

Sucrose

Meets USP-NF, EP, BP, JP and IP testing specifications

Product Code: TC048M

Product Description :

Molecular weight: 342.30
Molecular formula: $C_{12}H_{22}O_{11}$
CAS No.: 57-50-1

Quality Control:

Appearance (USP)

White, crystalline powder, or lustrous, dry, colourless or white crystals

Appearance (EP, BP)

White or almost white, crystalline powder, or lustrous, colourless or white or almost white crystals

Appearance (JP)

White crystalline powder, or lustrous, colourless or white crystals

Appearance (IP)

An almost white or colourless crystals, dry crystalline powder

Solubility (USP)

Very soluble in water, slightly soluble in alcohol; practically insoluble in dehydrated alcohol

Solubility (EP, BP)

Very soluble in water, slightly soluble in ethanol (96%), practically insoluble in anhydrous ethanol

Solubility (JP)

It is very soluble in water, and practically insoluble in ethanol (99.5%)

Solubility (IP)

Very soluble in water; freely soluble in ethanol (70%); practically insoluble in ethanol

Appearance of solution (USP)

The clarity of the 500mg/mL solution is the same as that of water or its opalescence is not more pronounced than that of reference suspension I

Appearance of solution (EP, BP)

50% solution in water is clear

Clarity of solution (JP)

50% solution in water is clear and its clarity is not different from water or its opalescence is not more than that of reference suspension I

Identification (JP)

Matches with the standard pattern

Identification (IP)

An orange precipitate is produced immediately

Identification A : FTIR (USP, EP, BP)

Matches with the standard pattern

Identification B : TLC (EP, BP)

The principle spot in the chromatogram obtained with the test solution is similar in position, colour and size to the principal spot in the chromatogram obtained with reference solution (a)

Identification C (EP, BP)

An orange precipitate is formed immediately

Acidity or alkalinity (IP)

≤ 0.6 mL of 0.01M sodium hydroxide is required to change the colour of the solution to pink

Specific rotation (USP, EP, BP, JP)

$+66.3^\circ$ to $+67.0^\circ$ ($c = 26\%$ in water at $20 \pm 0.5^\circ\text{C}$)

Specific rotation (IP)

$+65.9^\circ$ to $+67.0^\circ$ ($c = 10\%$ in water at 25°C)

Conductivity (USP, EP, BP, JP)

$\leq 35 \mu\text{S}\cdot\text{cm}^{-1}$ (at 20°C)

Colouring matter : A (IP)

No unpleasant odour is detectable

Colouring matter : B (IP)

Any fluorescence is not more intense than that of a solution containing $0.4 \mu\text{g}$ per mL of quinine sulphate in 0.005M sulphuric acid

System suitability : UV (USP, EP, BP, JP)

≤ 3.0 , The absolute difference 2 results

Colour value : UV (USP)

≤ 75 (Nonparenteral grade)

Colour value : UV (EP, BP, JP)

≤ 45

Barium (IP)

Complies

Calcium (IP)

The solution remains clear for at least 1 min.

Heavy metals (IP)

<= 0.001%

Dextrin (IP)

The solution remains yellow or becomes faint bluish green

Dextrins (USP, EP, BP, JP)

The solution remains yellow

Sulphite (USP)

The absorbance difference of the sample solution is NMT half of the absorbance difference of the reference solution

Sulphites (EP, BP, JP)

<= 0.001% (Calculated as SO₂)

Sulphites (IP)

A blue colour develops

Reducing sugar (USP, EP, BP, JP)

The blue colour does not disappear completely, ignoring any blue colour at the air and solution interface

Glucose and invert sugar (IP)

The blue colour does not disappear completely. Ignore any blue colour at the air/solution interface

Sulphated ash (IP)

<= 0.1%

Loss on drying (at 105°C, 3 hr) : (USP, EP, BP, JP)

<= 0.1%

Bacterial endotoxin (USP, EP, BP)

<= 0.25 IU/mg

Bacterial endotoxin (JP)

<= 0.25 EU/mg

Bacterial endotoxin (IP)

<= 0.25 U/mg

Storage and Shelf Life:

Store below 30°C away from bright light.

Shelf life is 48 months.

Use before expiry date given on the product label.

Revision : 04/2023

Disclaimer :

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