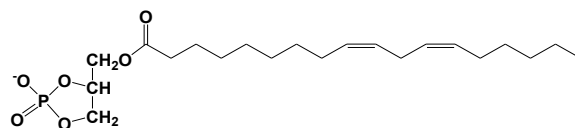


A bioactive lipid that enhances firmness and elasticity and improves wrinkles

● The cyclic phosphatidic acid corresponding to lysolecithin (CyPA®) is a phospholipid with a highly unique structure in which the phosphate group forms an intramolecular cyclic ester bond; it is an endogenous component found in trace amounts in human serum and tear fluid. Numerous physiological activities have been reported for its functions. Because we confirmed multiple beneficial effects on the skin, we produced cyclic phosphatidic acid (CyPA®) from soybean phospholipids using an enzymatic method and applied it in cosmetics.



Cyclic Phosphatidic Acid (CyPA®)

## 1 Information

### ● Functions in the epidermis

- Induction of hyaluronan synthase 1 expression
- Induction of transglutaminase expression
- Promotion of ceramide production
- Increase in aquaporin-3 expression

### ● Functions in the dermis

- Promotion of hyaluronan production
- Enhancement of the cytoskeleton
- Contraction of collagen gel (dermal model)

**Approaches youthful skin from both the epidermis and dermis**  
(pore-tightening effect, improved skin firmness, moisturizing effect, enhanced skin barrier function)

### ● Composition

| INCI            | 中文INCI | wt%  |
|-----------------|--------|------|
| LYSOLECITHIN    | 溶血卵磷脂  | 20.0 |
| GLYCERIN        | 甘油     | 50.0 |
| BUTYLENE GLYCOL | 丁二醇    | 30.0 |

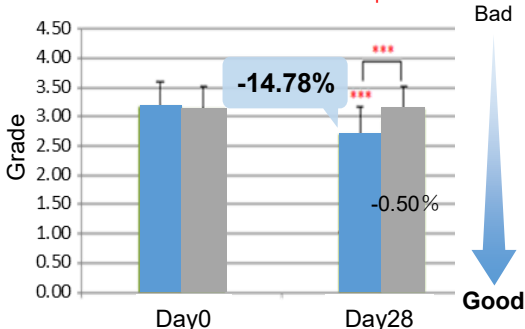


## 2 Experimental Data

### Anti-wrinkle effect

#### Crow's feet grade evaluation

Paired t-test: \*\*\*p<0.001



- Serum containing 1% CyPA®-QD Plant-BG
- Placebo serum

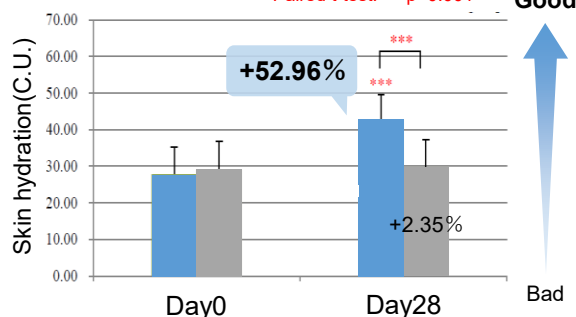
Evaluated by dermatologists according to the wrinkle grade criteria established in JCSS (Journal of Japanese Cosmetic Science Society, Vol.30, No.4).

We confirmed the anti-wrinkle efficacy of the serum containing CyPA®-QD Plant-BG.

### Moisturizing effect

#### Skin hydration analysis

Paired t-test: \*\*\*p<0.001



- Serum containing 1% CyPA®-QD Plant-BG
- Placebo serum

Measured by Corneometer CM825.

We confirmed the moisturizing effect of the serum containing CyPA®-QD Plant-BG.

CyPA is a registered trademark of NOF CORPORATION in Japan.