

## JAPANESE FACIAL SKINCARE ROUTINE

Today there are many global beauty trends in the market. The beauty industry across the world is developing brands inspired in each own culture for internal consumption while also exporting them globally. The demand for global beauty brands has grown due to globalization and increased interest in foreign travel and culture, and the ‘made in’ stamp carries more meaning than ever before.

As a part of the KAO Group, the mission of Kao Chemicals Europe is to strive for the wholehearted satisfaction and enrichment of the lives of people globally and to contribute to the sustainability of society. Following our mission we would like to approach J-Beauty trend to Western lifestyle, providing a Japanese skincare routine with high-quality products in four streamlined steps.

Rooted in ancient wisdom, a Japanese double-cleansing and double-moisturizing routine enhances the skin’s health and beauty. Building on the two-step cleansing routine, Japanese women in the late 19th century began double-moisturizing, first with “beauty waters” to renew and prepare skin to absorb moisture and second with a deeply hydrating moisturizer.

### Double-Cleansing:

Natural Cleansing Oil C-331 COMPOSITION	%
COCONAD RK <i>Tricaprylin</i>	30.0
RHEODOL 430V <i>Sorbeth-30 Tetraoleate</i>	15.0
RITUEL SY169216 <i>KAO fragrance</i>	0.5
Olive Oil	54.5

STEP 1: Pre-cleanse. Cleansing is emphasized as key to healthy, clear and radiant skin in Japan. It is customary to cleanse the face with a gentle cleansing oil to remove makeup and impurities. Our Natural Cleansing Oil based on RHEODOL 430V (INCI name: Sorbeth-30 Tetraoleate) transforms into weightless, milky texture upon contact with water helping to rinse-off. The formulation steps becomes very easy thanks to the high compatibility of RHEODOL 430V with many types of oil.

RHEODOL 430V shows good emulsification and solubilization for a wide range of substances, high polar ester oils and plant-derived oils.

Ratio = surf. : oil		RHEODOL 430V HLB 10.5	Polysorbate-60 HLB 14.9
		2:8	2:8
Esters oils	Isopropyl Myristate	✓	✓
	Capric/Caprylic Triglyceride	✓	✗
Hydrocarbons	Liquid paraffin	✗	✗
	Mineral oil	✗	✗
Vegetable oils	Olive oil	✓	✗
	Sesame oil	✓	✗
	Jobba oil	✓	✗
	Macadamia oil	✓	✗
	Sunflower oil	✓	✗
	Argan oil	✓	✓

✓: clear ✗: separation

<b>Gentle Facial Wash C-343</b>	
<b>COMPOSITION</b>	<b>%</b>
<b>AKYPO FOAM LM 25</b> <i>Potassium Laureth-4 Carboxylate</i>	<b>12.8</b>
<b>BETADET SHR</b> <i>Cocamidopropyl Hydroxysultaine</i>	<b>9.0</b>
<b>LEVENOL H&amp;B</b> <i>Glycereth-2 Cocoate</i>	<b>0.5</b>
<b>FINDET ARH-52</b> <i>PEG-40 Hydrogenated Castor Oil</i>	<b>0.5</b>
<b>YUKIHISA SY169866</b> <i>KAO Fragrance</i>	<b>0.5</b>
Glycerin	1.5
Preservative	0.5
Disodium EDTA	0.3
Lactic Acid 80%	q.s.
Deionized Water	Up to 100

STEP 2: Cleanse. A foam cleanser clears any remaining residues and purifies the skin. Our Gentle Facial Wash provides a rich, creamy foam generated thanks to AKYPO FOAM LM 25 (INCI name: Potassium Laureth-4 Carboxylate) that gently cleanses skin without stripping hydration.

AKYPO FOAM LM 25 offers an outstanding creamy foam with a very small bubble size, which leaves a very smooth feeling during the application. The other key benefit of this exceptional creamy foam is its stability, which is clearly favorable to contribute to a better experience during the application.

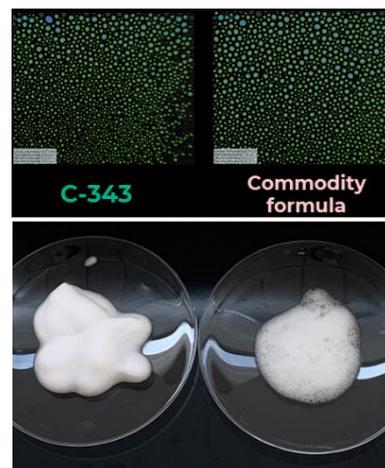
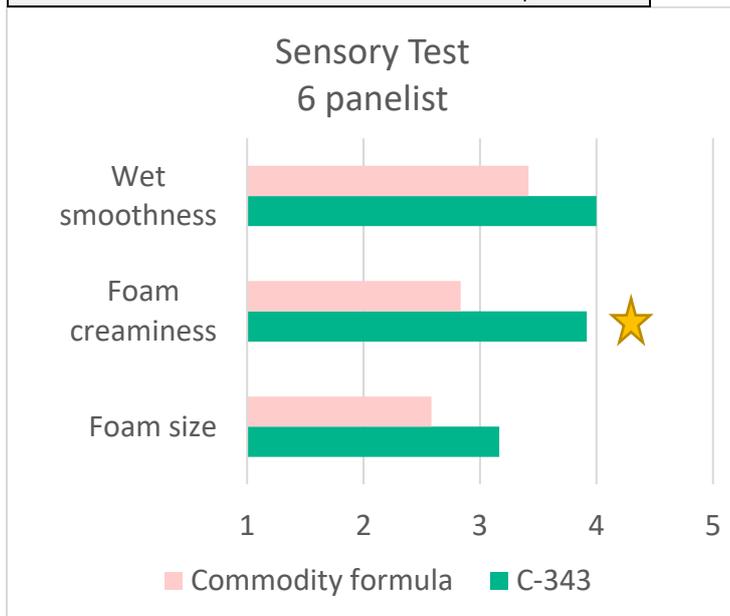


Figure 1: Sensory test. Commodity formula contains Sodium Laureth Sulfate, Cocamidopropyl Betaine and Cocamide DEA. Application: 2 pump-ups of the 50% water dilution formula.

★ Significant differences (ANOVA-1way; p<0.05)

## Double -Moisturizing:

Deep Moisture Spray C-344		
COMPOSITION		%
<b>LEVENOL C-201B</b>		7.5
<i>Glycereth-17 Cocoate</i>		
<b>FINDET ARH-52</b>		3.1
<i>PEG-40 Hydrogenated Castor Oil</i>		
<b>EXCEPARL IS-CE-A</b>		0.3
<i>Cholesteryl Isostearate</i>		
<b>HARUKA</b>	<b>SY170185S</b>	0.3
<i>KAO Fragrance</i>		
1,3 Butanediol		5.0
Glycerin		5.0
Trisodium Phosphate		0.4
Preservative		0.8
Citric Acid 99%		0.1
Citric Acid 10%		q.s.
Deionized Water		Up to 100

STEP 3: Pre-moisturize. A deep moisture spray preps the skin to better absorb moisture, enhancing its benefits. Our Deep Moisture Spray is a lightweight liquid that is easily absorbed into skin, directly delivering our concentrated active ingredient: EXCEPARL IS-CE-A (INCI name: Cholesteryl Isostearate). EXCEPARL IS-CE-A is a cholesteryl ester, one of the structural components of intercellular lipids, and plays a key role to keep moisture in skin.

LEVENOL C-201B is a plant-based nonionic surfactant with a better eco-toxicological profile than common non-ionic surfactants. Its solubilization capacity allows the incorporation of EXCEPARL IS-CE-A to an aqueous phase composition, while improving the smoothness feeling.

The pre-moisturizing step improves the hydration efficacy of composition C-323 up to 49% and 64% more hydration at 3 and 5 hours after use respectively.

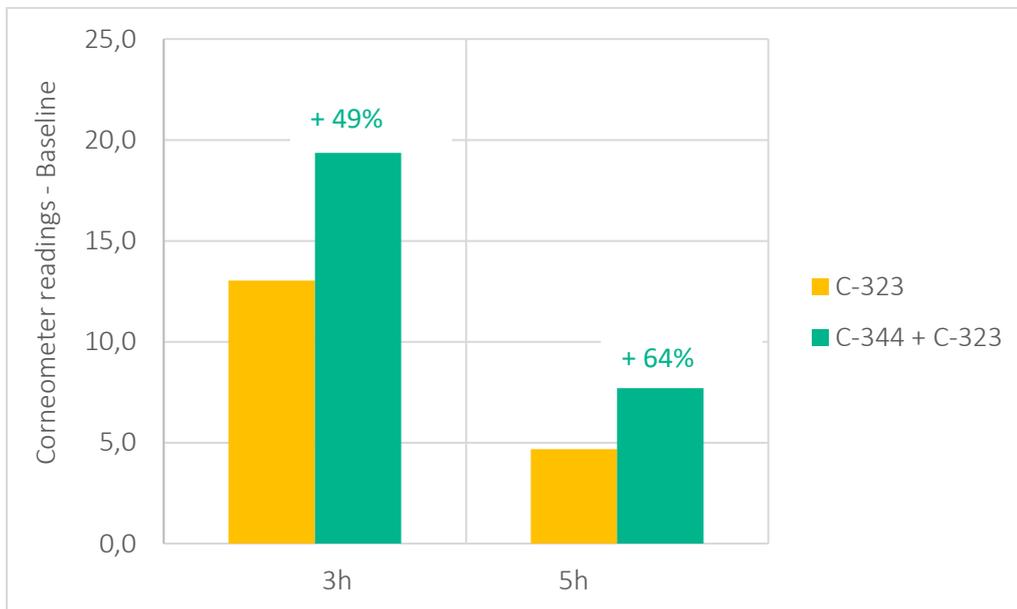
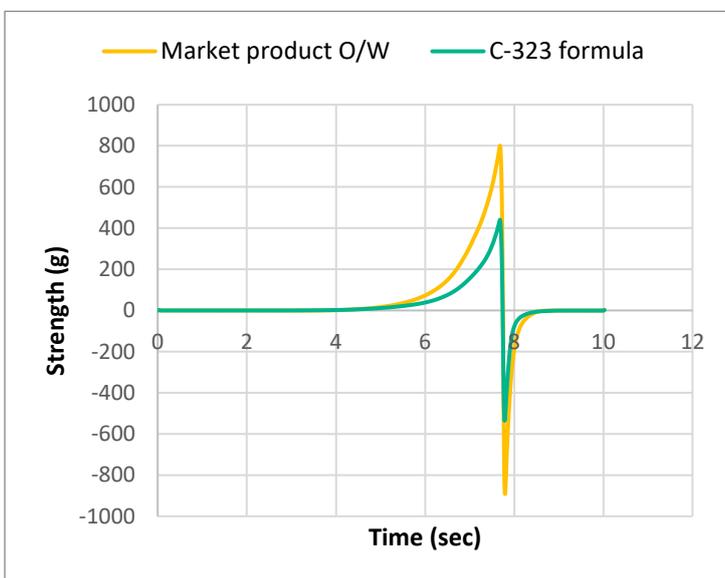


Figure 2: Moisture enhancing of composition C-323 after the pre-moisturizing step with composition C-344.

Rich & Fresh Cream C-323		
COMPOSITION		%
PENETOL GE-IS <i>Isostearyl Glyceryl Ether</i>		2.0
EXCEPARL	IS-CE-A <i>Cholesteryl Isostearate</i>	1.0
KAOPAN SP-O10 <i>Sorbitan Oleate</i>		0.2
YORU	SY169215 <i>KAO Fragrance</i>	0.5
Glycerin		10.0
Dimethicone		6.0
Squalane		4.0
Isopropyl Myristate		3.0
Caprylic/Capric Triglyceride		2.0
Preservative		0.8
Magnesium Sulfate		0.7
Tocopheryl Acetate, Helianthus Annus (sunflower) Seed Oil		0.3
Deionized Water		Up to 100

STEP 4: Moisturize. Nourishment is always beneficial for dry as well as for oily skin types. Once skin is ready to absorb the maximum moisture, apply a moisturizer to form a protective barrier. Our Rich & Fresh Cream is a rich W/O emulsion with a light feeling thanks to PENETOL GE-IS (INCI name: Isostearyl Glyceryl Ether). It can stabilize W/O emulsions with high water content as a result of the formation of reversed hexagonal liquid crystals. Due to their high-water content, these W/O emulsions are easy to spread, providing a high moisture feeling without leaving a greasy feeling.

Spreadability was measured using a Texture Analyzer. The force required to obtain a given deformation correlates with the spreadability. A higher peak force value indicates a less spreadable product. Conversely, a lower peak force value indicates a more spreadable sample. Composition C-323 based on PENETOL GE-IS shows an even easier spreadability than an O/W market product emulsion.



	MEAN Peak Force (g) ± S.D.
C-323 formula W/O emulsion	425.1 ± 19.7
Market product O/W emulsion	791.1 ± 1.8

Figure 3: Spreadability measure by using a Texture Analyzer. Evaluate the spreadability of two types of moisturizing creams using male and female conical probes.

Our key chemicals for Skin Care developed by Kao Corporation, bring the J-Beauty trend closer to Western lifestyle providing a Japanese skincare routine with high-quality products in four streamlined steps.