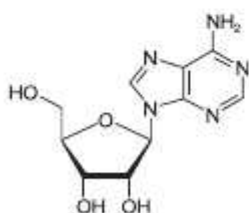




# BioGenic Adenosine-200

Anhydrous / Hydrus Formulation for Anti-wrinkle

## Adenosine

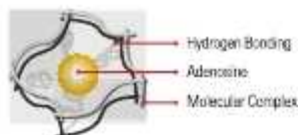


Adenosine is important active compound for skin anti-aging. Adenosine was approved as a wrinkle reduction ingredient by KFDA. It improves your wrinkle and tired skin.



## BioGenic Adenosine-200

BioGenic Adenosine-200, solubilized in polyol by Molecular complex technology resulted in excellent stability in anhydrous formulation. 4% of BioGenic Adenosine-200 is recommended for anti-aging sun-stick and it is applicable not only hydrus formulation but also water free formulation without recrystallization.



Adenosine, poorly soluble in water specially in polyol, becomes clearly soluble in water and water free formulation due to molecular complex.

## Efficacy of Adenosine

### Anti-wrinkle effect

#### Test Methods

- Fine wrinkle diminishing effect was carried out same samples with final formulations. Skin 3.6.1 conditions after application were observed by measuring volunteer skin with 3D-images with 'Aramo-TS' equipment.



#### Results

Fine wrinkle diminish evaluation of PIT hydro-gel cream with adenosine (active content: 0.04wt%) using human volunteers; (a) before application, (b) application after 6 weeks (n=6)

- According to results, the skin clearance was no changed prior to the application. After 6 weeks of applying final formulation, the skin epidermis tended to be a change of skin clearance. It was recognized to reduce fine wrinkles.

## Stability Test

### Test conditions

Temperature	: 4°C
Period	: 4 weeks
Content of Adenosine-200	: 4% (adenosine : 0.04%)
Formulations	: Skin, serum, emulsion, sunstick
Test Method	: Please see the formulation Guide

	0weeks	1weeks	2weeks	3weeks	4weeks
Skin					
Serum					
Emulsion					
Sun stick					

[Pictures of Formulation For 4 weeks]

BioGenic Adenosine-200 was added to serum, skin, emulsion, sun stick formulation to determine the stability. 4% of BioGenic Adenosine-200 were added to each formulation by post-adding with good agitation by agi-mixer and kept at 4°C for 4 weeks. Discoloration and recrystallization were not observed with 4% of Adenosine-200 in skin toner, serum, emulsion, sun stick formulations for 4 weeks at 4°C, 50°C.



## Application

- Function : Anti-aging, Anti-wrinkle
- Type : Skin toner, Serum, Lotion, Cream, Body lotion, Mask Pack, Sun stick

## Technical Data

### I Product information

Appearance	Liquid
Color	Colorless
Odor	Characteristic
Active ingredient content	0.9 ~ 1.1%
Solubility	Water soluble
INCI name	Pentylene glycol (and) Adenosine (and) Niacinamide (and) Tocopheryl Acetate
Storage condition	Room temperature

### II Formulation instruction

pH in finished products	4 ~ 8
Recommended Dosage	2~10% of BioGenic Adenosine-200
Recommended formulation	Transparent skin toner , Serum, Emulsion, Sun Stick

\*Guide formulation can be provided upon customer's request