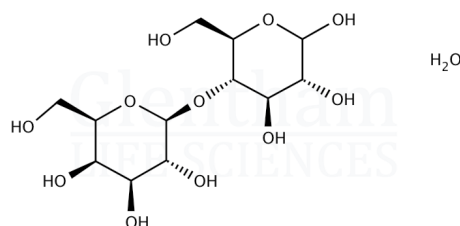


## Certificate of Analysis

Product Name	D(+)-Lactose monohydrate, 99.5%, Ph. Eur. grade
Glentham Code	GC9081
CAS Number	64044-51-5
EINECS	200-559-2
MDL Number	MFCD00166994
Additional CAS	10039-26-6
Additional CAS	14641-93-1
Additional CAS	5989-81-1
Additional CAS	63-42-3 (anhydrous)
Batch Number	472IKP
Molecular Weight	360.32
Molecular Formula	$C_{12}H_{22}O_{11} \cdot H_2O$
Storage Temp.	+20°C



Property	Specification	Batch 472IKP
Physical Description	White or almost white crystalline powder	Conforms
Identification	A, B, C, D according to Ph. Eur.	Conforms
Solubility (10% in water)	Clear, colourless solution	Clear, colourless solution
Acidity or Alkalinity	≤ 0.4ml (0.1M NaOH required)	0.2ml
Absorbance	10% in water at 400nm: ≤ 0.04	0.00
	1% in water at 270 - 300nm: ≤ 0.07	0.01
	1% in water at 210 - 220nm: ≤ 0.25	0.03
Specific Optical Rotation	+54.4 - +55.9 ° (anhydrous substance)	+55.4°
Heavy Metals	≤ 5ppm	≤ 5ppm
Water	4.5 - 5.5 %	5.1%
Sulphated Ash	≤ 0.1%	≤ 0.1%
Arsenic (As)	≤ 0.5ppm	≤ 0.5ppm
Lead (Pb)	≤ 0.01ppm	≤ 0.01ppm
Cadmium (Cd)	≤ 0.1ppm	≤ 0.01ppm
Mercury (Hg)	≤ 0.01ppm	≤ 0.01ppm
Cobalt (Co)	≤ 1ppm	≤ 1ppm
Vanadium (V)	≤ 1ppm	≤ 1ppm
Nickel (Ni)	≤ 1ppm	≤ 1ppm
Lithium (Li)	≤ 1ppm	≤ 1ppm
Antimony (Sb)	≤ 1ppm	≤ 1ppm
Barium (Ba)	≤ 1ppm	≤ 1ppm
Molybdenum (Mo)	≤ 1ppm	≤ 1ppm
Copper (Cu)	≤ 0.1ppm	≤ 0.1ppm
Tin (Sn)	≤ 1ppm	≤ 1ppm
Chromium (Cr)	≤ 1ppm	≤ 1ppm

## Certificate of Analysis

Purity	≥ 99.5% (anhydrous basis)	99.8%
Pharmacopoeia Specification(s)	Ph. Eur.	Conforms
Specification Version	v1.0	
Manufacture Date	2023-05-29	
Re-Test Date	2032-07-28	

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check [www.glentham.com](http://www.glentham.com) or contact us using the details above for the current version of this document.

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