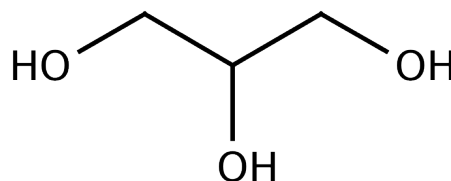


## Product Specification

Product Name : Glycerol, 99.5%, Ph. Eur., USP, Ultrapure  
Glentham Code : GC5551  
CAS Number : 56-81-5  
EINECS : 200-289-5  
MDL Number : MFCD00004722

Molecular Weight : 92.09  
Molecular Formula : C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>  
Storage Temp. : +20°C



Property	Specification
Physical Description	Clear, colourless liquid
Identification	According to Ph. Eur., USP
Solubility (20% in water)	Clear, colourless solution
Acidity or Alkalinity	≤ 0.2ml (of 0.1M NaOH required)
Refractive Index	1.470 - 1.475
Aldehydes	≤ 10ppm
Esters	≥ 8.0ml (of 0.1M HCl required)
Diethylene Glycol	≤ 0.1%
Any Individual Impurity	≤ 0.1% (with a retention time ≤ glycerol, Ph. Eur.)
Total Impurities	≤ 0.5% (with a retention time ≥ glycerol, Ph. Eur.)
Any Individual Impurity	≤ 0.1% (USP)
Sugars	To pass Ph. Eur. test
Chlorides	≤ 10ppm
Sulphates	≤ 20ppm
Halogenated Compounds	≤ 35ppm
Chlorinated Compounds	≤ 30ppm
Fatty Acids and Esters	≤ 1.0ml (of 0.5M NaOH required)
Colour	To pass USP test
Specific Gravity	≥ 1.249
Heavy Metals (as Pb)	≤ 5ppm
Sulphated Ash	≤ 0.01%
Antimony (Sb)	≤ 1ppm
Arsenic (As)	≤ 1ppm

## Product Specification

Lead (Pb)	≤ 1ppm
Cadmium (Cd)	≤ 1ppm
Chromium (Cr)	≤ 1ppm
Cobalt (Co)	≤ 0.5ppm
Iron (Fe)	≤ 1ppm
Mercury (Hg)	≤ 0.1ppm
Molybdenum (Mo)	≤ 1ppm
Nickel (Ni)	≤ 1ppm
Vanadium (V)	≤ 1ppm
Water	≤ 0.1% (USP test)
Assay	99.5 - 100.5 % (Ph. Eur. test)
Assay	99.5 - 100.5 % (USP test)
Pharmacopoeia Specification(s)	Ph. Eur., USP

Specification Version : v1.0  
Date Created : 2016-07-13

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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