Glentham LIFE SCIENCES

Glentham Life Sciences Ltd Unit 5 Leafield Way Corsham SN13 9SW United Kingdom

- t: +44 (0) 1225 667 798
- f: +44 (0) 2033 978 909
- e: info@glentham.com

w: www.glentham.com

Product Specification

Product Name	L-Threonine, GlenCell™, suitable for cell culture
Glentham Code	GM4012
CAS Number	72-19-5
EINECS	200-774-1
MDL Number	MFCD00064270
Molecular Weight	119.12
Molecular Formula	C ₄ H ₉ NO ₃
Storage Temp.	+20°C

Physical DescriptionWhite crystal in crystal ine powderIdentificationIRSolubilityFreely soluble in formic acid, soluble in water, practically insoluble in ethanolSolubility (10% in water)Clear, colourless solutionTransmittance> 98.0% (10% in water, 430nm, 10mm cell)Specific Optical Rotation< -7.629.0 °C = 6, H2O)Chloride (Cl)< 0.02%Ammonium (NH4)< 0.02%Sulphate (SO4)< 10ppmHeavy Metals (as Pb)< 10ppmArsenic (As2O3)< 10ppmRelated SubstancesTo pass testSulphated Ash< 0.1%PH< 2.6.2 (1% in water)Findotxins< 6.0EU/gAsay90.0 101.0 %	Property	Specification
SolubilityFreely soluble in formic acid, soluble in water, practically insoluble in ethanolSolubility (10% in water)Clear, colourless solutionTransmittance≥ 98.0% (10% in water, 430nm, 10mm cell)Specific Optical Rotation-27.6 - 29.0 ° (C=6, H2O)Chloride (Cl)≤ 0.02%Ammonium (NH4)≤ 0.02%Sulphate (SO4)≤ 0.02%Iron (Fe)≤ 10pmHeavy Metals (as Pb)≤ 10pmArsenic (As2O3)≤ 10pmRelated SubstancesTo pass testLoss on Drying≤ 0.2%Sulphate Ash≤ 0.1%PH5.2 - 6.2 (1% in water)Endotxins≤ 6.0EU/g	Physical Description	White crystals or crystalline powder
Solubility (10% in water)Clear, colourless solutionTransmittance>98.0% (10% in water, 430nm, 10mm cell)Specific Optical Rotation-27.629.0 ° (C=6, H2O)Chloride (Cl)< 0.02%	Identification	IR
Transmittance\$ 98.0% (10% in water, 430nm, 10mm cell)Specific Optical Rotation-27.629.0 ° (C=6, H2O)Chloride (Cl)\$ 0.02%Ammonium (NH4)\$ 0.02%Sulphate (SO4)\$ 0.02%Iron (Fe)\$ 10ppmHeavy Metals (as Pb)\$ 10ppmArsenic (As2O3)\$ 1ppmRelated SubstancesTo pass testLoss on Drying\$ 0.2%Sulphate Ash\$ 0.2%pH\$ 0.2%for (Fe)\$ 10ppmSulphate SO3)\$ 10ppmRelated Substances\$ 0.02%Loss on Drying\$ 0.2%Sulphate Ash\$ 0.1%pH\$ 2- 6.2 (1% in water)pH\$ 0.2%Sulphate Ash\$ 0.1%pH\$ 2- 6.2 (1% in water)pH\$ 0.0EU/g	Solubility	Freely soluble in formic acid, soluble in water, practically insoluble in ethanol
Specific Optical Rotation<27.6 - 29.0 ° (C=6, H2O)Chloride (Cl)<0.02%	Solubility (10% in water)	Clear, colourless solution
Chloride (Cl)< 0.02%	Transmittance	≥ 98.0% (10% in water, 430nm, 10mm cell)
Ammonium (NH4)< 0.02%Sulphate (SO4)< 0.02%	Specific Optical Rotation	-27.629.0 ° (C=6, H2O)
Sulphate (SO4)< 0.02%Iron (Fe)< 10ppm	Chloride (Cl)	≤ 0.02%
Iron (Fe)≤ 10ppmHeavy Metals (as Pb)≤ 10ppmArsenic (As2O3)≤ 1ppmRelated SubstancesTo pass testLoss on Drying≤ 0.2%Sulphated Ash≤ 0.1%pH5.2 - 6.2 (1% in water)Endotoxins≤ 6.0EU/g	Ammonium (NH4)	≤ 0.02%
Heavy Metals (as Pb)≤ 10pmArsenic (As2O3)≤ 1pmRelated SubstancesTo pass testLoss on Drying≤ 0.2%Sulphated Ash≤ 0.1%pH5.2 - 6.2 (1% in water)Endotoxins≤ 0.0EU/g	Sulphate (SO4)	≤ 0.02%
Arsenic (As2O3)< 1ppmRelated SubstancesTo pass testLoss on Drying< 0.2%	Iron (Fe)	≤ 10ppm
Related SubstancesTo pass testLoss on Drying< 0.2%	Heavy Metals (as Pb)	≤ 10ppm
Loss on Drying ≤ 0.2% Sulphated Ash ≤ 0.1% pH 5.2 - 6.2 (1% in water) Endotoxins ≤ 0.0EU/g	Arsenic (As2O3)	≤ 1ppm
Sulphated Ash≤ 0.1%pH5.2 - 6.2 (1% in water)Endotoxins≤ 6.0EU/g	Related Substances	To pass test
pH 5.2 - 6.2 (1% in water) Endotoxins ≤ 6.0EU/g	Loss on Drying	≤ 0.2%
Endotoxins ≤ 6.0EU/g	Sulphated Ash	≤ 0.1%
	рН	5.2 - 6.2 (1% in water)
Assay 99.0 - 101.0 %	Endotoxins	≤ 6.0EU/g
	Assay	99.0 - 101.0 %
Origin Non-animal origin	Origin	Non-animal origin

Specification Version	-	v1.0
Date Created	-	2016-04-22

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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