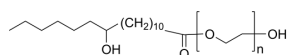


Certificate of Analysis

Product Name: Solutol HS-15
Cat. No.: CS-0040442
CAS No.: 61909-81-7
Batch No.: 112765
Chemical Name: Poly(oxy-1,2-ethanediyl), α -(12-hydroxy-1-oxooctadecyl)- ω -hydroxy-

PHYSICAL AND CHEMICAL PROPERTIES

Molecular Formula: $(C_2H_4O)_n C_{18}H_{36}O_3$
Storage: 2-8°C, sealed storage, away from moisture
Chemical Structure:



ANALYTICAL DATA

Appearance: Colorless to off-white (Oil)
PH-TEST: 6.3
Water(KF): 0.1 %
RESIDUE ON IGNITION: 0.2 %
FREEZING POINT: 25 degree C
DIOXAN: < 10 PPM
ETHYLENE OXIDE: < 1 PPM
HEAVY METALS: < 10 PPM
NICKEL: < 1 PPM
IODINE VALUE: 0.3 G I/100G
PEROXIDE VALUE: < 1 MEQ/KG
ACID VALUE: 0.2 MG KOH/G
HYDROXYL VALUE: 108 MG KOH/G
SAPONIFICATION VALUE: 60 MG KOH/G
Conclusion: The product has been tested and complies with the given specifications.

Caution: Product has not been fully validated for medical applications. For research use only.

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