DEXTROSE, USP VS GLUCOSE

What Are The Differences?

Baxter Global Medical Affairs

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TEMPORARY IMPORT PRODUCTS

Glucose injection products have been authorized for temporary import into the US due to supply challenges stemming from Hurricane Helene.

They are **NOT DIRECTLY INTERCHANGEABLE** with FDA-approved Dextrose injection USP.

The active component is measured differently. Their concentrations are not interchangeable.

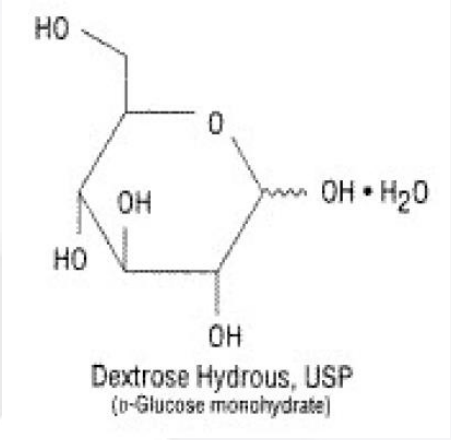
Dextrose 50% ≠ Glucose 50%

DEXTROSE, USP

In the US and Canada, labeling is expressed in percent Dextrose, USP.

It is measured as a hydrous form of dextrose, meaning dextrose coupled with a water molecule.

Chemically it is classified as “D-glucose monohydrate” ($C_6H_{12}O_6 \cdot H_2O$)



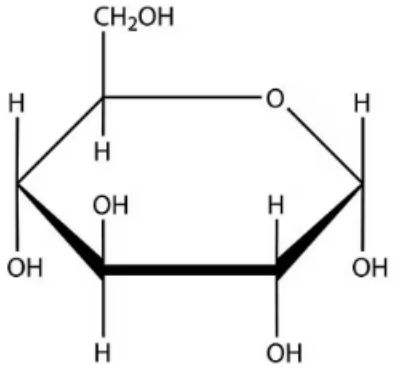
GLUCOSE

In Europe, labeling is expressed in percent of glucose.

It is measured as the anhydrous form of glucose. (No water molecule, just glucose)

Glucose has a **HIGHER osmolarity** content per gram than Dextrose, USP.

Glucose has a **HIGHER energy** content per gram than Dextrose, USP.



D-glucose (anhydrous)

DIFFERENCES OF DEXTROSE, USP VS IMPORTED GLUCOSE

The imported Glucose products are NOT directly interchangeable with Dextrose, USP.

Protocols, order entry, and compounding systems will need to be adjusted.

Example:
Dextrose 50% and Glucose 50% are not equivalent on an energy content or osmolarity per mL basis.

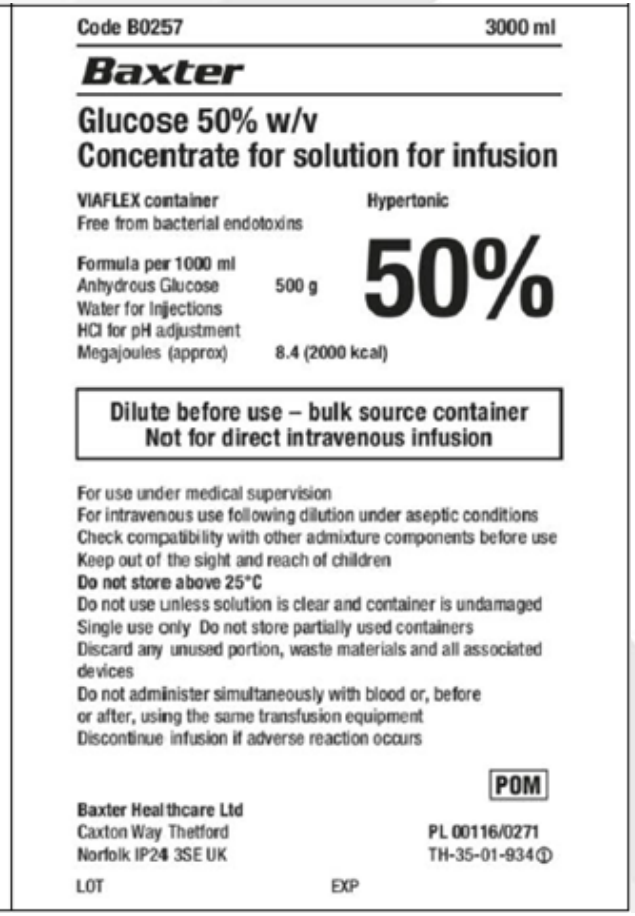
Differences in key parameters:

	Dextrose 50%	Glucose 50%
mOsm / L	2520	2775
kcal / L	1710	2000
Specific Gravity	1.170	1.177

LABELING EXAMPLES

FDA-approved Product

Imported Product



NOTICE THE DIFFERENCE

When using Glucose 50% instead of Dextrose 70%, you can expect to use:

- More glucose 50% volume to achieve the same amount of carbohydrate (as dextrose 70%)
- Potentially less SWFI because of the increased volume of Glucose 50% to achieve the same amount of carbohydrate

	Dextrose 70%	Glucose 50%
g / L	700	500
mOsm / L	3530	2775
kcal / L	2380	2000

CUSTOMER ACTIONS

Assess (now!) how your institution will incorporate these products

Evaluate the need for changes in the configuration of:

- Order entry systems / electronic medical record
- Compounding calculators (including any internal calculating tools)
- Automated compounding equipment
- Any other equipment or databases associated with compounding

For more information, scan this QR Code:

Or visit: https://meded.baxter.com/hurricane-helene-clinical-resources