) < = 0.5%
	Total Impurities with RRT >1.0 (NF/JP) < = 0.5%
Related Substances (ChP)	< = 0.5%
Residue on Ignition/Sulfated Ash (NF/ChP/EP/JP)	< = 0.1%
Residual Solvents	Ethanol < = 200 ppm Isopropyl Alcohol < = 250 ppm Methanol < = 50 ppm
Soluble Starch (NF/ChP/EP)	Passes Test
Sulfate	Sulfate (NF) < = 200 ppm Sulfate (ChP) < = 200 ppm Sulfate (EP) < = 200 ppm Sulfate (JP) < = 240 ppm
Water, KF (NF/ChP/EP/JP)	9.0 – 11.0%

Refer to page 2 for additional product details.

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General Product Overview

Trehalose Dihydrate is a non-reducing disaccharide used as an excipient in biotherapeutic applications. Its primary purpose is to protect the protein drug substance both in the liquid and frozen state. It provides tonicity, stabilization, cryo-protection and lyo-protection. Trehalose is superior to other sugars due to the rigidity of the alpha 1,1 bond. Trehalose is also more stable under high temperature and acidic conditions. Due to its non-reducing end, Trehalose does not react with other excipients such as amino acids or aldehydes.

Industry Application

Suitable for use as a cGMP chemical in pharmaceutical manufacturing processes and products.

Key Product Features

- The manufacturing of Trehalose Dihydrate, TRED-3250 is performed at BioSpectra's Bangor, PA facility.
- Appears as white to almost white crystalline powder
- Manufactured in accordance with ICH Q7
- Manufactured in a hormone free and animal free environment
- Contains no known major food allergens (as defined by FDA and WHO)
- The final product and its raw materials are not derived from nor come into contact with animal parts, animal products, and/or animal byproducts or derivatives.
- Is not subject to genetic modification
- Synonyms: α -D-Glucopyranosyl- α -D-glucopyranoside

Storage and Shipping Conditions

Refer to SDS.

Standard Shelf-Life Policy

Unless otherwise noted on the Shelf-Life Statement and CoA, this product has a 2-year retest date supported by a 3-year ICH Q1 Stability Study (if one is completed).

Package Sizes

5kg, 10kg, 25kg, and 50kg pails

[Click here to view SDS, CoAs and other supporting regulatory documents on our website.](#)

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