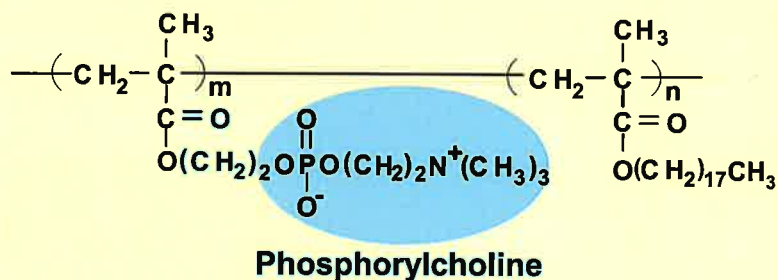


# LIPIDURE<sup>®</sup>-NR

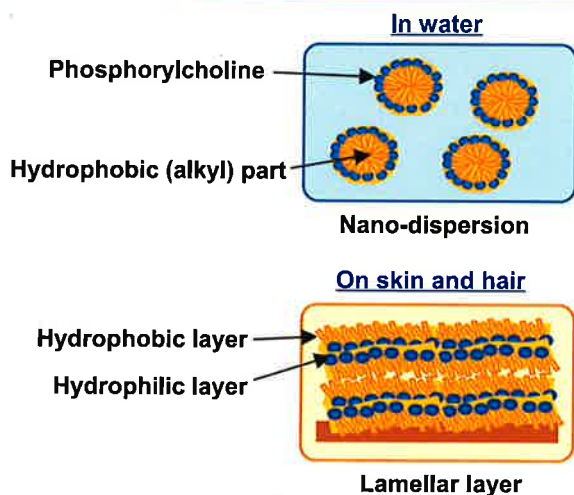
## Chemical Structure



## Products

Product	Composition	M.W.	JQD approval
Lipidure <sup>®</sup> -NR	Polyquarternium-61 : 5% Glycerin : 47.5% Butylene glycol : 47.5%	100K	Approved (Pre-mix)

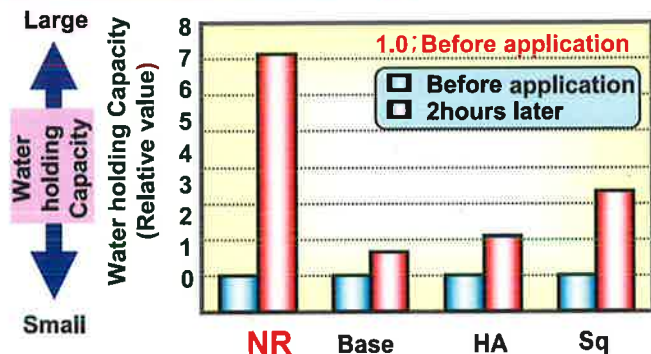
## Feature



- ✓ Excellent emollient efficacy
- ✓ Stabilization of lipophilic active
- ✓ Slow release of active

# Efficacy data

## ➤ Emollient efficacy



### Applied solution

NR : 10% Lipidure-NR(0.5% active), 2%BG/Gly aq.

Base : BG/Gly aq.

HA : 0.5% Sodium hyaluronate 2%BG/Gly aq.

Sq : 0.5% Squalane, 2%BG/Gly aq.

\*BG:Butylene Glycol, Gly:Glycerin

### Method

Applying each solution on skin

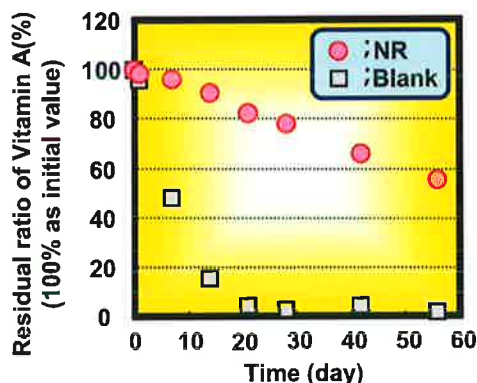
Measuring moisture on skin before and after application

### Instrument

SKICON-200(IBS)

**Moisture retained !!**

## ➤ Stabilization of lipophilic active



### Sample

NR : Vitamin A encapsulated with Lipidure-NR

(Vitamin A ;0.05%, Lipidure-NR ;10% (0.5% active))

Blank : Vitamin A dissolved with a surfactant

(Vitamin A ;0.05%, Surfactant ;5%)

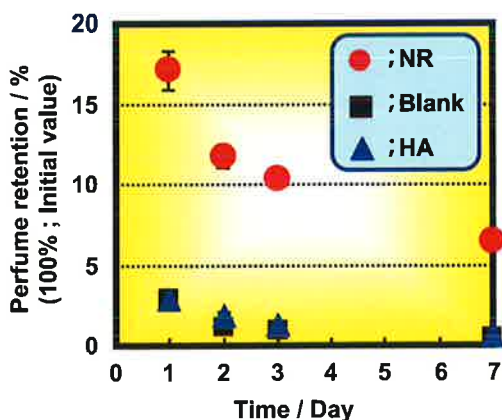
### Method

Storage in oven at 40°C

Measuring residual activity of Vitamin with UV spectrometer over time

**Active stability improved !!**

## ➤ Slow active release



### Sample

BLANK : Perfume dissolved with a surfactant

(Perfume ;1%, surfactant ;4.5%)

NR : BLANK with 9% Lipidure-NR(0.45% active)

HA : BLANK with 0.45% Sodium Hyaluronate

\*Perfume ;Sakura23590(Kobayashi Koryo Co. Ltd)

### Method

Titrating 200ul of each solution on filter paper

located in the bottom of fragrance sensor

Measuring initial odor intensity, then open the lid of sensor

Measuring odor intensity over time

### Instrument

Fragrance sensor SF-225(Sogo-Pharmaceutical Co. Ltd.)

**Active released gradually!!**

# Contact Information

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