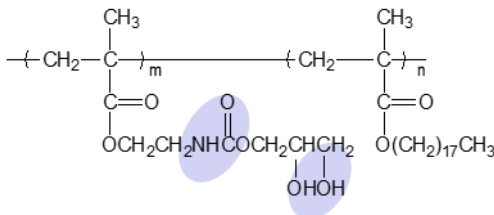


Ceramide-like polymer that enhances SPF and skin firmness

1 Product Features

- CERACUTE®-LL forms a polymer network, resulting in an anti-wrinkle effect. The polymer network also improves skin elasticity.
- It does not cause tautness of skin, and provides naturally skin feel.
- It keeps moisture on skin for a long time.
- It can boost SPF by improving dispersability of inorganic particles like titanium dioxide and zinc oxide in sunscreen formulation.



Ceramide-like structure

2 General information, Specification etc.

CERACUTE®-LL is a polyhydric alcohol solution with 5wt% polymer.

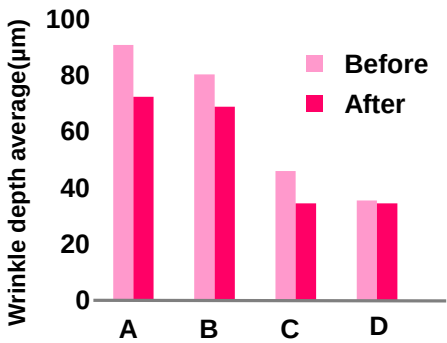
|              |                                                                                           |
|--------------|-------------------------------------------------------------------------------------------|
| INCI NAME    | GLYCERYLAMIDOETHYL METHACRYLATE/STEARYL METHACRYLATE COPOLYMER, GLYCERIN, BUTYLENE GLYCOL |
| Chinese INCI | 甘油酰胺乙醇甲基丙烯酸酯/硬脂醇甲基丙烯酸酯共聚物、甘油、丁二醇                                                          |
| Storage      | Room temperature (2~35 °C)                                                                |
| NET Weight   | 10 kg, 1 kg                                                                               |



Appearance of CERACUTE®-LL

【 Anti-wrinkle effects 】

Apply 5%CERACUTE®-LL aqueous solution to the outer corner of the subject's eyes twice a day for 3 weeks. The wrinkle depth before and after the test was analyzed with a wrinkle measuring device (PRIMOS).



4 out of 8 subjects were effective

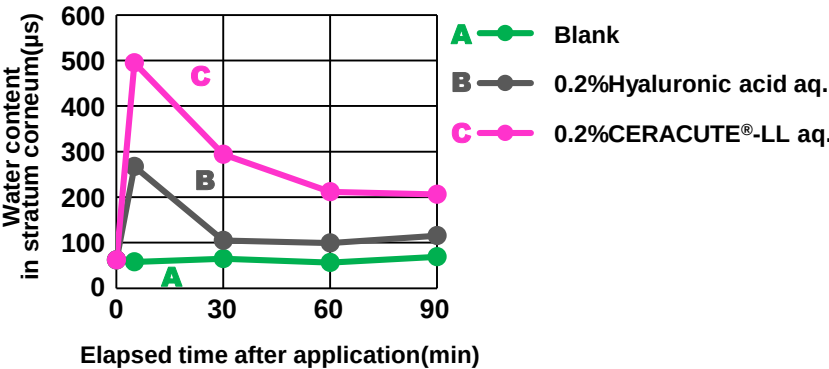
【Water retention in the stratum corneum】

〈Sample〉

- A : Blank
- B : 0.2%Hyaluronic acid aqueous solution
- C : 0.2%CERACUTE®-LL aqueous solution

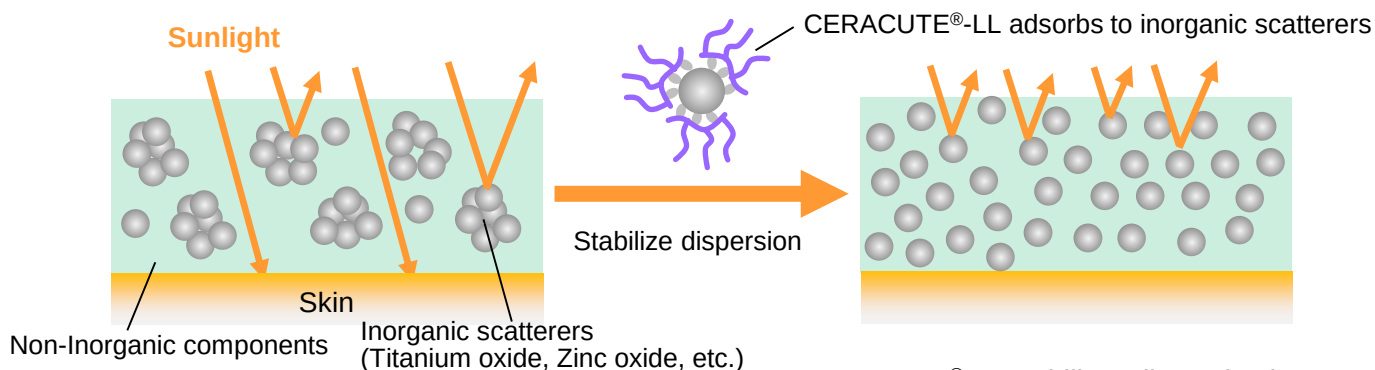
〈Measuring device〉

3.5MHz Skin surface hygrometer (SKICON-200EX)



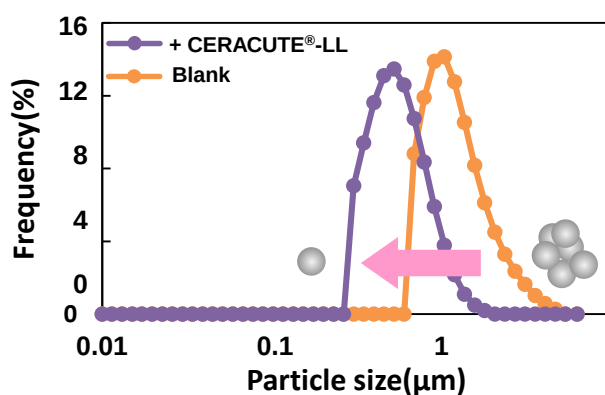
### 【SPF booster for sunscreen】

CERACUTE®-LL boosts SPF of sunscreen by improving the UV scatterers dispersion.



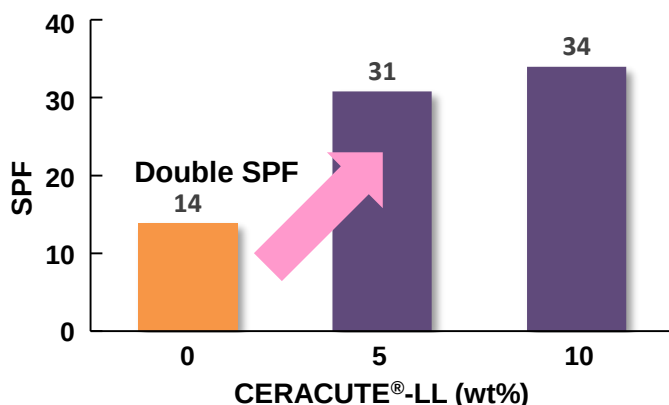
The conventional sunscreen formulations have insufficient dispersion of the inorganic scatterers and has not been able to sufficiently bring out the UV protection effect of the inorganic scatterers.

CERACUTE®-LL stabilizes dispersion by adsorbing to inorganic scatterers. The formulation with CERACUTE®-LL promotes the dispersion of the inorganic scatterers and can greatly enhance the UV protection effect.



〈Measuring device〉  
Diameter distribution measuring apparatus for dynamically light scattering particle (LB-550, Made by HORIBA)

The particle size distributions were compared ultraviolet absorber free W/O sunscreen adding CERACUTE®-LL with without adding it. This sunscreen contains Titanium oxide and Zinc oxide scatterers. The data shows the particle size is reduced and finely dispersed by adding CERACUTE®-LL.



〈Measuring device〉  
SPF analyzer  
(Labsphere UV-2000S, Made by Sanyo Corporation)

The ultraviolet absorber free W/O sunscreen SPF changes were analyzed. It shows that the sunscreen formulations with CERACUTE®-LL significantly improve SPF.

#### Disclaimers

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