

Certificate of Analysis

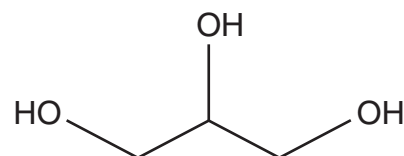
HR2-623 (pg 1)

Optimize™ reagents are preformulated macromolecular crystallization grade solutions designed specifically for the crystallization of proteins, peptides, and nucleic acids. Each Optimize solution is formulated using high purity salts, polymers, and buffers. Sterile filtered Optimize reagents are formulated at convenient ready to use concentrations. Optimize reagents remove the guesswork and make the process of reproducing preliminary screening conditions and general optimization faster, easier, and more convenient. When using Optimize reagents the user moves directly from the screen to the optimization with no time wasted searching for and formulating salts, buffers, and viscous polymers. This Certificate of Analysis indicates the quality and performance of the reagent.

Technical Support

Inquiries regarding Optimize reagent formulation, interpretation of screen results, optimization strategies and general inquiries regarding crystallization are welcome. Please e-mail, fax, or telephone your request to Hampton Research. Fax and e-mail Technical Support are available 24 hours a day. Telephone technical support is available 8:00 a.m. to 5:00 p.m. USA Pacific Standard Time.

Danielle Taylor
Quality Control



<u>Property Test</u>	<u>Lot (Sample) Results</u>
Product Name	100% Glycerol
Synonyms	1,2,3-Propanetriol Glycerin
Product Number	HR2-623
Formula	C ₃ H ₈ O ₃ HOCH ₂ CH(OH)CH ₂ OH
Formula Weight	92.09
CAS Number	[56-81-5]
EC Number	2002895
Beilstein Registry	635685
Merck	13,4497
RTECS	MA8050000
Purity	≥ 99.5 %, anhydrous
Density	1.25 g/ml (lit.)
Appearance (Solution)	Colorless, Clear Viscous Liquid

Property Test

Residue On Ignition

Infrared Spectrum

Trace Analysis

Arsenic Traces (MHS-AAS)

Residue (Filter Test)

Absorbance (λ)

UV Absorption

Boiling Point

Melting Point (Starting Material)

Vapor Density

Vapor Pressure

Autoignition Temperature

Flash Point

Refractive Index Range

pH Range

Conductivity Range

Total Impurities

Water

DNases

RNases

Proteases

Phosphatases

Ag

Al

As

Ba

Bi

Lot (Sample) Results

≤ 0.10 %

Corresponds

Passed

≤ 0.050 mg/kg

No Residue

5.0 M in H₂O

λ: 260 nm (A max): 0.05

λ: 280 nm (A max): 0.04

182.0 °C, 20 mm Hg (lit.)

20.0 °C (lit.)

3.1 (vs air)

< 1 mm Hg (20 °C)

698 °F

177 °C (350.6 °F)

1.47124 - 1.47419 at 20 °C

N20/D 1.474 (lit.)

6.9 - 7.4 at 25 °C

0.0 - 0.2 μS at 25 °C

Insoluble matter, passes filter test

≤ 0.10 %

None detected

None detected

None detected

None detected

≤ 0.0005%

≤ 0.0001%

≤ 0.0001%

≤ 0.0001%

≤ 0.0001%

<u>Property Test</u>	<u>Lot (Sample) Results</u>
Ca	≤ 0.0005%
Cd	≤ 0.0001%
Cl	≤ 0.0001%
Co	≤ 0.0001%
Cr	≤ 0.0001%
Cu	≤ 0.0001%
Fe	≤ 0.0001%
K	≤ 0.002%
Li	≤ 0.0001%
Mg	≤ 0.0001%
Mn	≤ 0.0001%
Mo	≤ 0.0001%
NH ₄ ⁺	≤ 0.0005%
Na	≤ 0.002%
Ni	≤ 0.0001%
Pb	≤ 0.0001%
SO ₄	≤ 0.001%
Sr	≤ 0.0001%
Tl	≤ 0.0005%
Zn	≤ 0.0001%

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