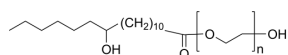


## Certificate of Analysis

<b>Product Name:</b>	Solutol HS-15
<b>Cat. No.:</b>	CS-0040442
<b>CAS No.:</b>	61909-81-7
<b>Batch No.:</b>	144885
<b>Chemical Name:</b>	Poly(oxy-1,2-ethanediyl), $\alpha$ -(12-hydroxy-1-oxooctadecyl)- $\omega$ -hydroxy-

### PHYSICAL AND CHEMICAL PROPERTIES

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



### ANALYTICAL DATA

<b>Appearance:</b>	Colorless to off-white (Oil)
<b>Appearance:</b>	White to light yellow (Oil)
<b>Acid Value:</b>	0.1 mg KOH/g
<b>Hydroxyl Value:</b>	104 mg KOH/g
<b>Iodine Value (Hanus):</b>	0.4 g Iodine/100g
<b>Peroxide value:</b>	<1.0 meq/kg
<b>Saponification Value:</b>	59 mg KOH/g
<b>Free macrogols:</b>	33.3 g/100g
<b>Nickel:</b>	<1.0 mg/kg
<b>Water (Karl-Fischer-Titration):</b>	0.1 g/100g
<b>Total ash:</b>	0.2 g/100g
<b>pH-Value (100 g/L in water):</b>	6.6
<b>Freezing Point:</b>	24 degree C
<b>Ethylene Oxide:</b>	<1.0 mg/kg
<b>1,4-Dioxane:</b>	<10.0 mg/kg
<b>Diethylene glycol:</b>	<100.0 mg/kg
<b>Residual solvents acetic acid:</b>	<0.5 g/100g
<b>Residual solvents ethylene glycol:</b>	<50 mg/kg
<b>(TYMC) Test method Ph.Eur., 2.6.12:</b>	<10.0 CFU/g
<b>(TYMC) Test method Ph.Eur.,</b>	<10.0 CFU/g

**2.6.12:**

**Bacterial endotoxines:** <3.0 IU/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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