

A close-up photograph of white, bubbly foam, likely from a soap or detergent. Several clear water droplets of varying sizes are scattered across the surface of the foam, reflecting light. The background is a soft, out-of-focus white.

# mild surfactant guide

A guide to Wilmar's mild surfactants,  
gentle and clean for healthy skin.

*Sustainable Beauty,  
From Multi-Plant Origins*

  
wilmar

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# Wilmar Beauty

Where beauty,  
performance, and  
sustainability meet.

As a company rooted in  
agriculture, we provide  
sustainable beauty ingredients,  
made from multi-plant origins.

Whether it's sustainable palm  
or upcycled rice husks, we  
harness our global presence  
and biodiversity to deliver  
sustainable beauty at scale.



haircare · skincare ·  
suncare · cosmetics ·  
fragrances



# BEAUTY FOR ALL



**global amines**  
A Clariant - Wilmar Joint Venture

Along with **ErcaWilmar** and **Global Amines Company**, our joint ventures in specialty oleochemicals, Wilmar offers a full portfolio of basic and specialty oleo beauty solutions.

With a global network of research and application teams, we service diverse beauty needs with trend insights, formulation knowledge, and global production scale.

## Global Application & Research Network



China · India · Italy · Germany ·  
Singapore · United States

emollients · surfactants ·  
solvents · emulsifiers ·  
cosmetic quats



# CLEAN, HAPPY SKIN

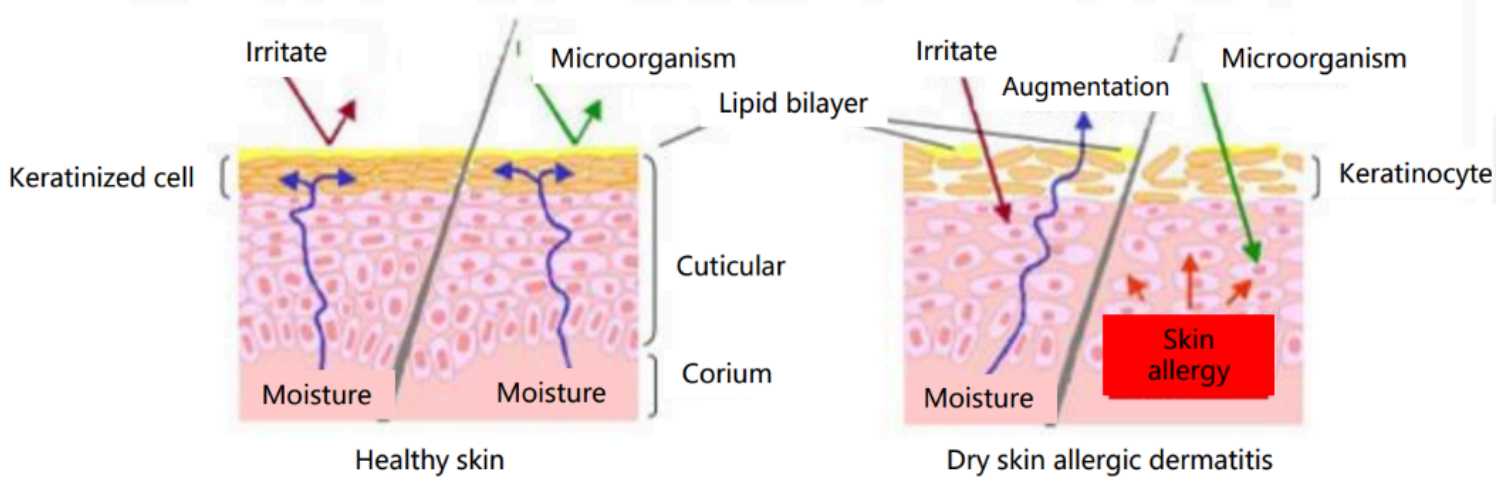
Fresh, clean, and soft upon touch:  
a great cleanse instantly lifts mood and refreshes skin.

With greater attention to mild cleansing and skin health, consumers desire skin protection, mildness, and effective cleansing, enhanced with luxurious feel and environmentally friendly ingredients.

From skin and hair types, foam quality, carbon footprint, to mild cleansing and more, Wilmar's mild surfactants offer a wide range of caring properties to suit your needs.



## THE FIRST STEP TO HAPPY SKIN



Cleansing is the first step to skin health: it plays a critical role in maintaining skin moisture and pH balance. When cleansers exceed skin's pH range, they disturb skin balance over time, causing skin irritation and allergies.

In recent years, traditional surfactants are under increasing scrutiny, due to their tendencies to over strip moisture, which cause dryness, irritation, and skin barrier damages.

A new generation of mild cleansers emerge and are especially popular with younger consumers.



# THE MAKING OF A MILD CLEANSER

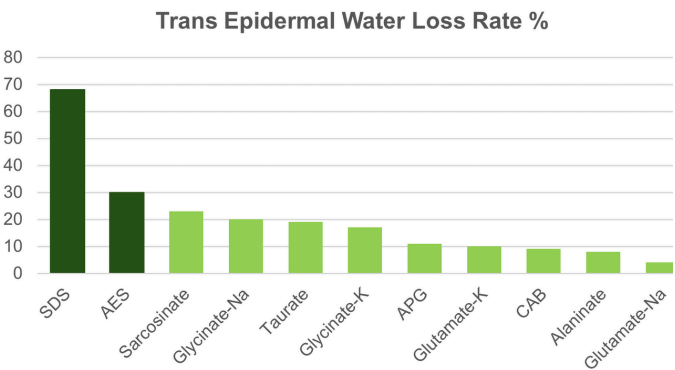


To create a mild, protective surfactant system, a formulation artist considers these structural and sensorial attributes.

## 1 MILDNESS

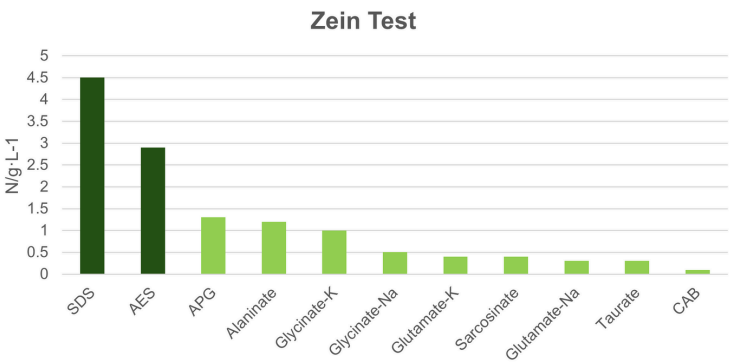
### Water Retention

A mild surfactant cleanses thoroughly, while limiting water loss and preventing dryness. The lower the trans epidermal water loss on skin, the gentler the surfactant.



### Skin Mildness

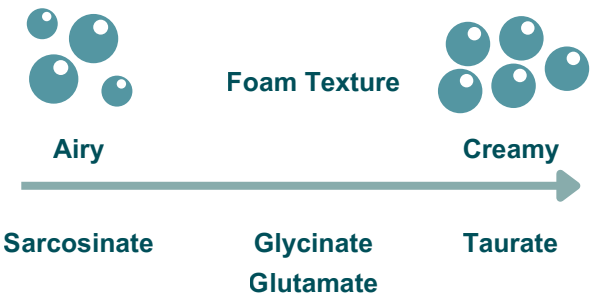
Mild surfactants limit irritation and damages to the lipid layer and proteins within the epidermis. The higher the Zein test score, the harsher the surfactant is on skin.



## 2 FOAM SENSORY

### Foam Texture

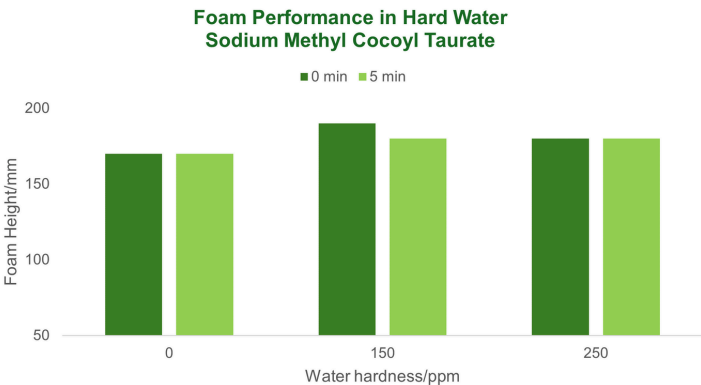
Depending on the product application, choose surfactants that exhibit desirable foam profiles and perception value, ranging from rich and creamy to airy light.



## 3 STABILITY

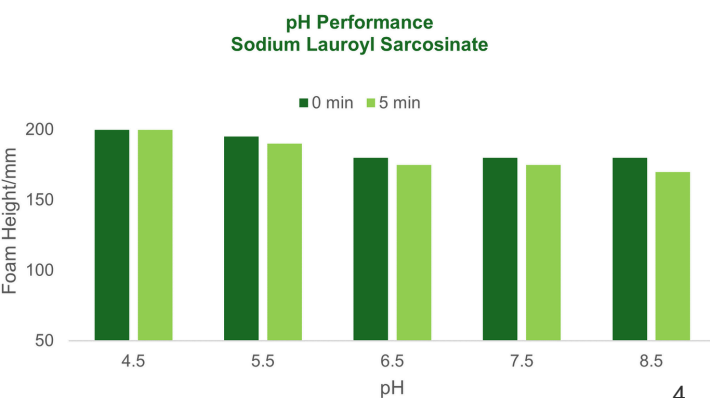
### Water Hardness

Hard water can hamper foam quality and stability. In hard water environments, choosing resilient mild surfactants is key.



### pH Compatibility

When mixed with co-surfactants, pH compatibility enhances foam and mildness benefits.





# WILMAR'S MILD SURFACTANTS

Gentle, effective, we harness the best of nature and skin science to deliver nourishing cleanse.

## Amino Acid Surfactants

Sarcosinate  
Taurate  
Glycinate  
Glutamate  
Alaninate

## Betaines

Cocamidopropyl Betaine  
Coco Betaine

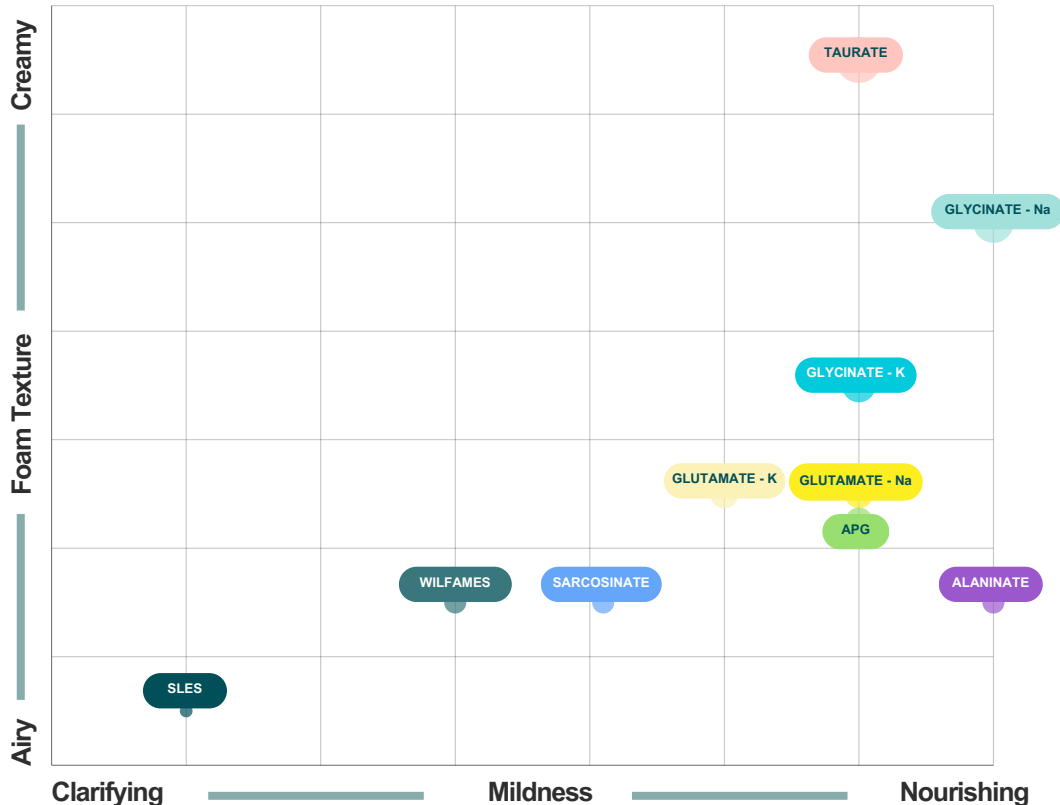
## APG

Coco Glucoside  
Caprylyl/Capryl Glucoside  
Lauryl Glucoside  
Decyl Glucoside

## MES

Methyl Ester Sulphonates

	Product Name	INCI Name
1	WILCARE Sarcosinate	Sodium Lauroyl Sarcosinate
2	WILCARE Taurate	Sodium Methyl Lauroyl / Cocoyl Taurate
3	WILCARE Glycinate - Potassium	Potassium Lauroyl / Cocoyl Glycinate
4	WILCARE Glycinate - Sodium	Sodium Lauroyl / Cocoyl Glycinate
5	WILCARE Glutamate - Potassium	Potassium Cocoyl Lauroyl / Glutamate
6	WILCARE Glutamate - Sodium	Sodium Cocoyl Lauroyl / Glutamate
7	WILCARE Alaninate	Sodium Cocoyl Alaninate
8	WILFAGREEN APG	Glucosides
9	WILFAMES	Methyl Ester Sulphonate
10	WILFAROL	SLES







# SULPHATE FREE

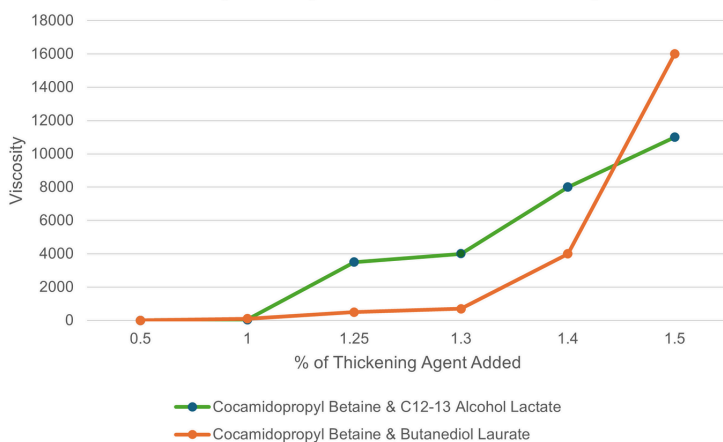
With greater interest in gentle, hypoallergenic beauty, consumers increasingly demand sulphate-free hair and skincare.

Balancing sulphate-free formulations with desired sensory experience is often challenging. From viscosity to foaming, discover unique properties and suitable pairing of our gentle ingredient to achieve desirable forms.

## THICKENING SUPPORT

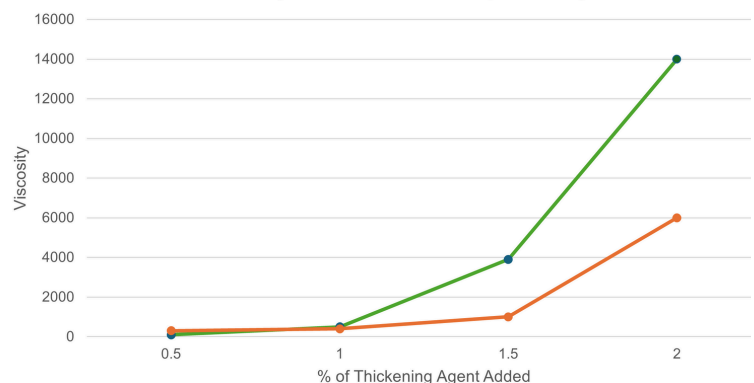
Among mild surfactants, **Sarcosinates** and **Taurates** are easier to thicken. With the help of the right thickeners, achieve the best of mildness and viscosity ease.

Thickened Viscosity of Sodium Methyl Cocoyl Taurates Compound System



\*The ratio of Sodium Methyl Cocoyl Taurate to amphoteric surfactant was 1:1

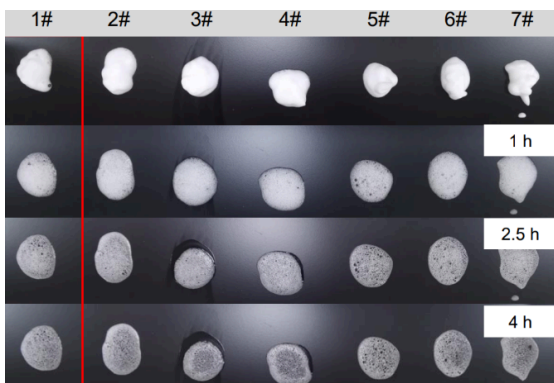
Thickened Viscosity of Sodium Lauroyl Sarcosinate Compound System



\*The ratio of Sodium Lauroyl Sarcosinate to amphoteric surfactant was 1:1

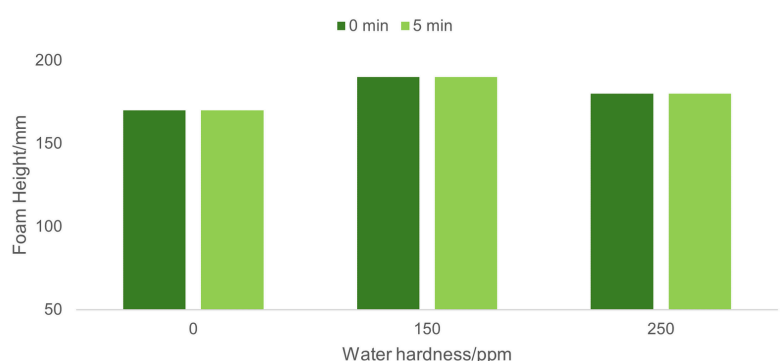
## FOAM STABILITY

Gentle **Glutamates** deliver dense foam that withstand hard water and acidic environments, exhibiting lasting foam quality when applied across surfactant combinations.



Foam quality across 7 different surfactant systems containing Glutamates

Foam Stability in Hard Water Sodium Cocoyl Glutamate



# MILD SURFACTANTS

Our formulator guide details all essential parameters to help you find the perfect fit.

	Product Name	INCI	Surfactant Class	Form	Active Content %	Foam Richness	Skin Mildness	pH Compatibility^
1	WILCARE LS-30	Sodium Lauroyl Sarcosinate	Anionic	Liquid	30	*	**	***
2	WILCARE LS-95	Sodium Lauroyl Sarcosinate	Anionic	Powder	95	*	**	***
3	WILCARE LMT-30*	Sodium Methyl Lauroyl Taurate	Anionic	Liquid	30	*	**	***
4	WILCARE LMT-95	Sodium Methyl Lauroyl Taurate	Anionic	Powder	95	*	**	***
5	WILCARE CMT-40*	Sodium Methyl Cocoyl Taurate	Anionic	Cream	40	*	**	***
6	WILCARE CMT-95	Sodium Methyl Cocoyl Taurate	Anionic	Powder	95	*	**	***
7	WILCARE SCA-30*	Sodium Cocoyl Alaninate	Anionic	Liquid	30	*	**	***
8	WILCARE SLE-30*	Sodium Lauroyl Glutamate	Anionic	Liquid	30	**	***	**
9	WILCARE SLE-95	Sodium Lauroyl Glutamate	Anionic	Powder	95	**	***	**
10	WILCARE SCE-30*	Sodium Cocoyl Glutamate	Anionic	Liquid	30	**	***	**
11	WILCARE SCE-95	Sodium Cocoyl Glutamate	Anionic	Powder	95	**	***	**
12	WILCARE KCE-30*	Potassium Cocoyl Glutamate	Anionic	Liquid	30	**	***	**
13	WILCARE SLG-30*	Sodium Lauroyl Glycinate	Anionic	Liquid	30	**	***	***
14	WILCARE SLG-95	Sodium Lauroyl Glycinate	Anionic	Powder	95	**	***	***
15	WILCARE SCG-30*	Sodium Cocoyl Glycinate	Anionic	Liquid	30	**	***	***
16	WILCARE SCG-95	Sodium Cocoyl Glycinate	Anionic	Powder	95	**	***	***
17	WILCARE KLG-30*	Potassium Lauroyl Glycinate	Anionic	Liquid	30	**	***	***
18	WILCARE KCG-30*	Potassium Cocoyl Glycinate	Anionic	Liquid	30	**	***	***
19	WILFAGREEN APG 0814	Coco Glucoside	Nonionic	Liquid	50	**	***	***
20	WILFAGREEN APG 810	Caprylyl/Capryl Glucoside	Nonionic	Liquid	50	**	***	***
21	WILFAGREEN APG 1214	Lauryl Glucoside	Nonionic	Liquid	50	*	***	***
22	WILFAGREEN APG 425	Decyl Glucoside	Nonionic	Liquid	50	**	***	***
25	GENAGEN CAB	Cocamidopropyl Betaine	Amphoteric	Liquid	30	*	***	***
26	GENAGEN KB	Coco-Betaine	Amphoteric	Liquid	29-31	*	***	***
27	WILFAMES C16 FR	Methyl Ester Sulphonate	Anionic	Flakes	87-93	**	**	***

\*High salt product available  
^\*\* indicates weak acidic to neutral, \*\*\* weak acidic to alkaline



Applications - as Main Surfactant						
Product Name		Baby, Pet, Sensitive Skin	Skincare	Haircare	Bodycare	Properties
1	WILCARE LS-30	✓	✓	✓	✓	<ul style="list-style-type: none"><li>Excellent foam performance in a wide pH range</li><li>Hard water resistance</li><li>Easier thickening</li></ul>
2	WILCARE LS-95	✓	✓	✓	✓	<ul style="list-style-type: none"><li>As a Main surfactant, ideal for shampoo, body wash</li><li>As a Co-surfactant, good for shampoo, facial and body wash</li></ul>
3	WILCARE LMT-30*		✓	✓	✓	<ul style="list-style-type: none"><li>Excellent foam performance in a wide pH range, even at low concentrations</li><li>Compatible with emollients</li><li>Hard water resistant</li><li>Easier thickening</li></ul> <ul style="list-style-type: none"><li>As a Main surfactant, ideal for shampoo and body wash, especially for clear systems</li><li>As a Co-surfactant, it improves foam performance, making it ideal for shampoo, facial cleanser, and body wash</li></ul>
4	WILCARE LMT-95		✓	✓	✓	
5	WILCARE CMT-40*		✓	✓	✓	
6	WILCARE CMT-95		✓	✓	✓	
7	WILCARE SCA-30*	✓	✓	✓	✓	<ul style="list-style-type: none"><li>Excellent foam performance under weak acidic and alkaline environments</li><li>Hard water resistant</li><li>As a Main surfactant, ideal for shampoo and body wash</li><li>As a Co-surfactant, it enriches foam under specific pH conditions, and is suitable for shampoo, facial and body wash</li></ul>
8	WILCARE SLE-30*	✓	✓	✓	✓	<ul style="list-style-type: none"><li>Extremely mild</li><li>Provides fine and dense foam</li><li>Excellent foaming under weak acidic conditions</li></ul> <ul style="list-style-type: none"><li>As a Main surfactant, ideal for facial cleansing bubble, sensitive skin and baby products</li><li>As a Co-surfactant, it improves foam fineness and delivers moisturising after feel</li></ul>
9	WILCARE SLE-95	✓	✓	✓	✓	
10	WILCARE SCE-30*	✓	✓	✓	✓	
11	WILCARE SCE-95	✓	✓	✓	✓	
12	WILCARE KCE-30*	✓	✓	✓	✓	<ul style="list-style-type: none"><li>Rich and fine foam under weak acidic and alkaline environments</li><li>Skin feels fresh and not tight after cleansing</li><li>Replaces soap base as the main surfactant,</li><li>Reduces irritation and improving soap-based foam quality</li></ul> <ul style="list-style-type: none"><li>As a Main surfactant, ideal for facial cleanser</li></ul>
13	WILCARE SLG-30*	✓	✓	✓	✓	
14	WILCARE SLG-95	✓	✓	✓	✓	
15	WILCARE SCG-30*	✓	✓	✓	✓	
16	WILCARE SCG-95	✓	✓	✓	✓	<ul style="list-style-type: none"><li>Very mild to skin</li><li>Good foaming properties</li><li>Compatible with most other surfactants</li><li>Suitable for shampoo, face, body wash, baby and pet care</li></ul>
17	WILCARE KLG-30*	✓	✓	✓	✓	
18	WILCARE KCG-30*	✓	✓	✓	✓	
19	WILFAGREEN APG 0814	✓	✓	✓	✓	
20	WILFAGREEN APG 810	✓	✓	✓	✓	<ul style="list-style-type: none"><li>Mild and hydrating to skin, with effective cleansing properties</li><li>Good foaming</li><li>Helps increase viscosity</li><li>Compatible with most other surfactants</li><li>Suitable for shampoo, face, body wash, baby and pet care</li></ul>
21	WILFAGREEN APG 1214	✓	✓	✓	✓	
22	WILFAGREEN APG 425	✓	✓	✓	✓	
25	GENAGEN CAB	✓	✓	✓	✓	
26	GENAGEN KB	✓	✓	✓	✓	<ul style="list-style-type: none"><li>Mild to skin with good cleansing properties</li><li>Excellent foaming</li><li>Compatible with most other surfactants</li><li>Suitable for shampoo, face, and body wash</li></ul>
27	WILFAMES C16 FR	✓	✓	✓	✓	

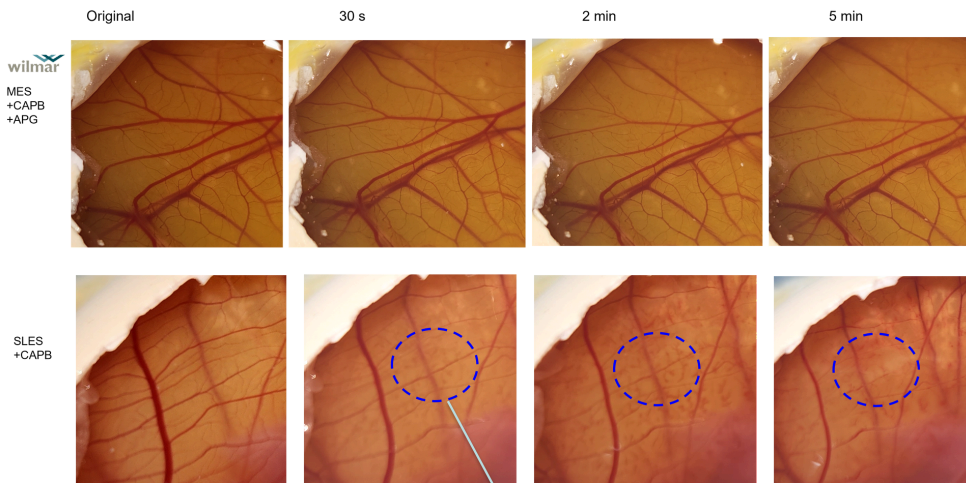
\*High salt product available

# TENDER LOVING CARE

From inflamed, flared up skin, to fragile baby skin, the mildest surfactants soothe irritation, and cleanse effectively to nurture skin barrier health.

## WILFAMES & APG

Plant-based and sulfate-free, WILFAMES delivers clarifying cleanse with nourishing care. When combined with glucosides, formulations are especially gentle, resulting in little irritation, even on sensitive skin.



Haemorrhage spots can be seen for SLES-CAPB after 30s, and it is not observed for MES-CAPB-APG in 5 min

## GENTLE PAIRING

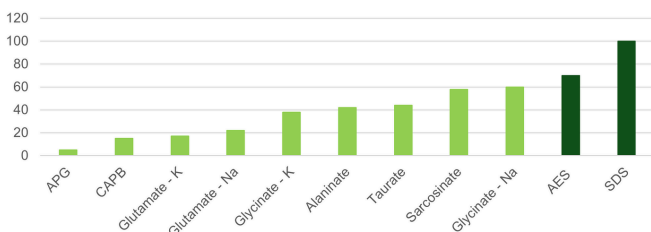
In a HET-CAM test, surfactants were compared to understand mildness and skin irritation.

Wilmar's mild surfactant solution combines WILFAMES, Betaines, and APG. Compared to a mixture of SLES and Betaines, our system demonstrated little damage to skin membrane.

## THE GENTLEST CARE



Red Blood Cells Test  
Denaturation Index %



Calm, clean skin is the first step to skin healing and achieving barrier health.

On inflamed, wounded skin, mild surfactants remove impurities without further damaging skin.

APG, Betaines, Glutamate, and Glycinate amino acid surfactants are considered the mildest surfactants for stressed skin, resulting in the lowest irritation to skin cell membranes.



A close-up, high-angle shot of a white bathtub filled with water and thick white bubbles. A person's head is partially submerged in the bubbles on the left side of the frame, with a white towel wrapped around their head. A hand is visible on the right side, also submerged in the bubbles. The background shows a wooden wall and a tiled floor.

# THE FORMULATION GUIDE

From the latest natural trends to new skincare concerns, Wilmar's cleansing solutions are made with consumer needs and sustainability in mind.



# HAIRCARE



In hair care, mild surfactants removes dirt, oils, and impurities without drying out scalp. This helps balance scalp microbiome to nourish healthy hair.

## EXTRA GENTLE BABY SHAMPOO

A gentle, comforting shampoo for baby and kids, thanks to a combination of **GENAGEN CAB** and **WILCARE LS 30**. No irritation, no tears.

HYDRATION

MILDNESS

COMFORT

★★★★

★★★★

★★★★

## BEAUTY RECIPE

1. Mix all ingredients in Part A at room temperature while stirring.
2. Mix all ingredients in Part B at room temperature while stirring.
3. Pour Part B slowly into A, stir until well incorporated.
4. Adjust pH in the range between 5 and 6.

**Appearance:** Clear Liquid  
**pH:** 5.6  
**Viscosity:**  
3000 mPa · s (10rpm,RV-7)

# no tears, baby

## INGREDIENTS

A.	
Water	qs
<b>WILFARIN USP-997</b> <i>Glycerin</i>	3.0
<b>GENAGEN CAB</b> <i>Cocamidopropyl Betaine (30%)</i>	10.0
<b>WILCARE LS 30</b> <i>Sodium Lauroyl Sarcosinate (30%)</i>	15.0
<b>ERCAGREEN 10L MB</b> <i>Polyglyceryl-10 Laurate</i>	3.0
<b>WILFAGREEN APG 0810</b> <i>Caprylyl Capryl Glucoside</i>	3.0
<b>ERCAREL MG 120 L</b> <i>PEG-120 Methyl Glucose Dioleate, Water</i>	4.0
Sodium Chloride	3.0
B.	
Preservative	qs
Lactic Acid	qs





# HAIRCARE

## CURL DEFINING SULPHATE FREE SHAMPOO

A hydrating, sulphate-free shampoo that gives body to curls, while protecting hair and scalp health.

FOAM	★★★★
MILDNESS	★★★★★
HAIR SOFTNESS	★★★★

## BEAUTY RECIPE

1. Mix Part A ingredients one by one, heat Part A under stirring.
2. With continuous heating, add part B into part A with mixing.
3. Add Part C and stir to cool.

**Appearance:** White flowy liquid  
**pH:** 7.07  
**Viscosity:**  
3000-4000 mPa · s (10rpm,RV-7)

## sulphate-free

### INGREDIENTS

A.	
Deionised Water	q.s.
Polyacrylate-33, Rheomer® 33T	7.0
20% Sodium Hydroxide Solution	q.s.
Sodium Benzoate	0.8
B.	
<b>WILCARE LS 30</b> <i>Sodium Lauroyl Sarcosinate</i>	<b>10.0</b>
<b>WILFAGREEN APG 1214</b> <i>Lauryl Glucoside</i>	<b>6.0</b>
Sodium Cocoyl Isethionate	7.2
<b>GENAGEN CAB</b> <i>Cocamidopropyl Betaine</i>	<b>6.0</b>
Isoamyl Laurate	2.0
<b>ERCAWAX EGDS V</b> <i>Ethylene Glycol Distearate</i>	<b>1.0</b>
C.	
Preservative	0.5



# HAIRCARE



## SCALP DETOX CLARIFYING SHAMPOO

A detoxifying scalp cleanse with **GENAGEN CAB**, **WILCARE LS 30**, and **WILFAGREEN APG 1214** to remove sebum, product build up, and calm irritated scalp.

- CLARIFYING    ★ ★ ★ ★
- MILDNESS    ★ ★ ★
- FRESHNESS    ★ ★ ★ ★

## BEAUTY RECIPE

1. Mix all ingredients in Part A at room temperature while stirring.
2. Mix all ingredients in Part B at room temperature while stirring.
3. Pour Part B slowly into A, stir until well incorporated.
4. Adjust pH in the range between 5 and 6.

**Appearance:** Clear Liquid  
**pH:** 5.6  
**Viscosity:**  
3000 mPa · s (10rpm,RV-7)

# scalp cleanse

## INGREDIENTS

A.	
Water	qs
<b>WILFARIN USP-997</b> <i>Glycerin</i>	3.0
<b>GENAGEN CAB</b> <i>Cocamidopropyl Betaine (30%)</i>	10.0
<b>WILCARE LS 30</b> <i>Sodium Lauroyl Sarcosinate (30%)</i>	15.0
<b>ERCAGREEN 10L MB</b> <i>Polyglyceryl-10 Laurate</i>	3.0
<b>WILFAGREEN APG 0810</b> <i>Caprylyl Capryl Glucoside</i>	3.0
<b>ERCAREL MG 120 L</b> <i>PEG-120 Methyl Glucose Dioleate, Water</i>	4.0
Sodium Chloride	3.0
B.	
Preservative	qs
Lactic Acid	qs



# HAIRCARE

## WILCARE NOURISH REPAIR SHAMPOO

A deeply conditioning shampoo for dry, damaged hair, made with hydrating **WILCARE Taurate**, **WILFARIN Glycerin**, and **GENAGEN CAB**.

**CONDITIONING** ★★★★★

**MILDNESS** ★★★★★

**SMOOTHNESS** ★★★★★

## BEAUTY RECIPE

1. Disperse guar with glycerin and acidify with citric acid.
2. Add water to glycerin-guar mixture.
3. Heat the batch to 60°C-70°C in a beaker.
4. Add the ingredients in Part A one at a time until all ingredients are dissolved.
5. Cool down the batch to 40°C and add the ingredients in Part B.
6. Check the pH. pH is around 6-6.5

**Appearance:** Pearly, flowable Liquid  
**pH:** 6.0-6.5

**Viscosity:**  
13,000-15,000 cps (10rpm, spindle#4)

**Stability:**  
50°C (1 month), 40°C (3 months)

## damage repair

### INGREDIENTS

A.	
Water	qs
<b>WILFARIN USP-997</b> Glycerin	3.0
<b>GENAGEN CAB</b> Cocamidopropyl Betaine (30%)	11.5
<b>WILFARES ESB 70 CP</b> Sodium Laureth Sulfate	5.0
<b>WILCARE LMT</b> Sodium Methyl Lauroyl Taurate	4.0
<b>COCAMIDE MEA</b> Cocamide MEA	2.0
Sodium Cocoyl Isethionate	6.0
<b>ERCAREL HE V/FD</b> PEG-7 Glyceryl Cocoate	0.5
<b>ERCAWAX EGDS V MB</b> Glycol Distearate	2.5
Hydroxypropyl Guar Hydroxypropyltrimonium Chloride	0.1
B.	
<b>Camellia Oil</b>	0.3
Preservative	qs
10% Citric Acid	qs





# feel great in your skin

## **SALES OFFICES**

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<https://www.wilmar-international.com/oleochemicals>

  
**wilmar**