



Activonol-PAF E91

PARABEN FREE PRESERVATIVE

- Paraben Free Preservative
- Reasonable Price
- Excellent Compatibility

Abstract **Paraben Free, Reasonable Price Preservative**

Activonol-PAF E91 is a Paraben Free Preservative. It has a very good preservative effect less than 1 % without parabens. It is stable to hydrolysis, temperature and pH.

Activonol-PAF E91 can be used to variety of formulations; skin toner, emulsion, wet tissue and so on. And also this product has a very effective cost; low price and low dosage.

Technical Information

INCI Name	Phenoxyethanol, Ethylhexyl glycerin
CAS No.	122-99-6, 70445-33-9
Appearance	Transparent liquid
Aspect	Characteristic Odor
Solubility	Slightly water soluble, Soluble in glycols
Recommended dosage	0.5 ~ 1.0 %

Skin Safety **Human Skin Patch Test**

: Activonol-PAF E91 under the single application patch test for 48 hrs to female adults subjects can be considered slight irritant.

Test Sample	Concentration	Result
Activonol-PAF E91	1.0 % in 30 % 1,3-BG	Slight irritant

(IECK-SAF-1404091)



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Anti-microbial effect

1) Challenge test : Skin Toner – 1.0% of Activonol-PAF E91 (KFDA method)

Days		Inoculation (cfu/ml)	1	3	7	9	11	15
Microorganism	Bacteria	8.1 x 10 ⁶	ND	ND	-	-	-	-
	Yeast	3.0 x 10 ⁵	2.0 x 10 ²	1.0 x 10	ND	-	-	-
	Mold	2.5 x 10 ⁵	6.0 x 10 ²	3.0 x 10	ND	-	-	-

*ND : Not Detected

Activonol-PAF E91 showed an excellent anti-microbial effect to all spectrum at 1.0 % dosage.

2) Challenge test : 2 Cycle : Emulsion – 1.0% of Activonol-PAF E91 (KFDA method)

Days		1 st Inoculation (cfu/ml)	1	4	6	8	11	15
Microorganism	Bacteria	4.4 x 10 ⁶	4.0 x 10 ³	ND	-	-	-	-
	Yeast	4.8 x 10 ⁵	2.7 x 10 ³	ND	-	-	-	-
	Mold	4.2 x 10 ⁵	3.0 x 10 ³	ND	-	-	-	-

Days		2 nd Inoculation (cfu/ml)	16	19	21	23	26	30
Microorganism	Bacteria	3.6 x 10 ⁶	1.4 x 10 ⁴	ND	-	-	-	-
	Yeast	4.0 x 10 ⁵	4.3 x 10 ³	ND	-	-	-	-
	Mold	3.6 x 10 ⁵	2.5 x 10 ³	ND	-	-	-	-

Activonol-PAF E91 showed an excellent anti-microbial effect at 2 cycle challenge test, indicating very powerful preservative effect.

Emulsion formula

Phase	Ingredient	%
A	DI H ₂ O	To 100
	Carbopol 934 (1 %)	30.0
	1, 3-Butylene glycol	5.0
	Glycerin	3.0
	Activonol PAF E91™	1.0
	EDTA-2 Na	0.02
	B	Stearic acid
Cetanol		1.5
Cetearyl olivate/sorbitan olivate		1.0
Squalane		2.0
Sunflower oil		2.5
Vitamin E Acetate		0.5
Dimethicone		2.0
C	DI H ₂ O	2.0
	L-Arginine	0.5

Skin toner formula

Materials	Weight (g)
tween80	1
ethanol	1
1,3-BG	3
PAF E91™	1
DI H ₂ O	94
Total	100