

Water-soluble emollient provides superior touch

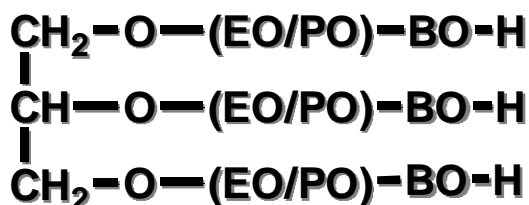
WILBRIDE® S-753D

 **NOF CORPORATION**
Oleo & Speciality Chemicals Div.

1 What is WILBRIDE® S-753D?

Compliant with JSQI

Chemical



EO: Oxyethylene (8mol)
PO: Oxypropylene (5mol)
BO: Oxybutylene (3mol)

Concept

Water-soluble emollient provides superior touch

INCI

PEG/PPG/polybutyleneglycol-8/5/3glycerin,
Tocopherol (200ppm)

Applications

Skin toner

Emulsion

Face mask

Make-up
cleansing

2 Features

- ① High safety ~compliant with JSQI
- ② Easy to use ~liquid, colorless, odorless, non-sticky
- ③ Good compatibility ~from water to polar oil
- ④ Good affinity to skin ~provide emollient feeling
- ⑤ Bicontinuous microemulsion inducing
- ⑥ Skin penetration **enhancing** for **hydrophilic** agents
(ex. VC derivatives, Amino acid, Glycerin, etc.)
- ⑦ Skin penetration **inhibiting** for **lipophilic** agents.
(ex. Paraben, UV-RAY absorber, etc.)

3 Compatibility

Category	Ingredients	1%		10%	
		25°C	50°C	25°C	50°C
Solvent	Water	S	S	S	S
	Ethanol	S	S	S	S
	DPG	S	S	S	S
	Oleyl alcohol	S	S	S	S
Triglyceride	Olive oil	S	S	I	I
	Triethylhexanoin	S	S	S	S
Ester	Isopropyl palmitate	S	S	I	S
	Octyldodecyl myristate	S	S	I	I
	Ethyl oleate	S	S	S	S
Hydrocarbon	Squalane	I	I	I	I
Silicone	Dimethicone	I	I	I	I

S : Soluble I : Insoluble

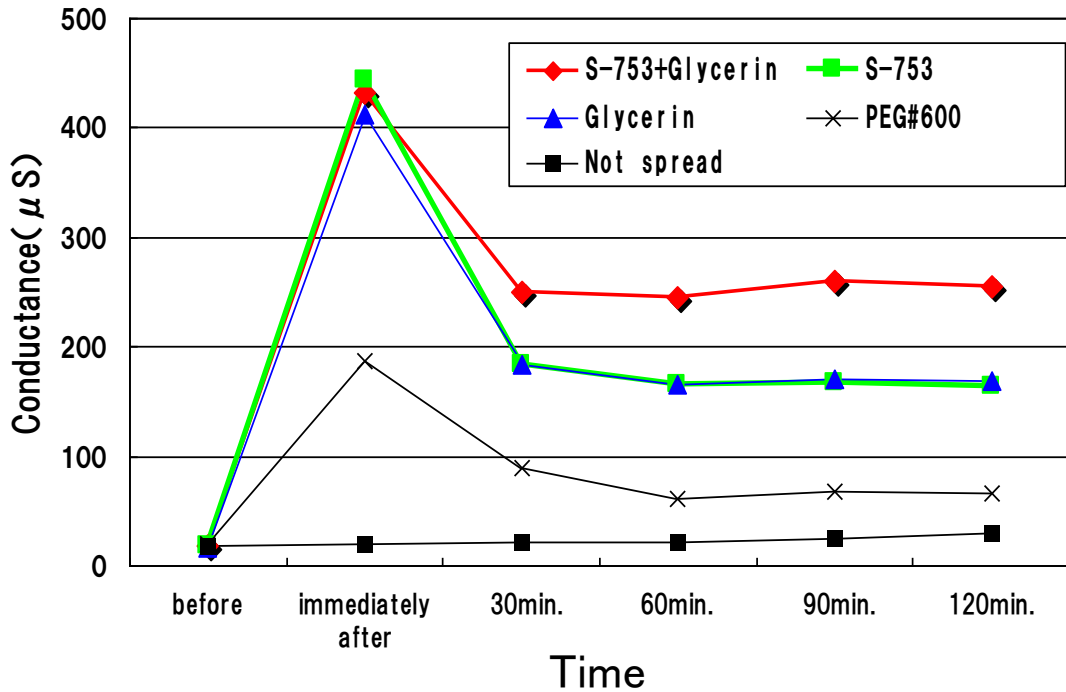
4 Affinity to skin



Applying on the artificial skin (1%aq.)

WILBRIDE® provides good affinity to skin in water system

Moisturizing effect



Measured by SKICON

Temperature: 25°C, Humidity: 50%, Concentration: 10wt% aq.

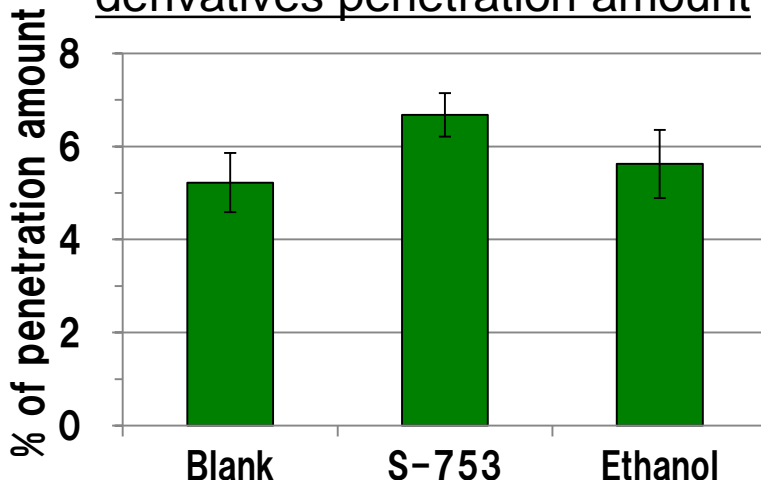
Exhibits synergy effect by combining with glycerin

Skin penetration enhancing (Tape stripping method)

<Test methods>

1. Applying samples on the arm and Leaving 3hr.
2. Collecting skin surface or horny layer by tape stripping (15 layers).
3. Amount of Vitamin C derivative is measured by HPLC.
4. Penetration amount under horny layer is calculated by subtracting the amount of surface and horny layer from the applied amount

Percentage of the Vitamin C derivatives penetration amount



<Tested Samples>

Active: 2wt% Ascorbyl Glucoside

Enhancer:

5wt% WILBRIDE or Ethanol

WILBRIDE can enhance penetration of Vitamin C derivatives without skin irritation

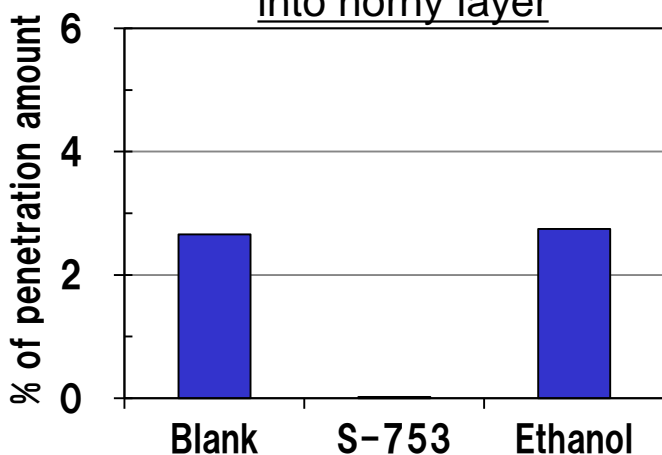
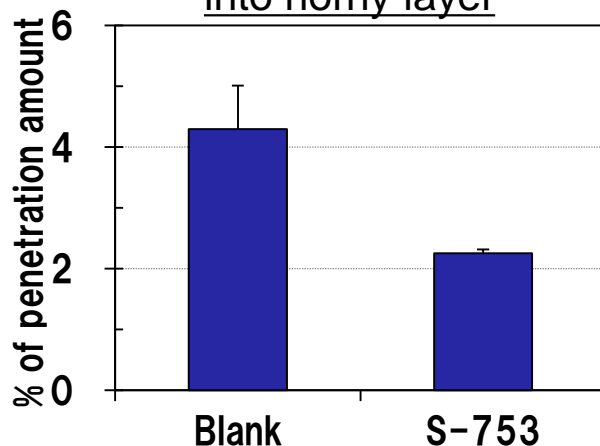
<Test methods>

1. Applying samples on the arm and Leaving 1hr
2. Washing off the skin surface
3. Collecting horny layer by tape stripping (15 layers)
4. Penetration amount into horny layer is measured by HPLC

<Tested samples>

Active: **0.1% Methyl Paraben****0.1% Ethylhexyl Methoxycinnamate (OMC)**

Inhibitor: 5wt% WILBRIDE or Ethanol

Paraben penetration amount
into horny layerOMC penetration amount
into horny layer**WILBRIDE can inhibit penetration of Lipophilic agents**

Consideration

Amphiphilic Layer
of WILBRIDE

Hydrophilic agents : Solubility in a formulation is decreased by amphiphilic property of WILBRIDE
 ⇒ Distribution to horny layer is enhanced

**NOF CORPORATION**

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