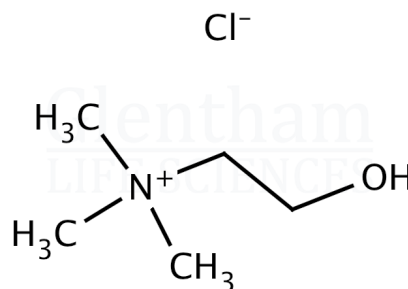


Certificate of Analysis

Product Name	Choline chloride, USP grade
Glentham Code	GV9961
CAS Number	67-48-1
EINECS	200-655-4
MDL-Nummer	MFCD00011721
Zusätzliche CAS	62-49-7
Batch Number	310GIV
Molecular Weight	139.63
Molecular Formula	$C_5H_{14}ClNO$
Storage Temp.	+20°C



Property	Specification	Batch 310GIV
Physical Description	Colourless crystals or white crystalline powder	Entspricht
Identification	A, B according to USP	Entspricht
pH (10% in water)	4.0 - 7.0	5.6
Residue on Ignition	≤ 0.05%	0.03%
Heavy Metals	≤ 10ppm	Entspricht
Lead (Pb)	To pass test	Entspricht
Arsenic (As)	≤ 1ppm	Entspricht
Mercury (Hg)	≤ 0.1ppm	Entspricht
Cadmium (Cd)	≤ 1ppm	Entspricht
Any Individual Impurity	≤ 0.3%	Entspricht
Total Impurities	≤ 2.0%	Entspricht
1,4-Dioxane	≤ 10µg/g	Entspricht
Total Amines	≤ 10µg/g	Entspricht
Water	≤ 0.5%	0.3%
Assay	99.0 - 100.5 % (anhydrous basis)	99.2%
Pharmacopoeia Specification(s)	USP	Entspricht

Specification Version	v1.0
Manufacture Date	2023-02-20
Re-Test Date	2029-05-18

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 or contact us using the details above for the current version of this document.

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