

VWR® CARBOHYDRATES AND SUGARS

BIOPHARMACEUTICAL
PRODUCTION
PROCESSES OFTEN
USE CARBOHYDRATES
DURING FERMENTATION,
CELL CULTURE OR
FORMULATION STEPS,
AMONGST OTHERS.



D(+)-GALACTOSE AND D(+)-TREHALOSE

These products are representative of our range of high purity ingredients and active pharmaceutical ingredients manufactured at our VWR GMP manufacturing site based in St. Louis, USA.

This production site is FDA registered; compliant to ICH Q7, 21CFR 210-211, IPEC.

D(+)-Galactose Ph. Eur./NF, endotoxin tested

Manufacturing overview

- Re-crystallisation from water using alcohol, filtration, metal acquisition and drying

Main uses

- Member of the monosaccharide family (ex. glucose) plus one of the major energy sources (along with L-Glutamine) for upstream mammalian cell culture
- Since the metabolism rate of D-Galactose by CHO cells is much lower than glucose, the amount of toxic by-products (lactic acid) is reduced improving cellular metabolism
- Once the required cell density is achieved, additional cell culture feeds are added to a bioreactor to initiate synthesis of the desired protein by CHO cells

D-Galactose is a key component of the final feed needed to improve the culture environment required for protein synthesis.

D(+)-Trehalose Ph. Eur./NF endotoxin tested

Manufacturing overview

- Re-crystallisation from water using alcohol, filtration, metal acquisition and drying

Main uses

- Can be used as an excipient to stabilise therapeutic proteins in their final dosage forms
- Functions as a cryoprotectant for stabilising frozen glycoproteins (antibodies)
- When formulated with arginine and Tween 80 offers a viable alternative to using human or bovine albumin in frozen preparations
- Also used in stabilising freeze-dried (lyophilised) dosage forms



VWR offers a list of other carbohydrates and sugars – compendial and multi-compendial.

- Complete, comprehensive Certificate of Analysis showing the typical specifications for products used in bioprocessing
- Available in different pack sizes (usually 1, 5 and 25 kg)
- Special packaging and extra specifications on request

Substance	500 g	1 kg	5 kg	25 kg
D(+)-Glucose anhydrous Ph. Eur./USP	284504S		284508W	28450BF
D(+)-Glucose hydrated Ph. Eur.		24369.290	24369.368	24369.461
D(-) Fructose Ph. Eur.		24282.290	24282.368	24282.461
D(+)-Galactose Ph. Eur./NF, endotoxin tested		3441.1000	3441.5000	3441.9025
D(+)-Trehalose Ph. Eur./NF, endotoxin tested		3599.1000	3599.5000	3599.9025
D(-) Mannitol Ph. Eur./USP		25311.297	25311.366	25311.468
D(+) Saccharose Ph. Eur.		27483.294	27483.363	27483.465

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