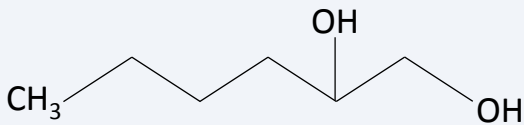


1,2-Hexanediol

- **High Purity**
- **Odorless and Colorless**
- **Good Solubility**
- **Moisturizing agent**
- 1,2-Hexanediol is a versatile 1,2-alkanediol that is very safe and effective as a moisturizer with broad range of antimicrobial activity.
- 1,2-Hexanediol helps reduce/eliminate preservatives like Parabens, Formaldehyde-donors or Phenoxyethanol
- 1,2-Hexanediol can be combined with low doses of preservatives like Phenoxyethanol, Iodopropynyl Butylcarbamate or acid based preservatives like Sorbate, Benzoate and Dehydroacetate for effective preservation of personal care formulations free of parabens or iodine.
- Liquid and semi-solid formulations

Composition

	$C_6H_{14}O_2$
CAS no.	6920-22-5
EC no.	230-029-6
IUPAC name	Hexane-1,2-diol
INCI name	1,2-Hexanediol

Specification

Analysis	Specification	Method
Description	Clear Colorless	Visual
Purity by GC	Min 99.5%	G.C
Water content	Max 0.5% w/w	Karl Fischer
pH value	6~7.5	



MIC Activity of 1,2-Hexanediol

	1,2-Hexanediol
<i>S. aureus</i>	2.5
<i>E. Coli</i>	1.25
<i>P. aeruginosa</i>	1.5
<i>C. albicas</i>	1.5
<i>A. niger</i>	0.63

Anti-Microbial Challenge test

American Type Culture Collection

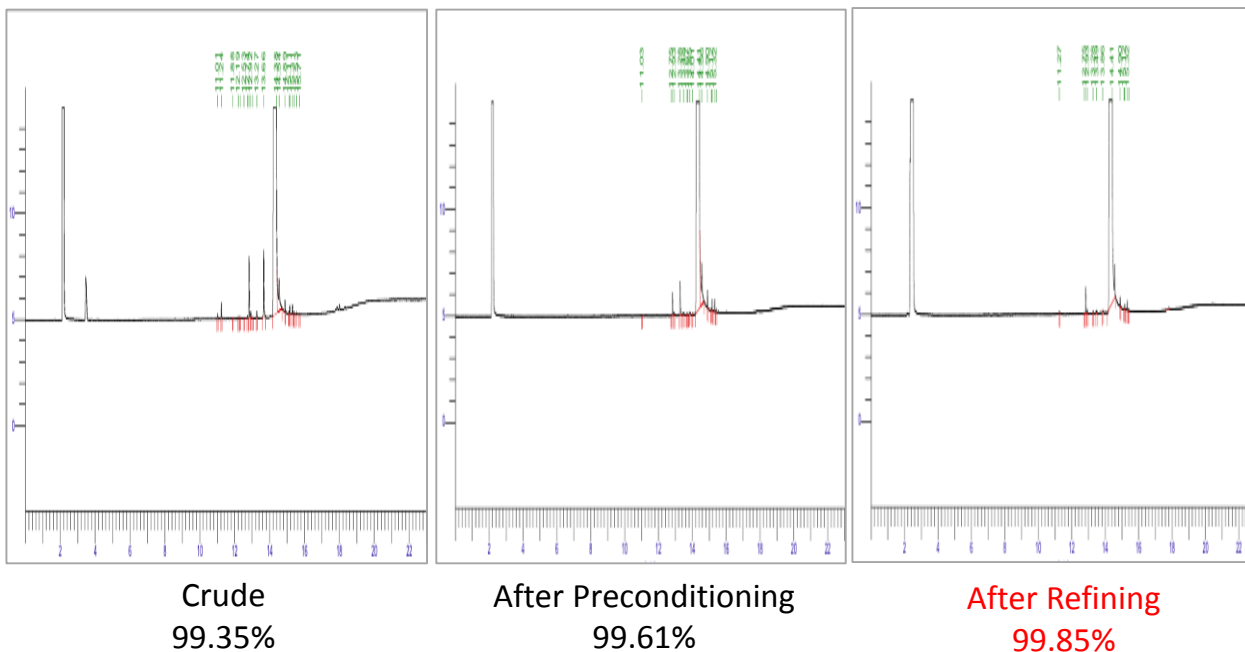
Test organism (CFU/mL)	ATCC No.	Initial number
Gram-positive bacteria <i>S. aureus</i>	6538	4.455×10^6
Gram-negative bacteria <i>E. Coli</i>	8739	4.455×10^6
Gram-negative bacteria <i>P. aeruginosa</i>	9027	4.455×10^6
Yeasts <i>C. albicas</i>	10231	4.85×10^5
Black Mold <i>A. niger</i>	16404	4.37×10^5

Population Change : 2.5% of 1,2-Hexanediol in emulsion

Days	1(7/15)	4(7/8)	6(7/10)	8(7/12)	11(7/15)	15(7/19)
Dilution factor (Bac./YM)	$10^{-3}/10^{-2}$	$10^{-1}/10^{-1}$	$10^{-1}/10^{-1}$	$10^{-1}/10^{-1}$	$10^{-1}/10^{-1}$	$10^{-1}/10^{-1}$
Micro organism	Bacteria	7×10^3	ND	ND	ND	ND
	Yeast	6.1×10^3	ND	ND	ND	ND
	Mold	5.6×10^3	ND	ND	ND	ND

High purity

Refining technology of 1,2-Hexanediol



Indications for Use

General Remarks

1,2-Hexanediol can influence the overall microbial stability due to their water binding properties. They are widely used in skin care, hair care, wet wipes, toiletries and cosmetics. With their moisturizing and solubilizing properties they are considered to be multifunctional. 1,2-Hexanediol makes them suitable for many applications.

Use Concentration

1,2-Hexanediol can be used as skin care additive and deodorant active in a recommended use concentration of 0.5~3.0%