



OLIVOIL TECHNOLOGY

EMULSIFIERS & SURFACTANTS



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A HIGH TECH MANUFACTURER

OUR RESEARCH, YOUR VALUE

The cosmetics and personal care **Kalichem R&D** is a fast-paced and highly innovative activity that is driven by science. To remain competitive in an ever-more technologically advanced market, we offer a portfolio that **responds to the changing needs of consumers and facilitates access to safe, innovative products.**

Our research facilities, and the scientists employed by Kalichem, delve into all imaginable aspects of beauty and well-being, from consumer behavior, beauty aspiration, skin and hair biology, to new ingredients and technologies. This extensive research allows our clients to create products that respond to ever-changing consumer expectations, while respecting human health and the environment.

R&D activity is continuous and constant, aimed to give customers also a very efficient finished product formulation service.

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A GREEN AND SUSTAINABLE COMPANY

A CONSISTENT PARTNER IN THE DEVELOPMENT OF RAW MATERIALS

Scientific research has always been part of Kalichem's DNA since its foundation in 2003. Every new Kalichem product is the result of the hard work of a number of scientists and researchers who are committed to the research and the realization of products based on vanguard cosmetic technologies. Investing in research is a high priority:

- A high percentage of the total turnover of the Kalichem Group is dedicated to base research and product development.
- A number of specialists are engaged daily in Research Centres which collaborate with Kalichem.
- The R&D Kalichem laboratory works closely with the most prestigious universities and the most influential research centres all over the world.

Kalichem has been awarded with a **platinum medal** in recognition of CSR (Corporate Social Responsibility) achievement for its attention to environment, ethics, labor and human rights by **Ecovadis**, the world's most trusted provider of business sustainability ratings.

Furthermore, Kalichem is a member of RSPO (Roundtable Sustainable Palm Oil) and offers a unique range of Palm Free surfactants and emulsifiers, along with specialties obtained through up-cycling and circular economy sourcing.



Sustainability: Ecovadis & RSPO

KALICHEM SRL is in the top 1% of companies rated by Ecovadis and is a member of RSPO.

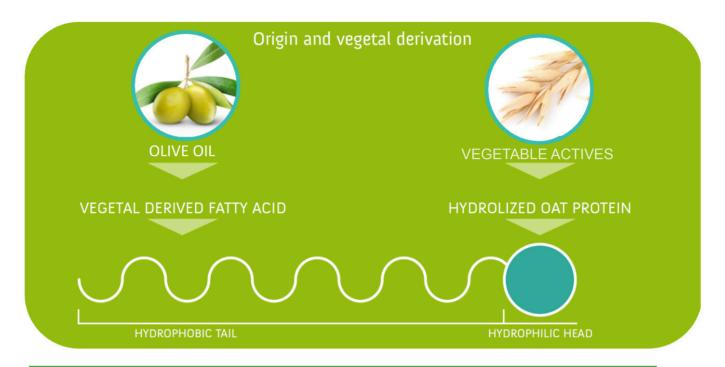




OLIVOIL EMULSIFIERS

SUSTAINABLE SPECIALTIES FOR "CLEAN" EMULSIONS

Patented self-emulsifying bases able to build emulsions with both high and low viscosity with a unique technology based on the use of olive fatty acids condensed with vegetable derived aminoacids/polypeptides (oat, glutamic acid etc.).





- 100% palm free, preservatives free
- · Silicon like sensorial effect
- · Lipo-aminoacid based on olive oil fatty acids and glutamic acid from sugar beet
- · Moisturizing action and instant tensor effect
- · Ideal for both hyper-fluid and viscous emulsions (depending on concentration of use)



- · Liquid crystal emulsifier based on olive oil fatty acids and oat polypeptides
- · Moisturizing action and instant tensor effect
- Silicon like texture, medium-quick absorption
- · Ideal for both hyper-fluid and viscous emulsions (depending on concentration of use)
- · RSPO mass balance grade available

EMULSIONS FORMULATIONS

SUSTAINABLE SPECIALTIES FOR "CLEAN" EMULSIONS

NIGHT CREAM

METHOD:

Mix phase A ingredients and heat until solids fusion
Mix phase B ingredients and heat to a temperature of 75°C +/- 1° C mixing
Mix phase A and B, stir and homogenize for 10 minutes. Cool down to 40°C.
Stir and add C, homogenizing after each addition. Finally set the pH within a range of 5.0-8.0

#	INGREDIENTS	[%]
A1	OLIVOIL AVENATE EMULSIFIER	10.0
A2	Coco caprylate	9.0
A3	Caprylic/capric triglyceride	7.0
A4	Cetyl alcohol	5.0
A5	Tocopheryl acetate	1.0
B1	Aqua	to 100.0
B2	Glycerin	3.5
С	Preservatives, parfum and pH regulator	as needed

HYPERFLUID SPRAY

METHOD:

Mix phase A ingredients and heat until solids fusion

Mix phase B ingredients and heat to a temperature of of 75°C +/- 1° C mixing Mix phase A and B, stir and homogenize for 10 minutes. Cool down to 40°C. Stir and add C homogenizing after each addition. Finally set the pH within a range of 5.0-8.0

#	Ingredients	[%]
Al	OLIVOIL AVENATE EMULSIFIER	4.0
A2	Octyldodecanol	6.0
A3	Isopropyl Myristate	6.0
A4	Tocopheryl Acetate	0.1
B1	Aqua	to 100.0
B2	Glycerin	1.0
В3	Microcrystalline cellulose	2.0
С	Preservatives, parfum and pH regulator	as needed





EMULSIONS FORMULATIONS

SUSTAINABLE SPECIALTIES FOR "CLEAN" EMULSIONS

DEO ROLL-ON EMULSION

METHOD:

Mix phase A ingredients and heat until solids fusion

Mix phase B ingredients and heat to a temperature of 75°C +/- 1° C mixing

Mix phase A and B, stir and homogenize for 10 minutes. Cool down to 40°C.

Stir and add C homogenizing.

Add D homogenizing after each addition. Finally set the pH within a range of 5.0-8.0

#	INGREDIENTS	[%]
A1	OLIVOIL GLUTAMATE EMULSIFIER G-PF	2.0
A2	Coco caprylate/caprate	2.0
A3	Dicaprylyl carbonate	4.5
A4	Tocopheryl acetate	0.2
B1	Aqua	to 100.0
B2	Aqua, tetrasodium glutamate diacetate	0.2
В3	Xanthan gum, sclerotium gum	0.4
B4	Chondrus crispus extract	0.25
C1	DEOHAP DRY	20.0
D	Preservatives, parfum and pH regulator	as needed

• PALM FREE FACE CREAM

METHOD:

Mix phase A ingredients and heat until solids fusion

Mix phase B ingredients and heat to a temperature of 75°C +/- 1° C mixing Mix phase A and B, stir and homogenize for 10 minutes. Cool down to 40°C.

Stir and add C, homogenizing after each addition. Finally set the pH within a range of 5.0-8.0

#	INGREDIENTS	[%]
A1	OLIVOIL GLUTAMATE EMULSIFIER G-PF	5.0
A2	Prunus amygdalus dulcis oil	10.0
A3	Tocopheryl acetate	1.0
B1	Aqua	to 100.0
B2	Xanthan gum	0.5
С	Preservatives, parfum and pH regulator	as needed



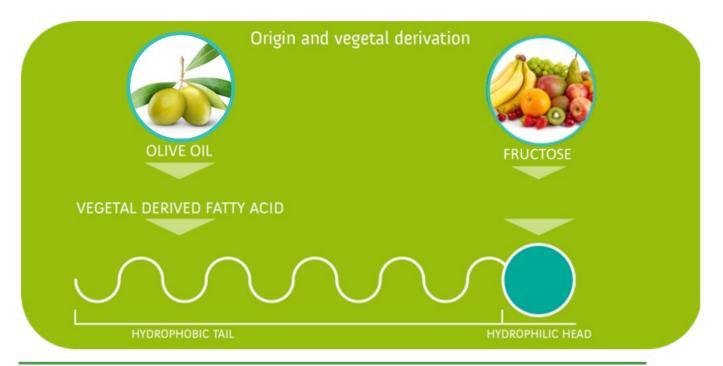
OLIVOIL

AVENATE

OLIVOIL SURFACTANTS

SPECIALTIES IDEAL FOR MILD CLEANSERS

Patented surfactants able to develop sensorially advanced and mild cleansers for body, face, hair and intimate care: unique technology based on the use of olive fatty acids condensed with vegetable derived aminoacids/polypeptides/sugars (oat, fructose, glutamic acid etc.).





- · Based on soothing oat aminoacids, olive oil fatty acids and fructose
- · Ideal for hair care, face and body care applications
- · Hair conditioning, detangling, shining features.
- · Low TEWL and eye irritation (ideal for "tear free" formulations)
- · Foam builder/booster



- · Powder, low water (glycerin vehiculated) and water based versions available
- $\boldsymbol{\cdot}$ Water saving features, ideal base for eco-sustainable and biodegradable washes
- Foam building and boosting features
- · To use as primary surfactant for sulfate free cleansers or secondary surfactant
- · More delicate than physiological water (in vivo tested)

RINSE-OFF FORMULATIONS

SPECIALTIES IDEAL FOR MILD CLEANSERS

POWDER SHAMPOO

METHOD:

Add 2 to 1 by mixing with the spatula until complete absorption. Add ingredients 3-7 in succession the previous phase, mixing thoroughly with the spatula.



#	Inci	[%]
1	Diatomaceous earth	7.0
2	Parfum	2.0
3	OLIVOIL GLUTAMATE SP	65.8
4	Sodium methyl cocoyl taurate, Aqua	22.5
5	Guar hydroxypropyltrimonium chloride	0.2
6	Xanthan gum	0.5
7	Citric acid	2.0

REFILLABLE MOUSSE WASH

METHOD:

Combine ingredients from 1 to 5 in succession while stirring. The solution can be diluted with a 1:5 ratio with tap water to make a cleanser with a SAL of 6-7%.





#	Inci	[%]
1	OLIVOIL GLUTAMATE LW	70.4
2	Polyglyceryl-2 caprate	10.0
3	OLIVOIL GLUTAMATE SP	5.5
4	Phenethyl alcohol, Caprylyl glycol	10.0
5	Parfum	2.5
6	Lactic acid, Aqua	1.6

RINSE-OFF FORMULATIONS

SPECIALTIES IDEAL FOR MILD CLEANSERS

SHOWER SHAMPOO

METHOD:

Add ingredients 1-5 and 7 to 6. Add 8 and 9 and set the pH between 5,5-7.0.



#	Inci	[%]
1	OLIVOIL GLUTAMATE	22.0
2	Lauryl glucoside, aqua	10.0
3	Cocamidopropyl betaine	10.0
4	OLIVOIL FRUTTOSIDE	5.0
5	KERASHAFT V	5.0
6	Aqua	to 100.0
7	Glycerin	5.0
8	Tetrasodium glutamate diacetate, aqua	0.1
9	Preservatives, parfum and pH regulator	as needed

SHOWER GEL

METHOD:

Add ingredients 1-6 and 8-9 to 7. Add 10 and set the pH between 5,5-7.0.



#	INCI	[%]
1	Sodium coco sulfate, aqua (SULFETAL CSE30)	27.0
2	OLIVOIL GLUTAMATE	12.0
3	Cocamidopropyl betaine	9.0
4	Decyl glucoside, aqua	5.0
5	OLIVOIL FRUTTOSIDE	5.0
6	Glyceryl oleate, cocoglucoside (LAMESOFT PO65 2)	2.0
7	Aqua	to 100.0
8	Glycerin	5.0
9	Tetrasodium glutamate diacetate, aqua	0.1
10	Preservatives, parfum and pH regulator	as needed

RINSE-OFF FORMULATIONS

SPECIALTIES IDEAL FOR MILD CLEANSERS

MICELLAR WATER

METHOD:

Add 1 to 2 and separately 3-7; mix the two solutions and stir. Add 8 as needed to set the pH between 6,00 and 7,40.



#	Inci	[%]
1	OLIVOIL GLUTAMATE	4.0
2	OLIVOIL FRUTTOSIDE	1.0
3	Aqua	to 100.0
4	Glycerin	2.0
5	Aloe barbadensis leaf extract	0.1
6	Tetrasodium glutamate diacetate, aqua	0.1
7	Sodium citrate	0.1
8	Preservatives, parfum and pH regulator	as needed

MAKE UP REMOVING MILK

METHOD:

Mix 1-5 and heat until solids fusion. Mix 6 -9 and heat to a temperature of 75°C +/- 1° C mixing. Mix the two phases, stir and homogenize for 10 minutes, cool down to 40°C. Add 10 and homogenize. Add 11 to set the pH within a range of 5.0-8.0





#	Inci	[%]
1	OLIVOIL AVENATE EMULSIFIER	4.0
2	Coco caprylate	6.0
3	Dicaprylyl carbonate	6.0
4	Propanediol	2.0
5	Lecithin, tocopherol, ascorbyl palmitate, citric acid	0.1
6	Aqua	to 100.0
7	Glycerin	1.0
8	Xanthan gum. sclerotium gum	0.4
9	Chondrus crispus extract	0.25
10	OLIVOIL FRUTTOSIDE	2.0
11	Preservatives, parfum and pH regulator	as needed

