＜ADDRESS＞
ADEKA CORPORATION
7-2-35, HIGASHI OGU, ARAKAWA-KU TOKYO 116-8554 JAPAN
SALES TEL +81-3-4455-2833 FAX +81-3-3809-8232
R&D TEL +81-50-5518-4336 FAX +81-3-3809-8284

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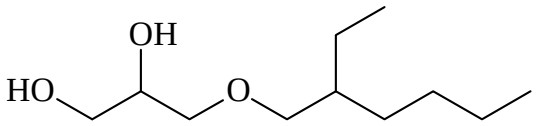
ADEKA NOL GE-RF

ADEKA NOL GE-RF is glycerin mono 2-ehylhexyl ether.
It is high-purify and low oder product and can be used for cosmetics as moisturizer with antimicrobial activity.



$C_{11}H_{24}O_3$: 204.11

CAS RN.: 70445-33-9
INCI name: ETHYLHEXYLGLYCERIN

Physical and chemical property

PURITY	APPEARANCE	SPECIFIC GRAVITY(25˚C)	WATER SOLUBILITY
>99.0%	Clear liquid	0.95	0.2wt%

Toxicological data

	Results	Methods
Acute oral toxicity	LD_{50} >2000mg/kg	Rat, oral intubation
Primary skin irritation	Non irritant	Rabbit, 24hours occlusive application
Cumulative skin irritation	Non irritant (10% in 1,3-BD) Cause cumulative skin irritation (100%)	Rabbit, Once a day, for two weeks
Human patch testing	Negative	Occlusive patch (24hours) on upper dorsal area. 40 adults (Japanese)
Ocular irritation	Minimally irritating	5% 1,3-butanediol solution. Rabbit, Draize method
Skin sensitization	Negative	Guinea pig, Maximization method.
Reverse mutation testing using microorganisms	Negative	*S.typhimuriumu* TA98, TA100, TA1535, TA1537,*E.coli* WP2uvrA
Chromosomal aberration testing using cultured mammalian cells	Negative	Chinese hamster fibroblast cell (CHL/IU).

ANTIMICROBIAL ACTIVITY

Minimal Inhibitory Concentration for microorganism (MIC)

	ADEKA NOL GE-RF	1,2-Hexanediol	Methyl-paraben
B.subtilis	**1280**	>5,120	1280
E.coli	**5120**	>5,120	1280
S.aureus	**2560**	>5,120	2560
P.aeruginosa	**2560**	>5,120	2560
C.albicans	**4000**	—	>2000
Z.rouxii	**4000**	—	2000
A.niger	**4000**	—	2000

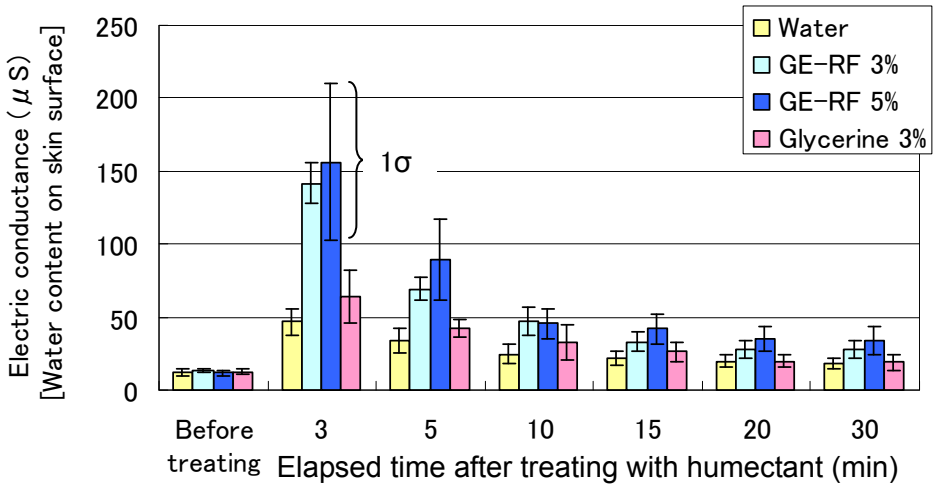
TEST MICROORGANISM

:BACTERIA
Bacillus subtilis IFO 3134
Escherichia coli ATCC 14948
Pseudomonas aeruginosa IFO 13736
Staphylococcus aureus IFO 13276

:FUNGI
Candida albicans IFO 1594
Zygosaccharomyces rouxii IFO 1876
Aspergillus niger IFO 9455

Moisturizing property

ADEKA NOL GE-RF shows good moisturizing property.



Electric conductance (water content) on skin surface after treating GE-RF aq (20˚C,30%RH)

*The data is a mean value of seven people.

<test method>

The filter paper wet with the test solution was put on the forearm. After 5 minutes, the filter paper was removed. After that, the time course of electric conductance on the skin surface was measured.