14 Safety

Dextrates is used in oral pharmaceutical formulations and is generally regarded as a relatively nontoxic and nonirritant material.

15 Handling Precautions

Observe normal handling precautions appropriate to the circumstances and quantity of material handled. Eye protection, gloves, and a dust mask are recommended.

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16 Regulatory Status

GRAS listed. Included in the FDA Inactive Ingredient Database (oral; tablets, chewable and sustained action). Included in nonparenteral medicines licensed in the UK. Included in the Canadian Natural Health Products Ingredients Database.

17 Related Substances

Dextrose; maltodextrin.

18 Comments

Only the hydrated form of dextrates is currently commercially available and is described as a minimum of 93% dextrose and the balance as maltodextrin.[7]

19 Specific References

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20 General References

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21 Author

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22 Date of Revision

4 May 2017.

Dextrin

1 Nonproprietary Names

BP: Dextrin
JP: Dextrin
PhEur: Dextrin
USP–NF: Dextrin

2 Synonyms

Avedex; British gum; *Caloreen*; canary dextrin; *C*Pharm*; *Crystal Gum*; dextrinum; dextrinum album; β-limit dextrin; *Primogran W*; starch gum; yellow dextrin; white dextrin.

3 Chemical Name and CAS Registry Number

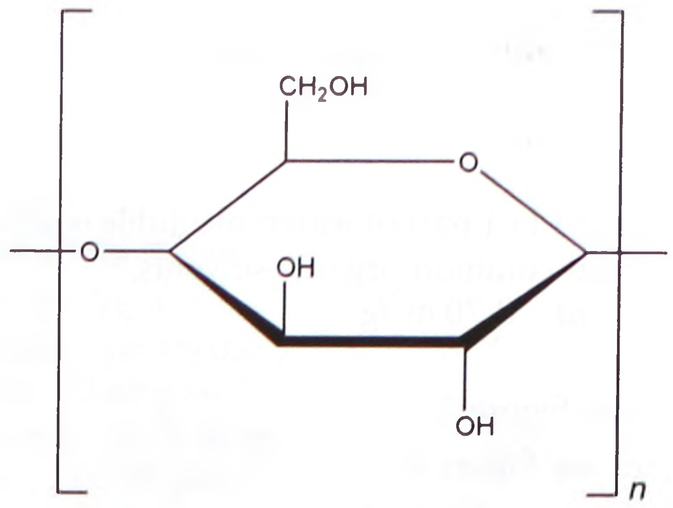
Dextrin [9004-53-9]

4 Empirical Formula and Molecular Weight

$(C_6H_{10}O_5)_n{\cdot}xH_2O$

The USP 40–NF 35 S1, and the PhEur 9.2 describes dextrin as partially hydrolysed starch modified by heating with or without acids, alkalis or pH control agents. The average molecular weight of dextrin can range between 1000 Da to 3 000 000 Da.

5 Structural Formula



A structure for straight chain dextrin with α-D-(1→4) linkages is shown. Dextrins may be straight chain or contain branches with α-D-(1→6) linkages depending on the method of starch hydrolysis used to produce them.

6 Functional Category

Microencapsulating agent; stiffening agent; suspending agent; tablet and capsule binder; tablet and capsule diluent; viscosity-increasing agent.