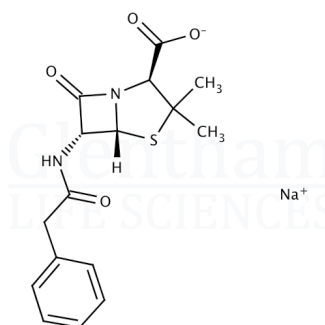


Certificate of Analysis

Product Name	Penicillin G sodium salt, Ph. Eur. grade
Glentham Code	GP0953
CAS Number	69-57-8
EINECS	200-710-2
MDL Number	MFCD00069666
Additional CAS	61-33-6 (free acid)
Batch Number	801OEX
Molecular Weight	356.37
Molecular Formula	$C_{16}H_{17}N_2NaO_4S$
Storage Temp.	+4°C



Property	Specification	Batch 801OEX
Physical Description	White or almost white crystalline powder	White crystalline powder
Identification	A, B, C, D according to Ph. Eur.	Conforms
Solubility (10% in water)	Clear, colourless solution	Clear, colourless solution
pH (10% in water)	5.5 - 7.5	6.7
Specific Optical Rotation ($[\alpha]_{20/D}$)	+285 - +310 ° (c=2, water)	+303°
Absorbance	264nm: 0.80 - 0.88	0.86
	280nm: ≤ 0.10	0.02
	325nm: ≤ 0.10	0.02
Related Substances	Impurity E: ≤ 2.0%	Not detected
	Impurity F: ≤ 1.0%	Not detected
	Impurity B: ≤ 0.5%	Not detected
	Impurity A: ≤ 0.2%	Not detected
	Impurity C: ≤ 0.2%	Not detected
	Impurity D: ≤ 0.2%	Not detected
	Impurity G: ≤ 0.2%	Not detected
	Impurity H: ≤ 0.2%	Not detected
	Any other impurity: ≤ 0.2%	0.09%
	Total impurities: ≤ 3.0%	0.21%
2-Ethylhexanoic acid	≤ 0.5%	≤ 0.5%
Loss on Drying	≤ 1.0% (105 °C)	0.6%
Assay (HPLC)	96.0 - 101.0 % (dried basis)	99.6%
Potency	≥ 1645IU/mg (dried basis)	1660IU/mg
Pharmacopoeia Specification(s)	Ph. Eur.	Conforms

Specification Version	v1.2
Manufacture Date	2023-02-15
Re-Test Date	2029-03-20

Certificate of Analysis

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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