



WELCOME TO UL PROSPECTOR WEBINAR

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Sales Manager UK
JRS Personal Care

www.jrspersonalcare.com

J. RETTENMAIER & SÖHNE
GMBH + CO KG  Fibers designed
by Nature

TOPICS

- About JRS
- Thickeners & stabilizers
- Upcycling
- Solids & waterfree



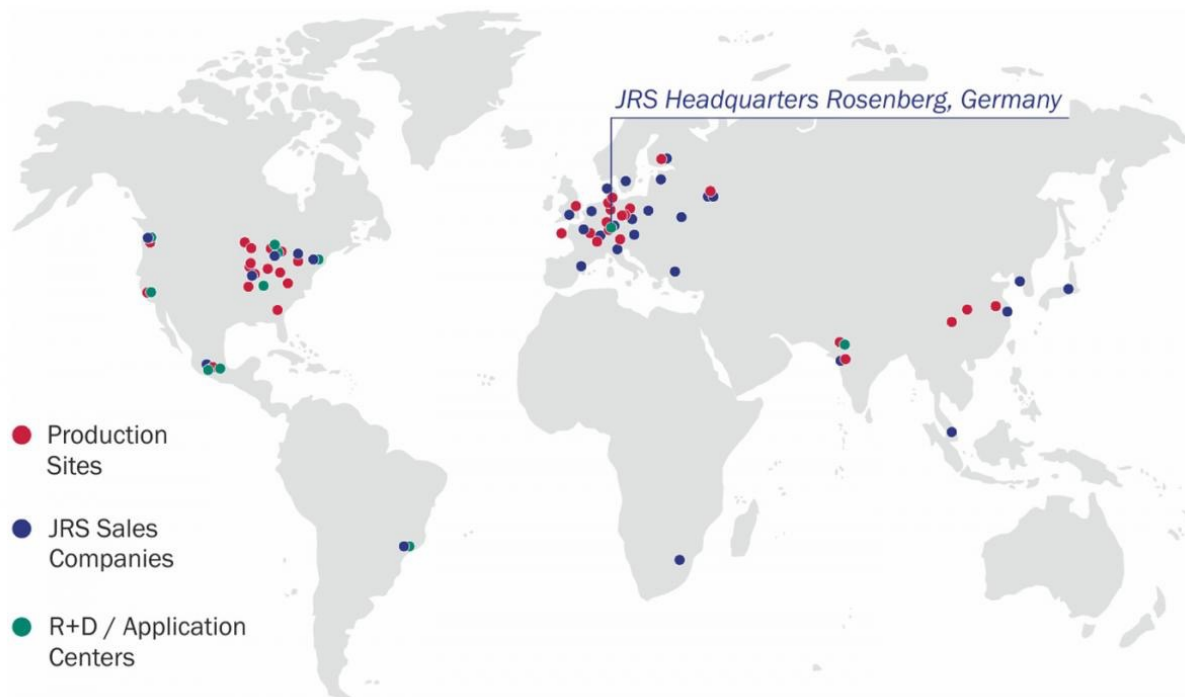
ABOUT JRS

ABOUT JRS



- Member of the family owned J. Rettenmaier Group, with 140+ years of experience
- Headquartered in Rosenberg, Germany
- 3.500 employees worldwide
- Financially secure company with strong balance sheet, no debt and commitment to growth
- Experts in **sustainable, natural and biodegradable** ingredients
- Largest producer of INCI: Cellulose and INCI: Microcrystalline Cellulose worldwide
- Global regulatory, technical and service network support with local operational support
- Regional logistic centers in Europe and United States
- Environmental and socially conscious business practices

JRS GLOBAL PRESENCE



More than 90 production and sales locations worldwide!



Food



Personal Care



Animal Nutrition



Pharma

JRS PRODUCT PORTFOLIO

PLANT



&

OCEAN



Customer Benefits

- 100 % plant based -
Trees and Seaweed

- Biodegradable
- Sustainable



THICKENERS & STABILIZERS

THICKENERS & STABILIZERS

- Thickeners are typically used to modify rheological characteristics
- Sensorial and consumer perception- rich/ luxurious
- Thickening can also enhance stability
- Stabilizing particles/ scrubs in emulsions and wash products

Product Information:

- Natural origin: 100 % polysaccharides
- INCI: Caesalpinia Spinosa Gum, Xanthan Gum
- Biodegradability: readily biodegradable according to OECD 301 B
- Clarity: transparent
- ISO 16128: 100 % natural origin



Technical Information:

- Viscosity (0.5 % in water): 20 000 mPas – 40 000 mPas
- pH stability: pH 5 – pH 11
- Additional suspending properties



Activation in water:

- 1st step:

Dissolver blade

Cold process, > 2 000 rpm, > 15 minutes

- 2nd step:

Propeller

Hot process, > 500 rpm, > 5 minutes,

heating up to 70° C



Benefits:

- Transparent thickener
- Additional suspending properties
- 100 % natural origin
- Readily biodegradable

Product Information:

- Natural origin: 100 % wood
- INCI: Microcrystalline Cellulose, Cellulose Gum
- Biodegradability: readily biodegradable according to OECD 301 B
- Clarity: opaque, white gel
- ISO 16128: 96.2 % natural origin

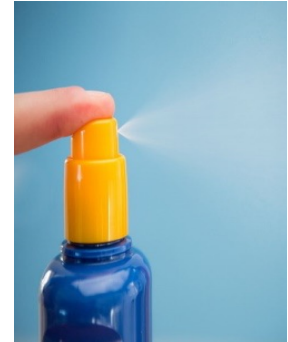


Technical Information:

- Viscosity (2 % in water): 600 mPas – 2 000 mPas
- pH stability: pH 4 – pH 11
- Electrolyte stability: up to 3 % NaCl

Technical Information:

- Excellent sprayability
- Fine droplet distribution
- Prevent dripping down
- Easier distribution on skin
- Suspending agent for TiO_2 and ZnO



VIVAPUR® CS TEX SUN - SPRAYABILITY

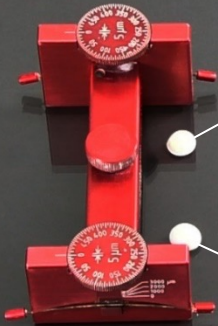


without

with 2%

VIVAPUR® CS TEX Sun

VIVAPUR® CS TEX SUN - SPREADABILITY



Regular available sunscreen
with Xanthan Gum

Sun Protection Spray 50+
1.2 % VIVAPUR® CS TEX SUN
2.0 % VIVAPUR® CS Sensory 5

VIVAPUR® CS TEX SUN - SPREADABILITY



Activation in water:

- Dissolver blade
Cold process, > 6m/s, > 5 minutes
- Rotor / stator
Cold process, > 4 000 rpm, > 2 minutes



SUN PROTECTION SPRAY 50+

Phase	Product Name	INCI	Functions	%	
A	1	Parsol 1789	Butyl Methoxydibenzoylmethane	UV A Filter, Oil Soluble	5.0
	2	Parsol TX	Titanium Dioxide, Silica, Dimethiocone	UV Filter, Inorganic	3.0
	3	Amphiosil K	Potassium Cetyl Phosphate	Emulsifier	2.0
	4	Tego Alkanol1618	Cetearyl Alcohol	Emulsifier	1.2
	5	Parsol 340	Octocrylene	UV Filter, Hydrophobic	14.0
	6	Parsol SLX	Polysilicone-15	UV B Filter, not Water Soluble	2.0
	7	dl-alpha-Tocopheryl Acetate	Tocopheryl Acetate	Antioxidant	0.5
	8	Finsolv TN	C12-15 Alkyl Benzoate	Emollient	3.0
	9	Dub dis	Diisopropyl Sebacate	Emollient	5.0
B	1	VIVAPUR® CS TEX Sun	Microcrystalline Cellulose, Cellulose Gum	Rheology Modifier	1.2
	1	Demineralized Water	Aqua	Solvent	44.3
C	2	Glycerin 86.5 %	Glycerin	Humectant	3.0
	1	Trizma Base	Tromethamine	pH Adjuster	pH>7, QS
D	1	Trizma Base	Tromethamine	pH Adjuster	1.0
	2	Parsol HS	Phenylbenzimidazole Sulfonic Acid	UV B Filter	2.0
	3	Demineralized Water	Aqua	Solvent	10.0
E	1	VIVAPUR® CS Sensory 5	Microcrystalline Cellulose	Sensory Enhancer	2.0
	2	Germaben II	Propylenglykol, Diazolidinyl Urea, Methylparaben, Propylparaben	Preservative	0.8

Formulated by JRS, Germany

Process

- Step 1:** Add A1 - A4 (solids) together in a beaker. Add A5 - A9 (liquids) in another beaker and stir (magnetic stirrer) . Add A1 - A4 into A5 - A9 while stirring and slowly heat to 85 °C.
- Step 2:** Add demineralized water and VIVAPUR® CS TEX Sun in a beaker and homogenize with Ultra Turrax high speed dissolver for at least 2 min at 9 500 rpm. Then Add B2 and homogenize again with Ultra Turrax for 30 s. Heat the mixture to 80 °C while stirring (magnetic stirrer).
- Step 3:** Add B to A and homogenize with Ultra Turrax for at least 30 s.
- Step 4:** Let the emulsion cool down to 55 °C under gentle stirring. Check pH and adjust with Tromethamin phase C to >7 if necessary.
- Step 5:** Mix D separately and check pH of the solution (> 7). Add D to the emulsion under stirring.
- Step 6:** Add E1 and E2 under stirring.
- Step 7:** Homogenize all with Ultra Turrax for at least 30 s. Let cool down to ambient temperature.

Benefits:

- Suspending agent for TiO₂ and ZnO
- Sprayable
- Easier distribution on skin
- White gel

Product Information:

- Natural origin: 100 % wood, polysaccharides
- INCI: Microcrystalline Cellulose, Xanthan Gum
- Biodegradability: readily biodegradable according to OECD 301 B
- Clarity: opaque, white gel
- ISO 16128: 100 % natural origin



Technical Information:

- Viscosity (2 % in water): 1 000 mPas – 3 000 mPas
- pH stability: pH 4 – pH 11
- Electrolyte stability: up to 3 % NaCl
- Thixotropical behaviour: Easy distribution on skin
- Suspending agent



Activation in water:

- Dissolver blade
Cold process, > 10m/s, > 5 minutes
- Rotor / stator
Cold process, > 10 000 rpm, > 3 minutes



SHAMPOO CREAM – SULFATE FREE

Phase	Product Name	INCI	Functions	%
A	Demineralized Water	Aqua	Solvent	53.35
	Microcare® NB (Thor)	Sodium Benzoate	Preservative	0.5
	Sodium Gluconate Granular	Sodium Gluconate	Chelating Agent	0.2
B	VIVAPUR® CS 032 XV	Microcrystalline Cellulose, Xanthan Gum	Stabilizer, Thickener	3.0
C	Plantacare® 818 UP	Coco-Glucoside, Aqua	Nonionic Surfactant	25.0
	Dehyton® K COS	Cocamidoproyl Betaine, Aqua	Amphoteric Surfactant	7.0
	Lamesoft® PO 65/MB	Coco-Glucoside, Glycerol Oleate, Aqua, Tocopherol, Hydrogenated Palm Glycerides Citrate, Citric Acid	Emollient	2.5
	Plantasil®	Aqua, Dicaprylyl Ether, Decyl Glucoside, Glycerol Oleate, Benzoic Acid, Citric Acid	Conditioner	6.0
D	Gluidin® KERA-P LM	Hydrolyzed Vegetable Protein, Aqua, Sodium Benzoate	Protection, Repair, Softness	1.0
	Perfume Cosmos Clean Fresh (Robertet)	Parfum	Perfume	0.5
	Citric Acid Solution 50 %	Aqua, Citric Acid	pH Adjuster	0.95

Formulated by AMI CHIMIE, France

Process

Phase A dissolve preservative and chelating agent in water.

Add VIVAPUR® CS 032 XV under low agitation, into A and maintain this stirring for one minute then leave under strong agitation with dissolver plate (2 000 rpm) for 15 min.

Add the Ingredients of phase C one by one, homogenizing between each addition.

Add phase D and adjust pH to 5.

Characteristics of this formulation

pH : <5.5

Viscosity (Brookfield, RVT, spindle 4, speed 10) : 5000 – 6000 mPa.s

DETOX GOLDEN PEARLY CONDITIONER

Phase	Product Name	INCI	Functions	%
A	Demineralized Water	Aqua	Solvent	82.75
	Purisoft™ PW PSE LS 9836	Moringa Pterygosperma Seed Extract & Maltodextrin	Detoxifying Active	0.02
	Glycerin 99.5 % AMI	Glycerin	Moisturizer	2.0
B	VIVAPUR® CS 032 XV	Microcrystalline Cellulose, Xanthan Gum	Stabilizer, Thickener	0.7
C	Plantaquat® NC	Cetearyl Alcohol & Lecithin & Sodium Cetearyl Sulfate & Olus Oil	Repairing and conditioning agent	7.0
D	Myritol® 318	Caprylic/Capric Triglyceride	Emollient	2.0
E	Demineralized Water	Aqua		2.0
	Microcare® NB (THOR)	Sodium Benzoate	Preservative	0.5
F	Parfum Hair Vital Sp042370(BELL)	Parfum	Perfume	0.7
G	Demineralized water	Aqua	Solvent	2.0
	Cloisonné® Super Bronze 250Z	Mica & Iron Oxides	Pigment with effect	0.03
	Timica® Radiant Gold 222G	Mica & Titanium Dioxide & Iron Oxides	Pigment with effect	0.3
H	Citric acid	Citric Acid	Adjust pH	Qsp

Formulated by AMI CHIMIE, France

Process

Mix phase A and warm it to 50 °C. Disperse phase B under high shear for 5 minutes and continue until well-blended. Incorporate Plantaquat® NC under slow agitation and warm to 70 °C. Continue agitation during 15 min at 70 °C. At this temperature, increase the agitation speed (vortex). Cool the temperature slowly to 55 °C under agitation and add phase D. Blend the emulsion with Ultra-Turrax (4 000 u/min for 3 min) until a light colored, smooth and homogeneous cream is obtained. Cool under moderate agitation. Around 30 °C – 35 °C add phase E and then the perfume. Prepare the mixture G and blend it before adding phase H at pH = 4 – 4.5 with citric acid.

SHOWER GEL – SULFATE FREE

Phase	Product Name	INCI	Functions	%
A	Demineralized Water	Aqua	Solvent	QS
	VIVAPUR® CS 032 XV	Microcrystalline Cellulose, Xanthan Gum	Rheology Modifier	3.0
B	Plantacare® 818 UP/MB (available on request)	Coco-Glucoside	Non- ionic surfactant	32.7
	Lamesoft® PO 65/MB	Coco-Glucoside, Glycerol Oleate	Moisturizer	3.0
C	Microcare® NB (Thor)	Sodium Benzoate	Preservative	0.5
D	Citric Acid Solution à 50 %	Citric Acid	Adjust pH	QS

Formulated by AMI CHIMIE, France

Process

Add VIVAPUR® CS 032 XV into water mild agitation, maintain the agitation one minute and then let it disperse under high shear forces for 5 minutes. Add Ingredients of phase B separately and mix all the time. Add the preservative phase C and adjust pH at 4.8 – 5 with phase D.

Benefits:

- Suspending agent
- High thixotropic
- 100 % natural origin
- Readily biodegradable

LATEST NEWS FROM OUR PORTFOLIO



The jury said **VIVAPUR® CS TEX Easy** is „an interesting sustainable, natural and readily biodegradable alternative to liquid plastics used as thickeners and stabilizers“



UPCYCLING

UPCYCLING

- On trend aspect of Sustainability “Macro- Trend”
- Use of waste products from other industries
- Clearly defined process
- Functionality is key
- “Greenwashing” is being called out!

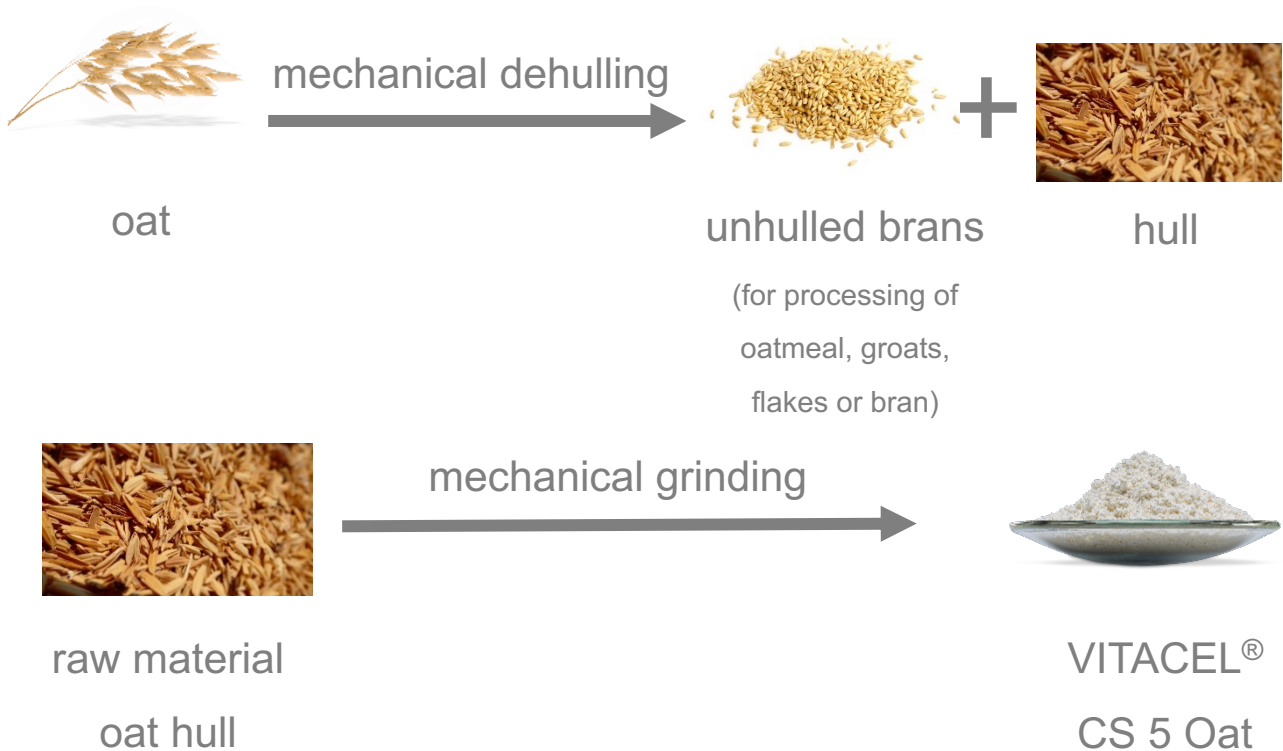


UPCYCLING



VITACEL® CS 5 Oat

SIMPLIFIED PROCESS FLOW VITACEL® CS 5 OAT



Product Information:

- Natural origin: 100 % oat hull
- INCI: Avena Sativa (Oat) Hull Fiber
- Biodegradability: readily biodegradable according to OECD 301 B
- Appearance: beige fine powder
- ISO 16128: 100 % natural
- Particle Size: ~ 5 µm
- Bulk density: ~ 140 g/l
- Suitable for pickering emulsions

FLAWLESS PRESSED POWDER

Phase	Product Name	INCI	Functions	%
A	VIVAPUR® CS Sensory 12	Microcrystalline Cellulose	Sensory Enhancer	14.0
	VITACEL® CS 5 Oat	Avena Sativa (Oat) Hull Fiber	Natural Color	50.0
	DP Opal	Mica, CI77891, CI77491, CI77492, CI77499	Shimmer	30.0
B	Zetamol 2IS	Isostearyl Isostearate	Emollient	5.0
C	Euxyl PE 9010	Phenoxyethanol, Ethylhexylglycerin	Liquid preservative	1.0

Formulated by Laboratorio Cosmopolita, Italy

Process

Mix the powders of Phase A in the planetary, add phase B + C and mix for 20 seconds.

MATTIFYING LOOSE POWDER

Phase	Product Name	INCI	Functions	%
A	VIVAPUR® CS 9 FM	Microcrystalline Cellulose	Mattifying absorber	20.0
	VIVAPUR® CS Sensory 15 S	Microcrystalline Cellulose, Cellulose Gum	Smoothing Agent	43.7
	Sericite GMS-4C	CI 77019	Pigment	15.0
	Tapioca Natural	Tapioca Starch	Starch	15.0
	VITACEL® CS 5 Oat	Avena Sativa (Oat) Hull Fiber	Silky Soft Touch	5.0
B	Caribpure Grapefruit Oil	Citrus Grandis (Grapefruit) Peel Oil	Aroma	0.3
C	Euxyl PE 9010	Phenoxyethanol, Ethylhexylglycerin	Preservative	1.0

Formulated by Laboratorio Cosmopolita, Italy

Process

Mix the Ingredients of phase A in the planetary mixer. Add B + C and mix.

HAIR DUST

Phase	Product Name	INCI	Functions	%
A1	VIVASTAR® CS 022 Alginate	Algin	Thickener	12.70
A1	VITACEL® CS 20 FC	Cellulose	Filler	62.27
A2	Calcium Chloride, 2H2O	Calcium Chloride, 2H2O	Salt	1.37
A3	VITACEL® CS 5 Oat	Avena Sativa (Oat) Hull Fiber	Filler	6.23
B1	Hydrolite 5	Pentylene Glycol	Multifunctional	1.62
B2	Glycerin	Glycerin	Humectant	1.25
C	Nat Deodorized Oat Oil	Avena Sativa (Oat) Kernel Oil	Moisturizer, Nourishing	0.25
D1	Colorona® Blackstar Gold	CI 77499, MICA	Pearl Luster Pigment	6.35
D2	Colorona® Bronze Fine	CI 77499, MICA	Pearl Luster Pigment	4.48
D3	Colorona® Mica Black	CI 77499, CI 77891, MICA	Pearl Luster Pigment	3.48

Formulated by Formule & Sens

Process

Weight the two powders from phase A1 and homogenize in a mixer.
Add the ingredients of the following phases one by one.
At each incorporation, mix in a mixer at room temperature.

UPCYCLING



VITACEL® CS 5 Apple

SIMPLIFIED PROCESS FLOW VITACEL® CS 5 APPLE



apples

mechanical pressing



apple juice



pressed
apple pomace



raw material

pressed apple pomace

drying, mechanical grinding



VITACEL®

CS 5 Apple

VITACEL® CS 5 APPLE

Product Information:

- Natural origin: 100 % apple pomace
- INCI: Pyrus Malus Fiber
- Biodegradability: readily biodegradable according to OECD 301 B
- Appearance: brown fine powder
- ISO 16128: 100 % natural
- Particle Size: ~ 5 µm
- Bulk density: ~ 180 g/l
- Suitable for pickering emulsions

EYE CONTOUR REFRESH APPLE

Phase	Product Name	INCI	Functions	%
A	Demineralized Water	Aqua	Solvent	81.2
	Glycerin (AMI)	Glycerin	pH Adjuster	3.0
B	Rheocare™ C Plus	Carbomer	Humectant	0.2
C	Cosmedia® SP	Sodium Polyacrylate	Thickener	0.5
	Eumulgin® Prisma	Disodium Cetearyl Sulfosuccinate	Thickener	0.5
	Cetiol® Sensoft	Propylheptyl Caprylate	Emulsifier O/W	7.0
	Cetiol® RLF	Caprylyl Caprylate/Caprates	Emollient	5.0
D	NaOH (a.s. 20 %)	Sodium Hydroxyde	Emollient	0.6
E	VITACEL® CS 5 Apple	Pyrus Malus Fiber	Smoothing Powder	2.0
	Preservative	Preservative	Preservative	0.5

Formulated by AMI CHIMIE, France

Process

Mix phase A with stirring until homogenization (600 rpm).

Heat phases A and C at 80 °C.

Disperse phase B in phase A with stirring (20 - 30 min - 1200 rpm).

Make the emulsion, add phase C in A + B with high stirring.

Cool the emulsion.

At 35 °C, add phase D, then the Ingredients of phase E one by one.

UPCYCLING



VITACEL® CS 7 Orange

SIMPLIFIED PROCESS FLOW VITACEL® CS 7 ORANGE



oranges

mechanical pressing



orange juice



orange pomace



drying, mechanical grinding



raw material
orange pomace

VITACEL®
CS 7 Orange

VITACEL® CS 7 ORANGE

Product Information:

- Natural origin: 100 % orange pomace
- INCI: Citrus Aurantium Dulcis (Orange) Peel Powder
- Biodegradability: readily biodegradable according to OECD 301 B
- Appearance: beige fine powder
- ISO 16128: 100 % natural
- Particle Size: ~ 7 µm
- Bulk density: ~ 200 g/l

EASY GENIUS GLOW CREAM

Phase	Product Name	INCI	Functions	%
A	Demineralized Water	Aqua	Solvent	65.7
	Erylite®	Erythritol	Moisturizer	3.0
	Sodium Gluconate Granular	Sodium Gluconate	Chelating agent	0.2
	Eumulgin® Prisma	Disodium Cetearyl Sulfosuccinate	O/W Emulsifier	0.2
	Xanthan Gum XG FNCSP PC	Xanthan Gum	Thickener stabilizer	0.2
B	Cosmedia® ACE	Sodium Polyacrylate & Dicaprylyl Carbonate & Polyglyceryl-3 Caprate	Emulsifier polymer	2.2
C	Uvinul® Easy	Dibutyl Adipate & Diethylamino Hydroxybenzoyl Hexyl Benzoate & Ethylhexyl Methoxycinnamate & Laureth-7 Citrate & Polyglyceryl-2 Dipolyhydroxystearate & Ethylhexyl Triazone & Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine & Lauryl Glucoside & Triethanolamine	Filters UVA- UVB	15.0
	Cosmedia® Gel CC	Dicaprylyl Carbonate & Stearalkonium Hectorite & Propylene Carbonate	Rheologicalagent	3.0
	Cetiol® Ultimate	Undecane & Tridecane	Emollient	3.0
D	Vitamin E Acetate Care	Tocopheryl Acetate	Antioxidant	0.5
	VITACEI® CS 7 Orange	Citrus Aurantium Dulcis (Orange) Peel Powder	Silky soft touch	2.0
	Timica® Terra Brown Mn4509	Mica & Titanium Dioxide & Iron Oxides	Effect Pigment	1.0
	Timica® Radiant Gold 222G	Mica & Titanium Dioxide & Iron Oxides	Effect Pigment	0.8
	Flamenco® Summit Gold Y30D	Mica & Titanium Dioxide	Effect Pigment	0.5
E	Perlaura™ A00316	Aqua & Polygonum Bistorta Root Extract & Hexylene Glycol & Caprylyl Glycol & Xanthan Gum	Active	1.0
	Euxyl K 712 (Schülke)	Sodium Benzoate & Potassium Sorbate & Aqua	Preservative	1.0
	Sunny Beach Perfume (Bell)	Parfum	Perfume	0.7

Formulated by AMI CHIMIE, France

Process

Add ingredients of phase A into water under stirring.

Disperse phase B in A and let it swell under stirring for 20 minutes.

Once well blended, realize the emulsion by dispersing phase C into the A + B mixture under stirring.

Add the ingredients of phase D and E one by one under agitation.

Characteristics

pH: 5.3 - 5.6

Viscosity (Brookfield, RVT, spindle 6, speed 20): 11 000 - 15 000 mPas

VITACEL® CS 5 OAT, 5 APPLE & 7 ORANGE

Benefits:

- Wrinkle filler
- Sensory improver
- Optical blurring, mattifying, soft focus
- Filler
- Excellent marketing tool
- 100 % natural
- Readily biodegradable

UPCYCLING – MORE TO COME

Coming soon:

- VITACEL CS 35 Sugar Cane – Origin: 100 % Sugar Cane
- VITACEL CS 80 Rice – Origin: 100 % Rice Fiber

Benefits:

- Excellent marketing tool
- 100 % natural
- Bulking (Sugar Cane)
- Soft scrub (Rice)



SOLIDS & WATERFREE

SOLIDS & WATERFREE – MARKET DEMAND

- New, innovative products/ packaging
- Reduction of packaging / plastic waste/ environmental concerns
- New options for single use products
- Possibility to reduce preservatives
- Instant products: Spa-like products
- Convenience: Travelling
- Economical: Not paying for water

SOLIDS & WATERFREE

- Tablets
- Sticks
- Pellets
- Flakes
- Granules
- Bars
- Free flowing powders

PRODUCT PORTFOLIO

- Instant gel
- Dry binders
- Disintegrants
- Lubricants
- Fillers
- Carriers
- Peeling & visual effects

INSTANT GEL & DISINTEGRANT

VIVASTAR® CS INSTANT Powder

- INCI: Sodium Carboxymethyl Starch
- ISO 16128: 90.6 % natural origin
- Transparent instant gel

BAKING SODA POWDER INSTANT CLEANSER

Phase	Product Name	INCI	Functions	%
A	Sodium Bicarbonate Powder	Sodium Bicarbonate	Abrasive, effervescent agent	62.3
	BergaSoft SCI 80 Powder	Sodium Cocoyl Isethionate	Cleansing	12.0
	Citric Acid, anhydrous	Citric Acid	Effervescent agent	11.5
	VIVASTAR® CS Instant Powder	Sodium Carboxymethyl Starch	Water binding, instant effect, creamy touch, thickener	5.7
	VIVAPUR® CS 130 FM	Microcrystalline Cellulose	Anti-caking, humidity absorption, flowability	5.5
	Trisodium Citrate, anhydrous	Sodium Citrate	Buffering	2.0
	D-Panthenol USP	Panthenol	Skin conditioning	0.5
	Hydra 233971	Parfum	Perfume	0.3
	Sipernat 22S	Silica	Anti-caking	0.1
Frescolat Plus	Menthol, Menthyl Lactate	Refreshing	0.1	

Formulated by JRS

Process

Mix Sodium Bicarbonate and VIVAPUR® in a suitable mixer.

Then add step by step slowly under mixing Panthenol, Parfum, Frescolat and mix thoroughly until homogenous (at least 10 min).

Then add BergaSoft, Citric Acid, VIVASTAR®, Sodium Citrate, Silica and mix for 5 min.

DRY BINDERS

Tablet binders are one of the most essential elements in the formulation of a **tablet**. Because they promote cohesiveness, the **binders**, also called adhesives, help the other ingredients in a **tablet** to mix together. **Tablet binders** are used to turn powder to granules; this is achieved through the process of granulation.

DRY BINDERS

VIVAPUR® CS 70 FM

- INCI: Microcrystalline Cellulose
- Particle size: 70 µm
- ISO 16128: 100 % natural origin

VIVAPUR® CS 130 FM

- INCI: Microcrystalline Cellulose
- Particle size: 130 µm
- ISO 16128: 100 % natural origin

DRY BINDERS

VIVASTAR® CS 200 Glucose

- INCI: Glucose
- ISO 16128: 100 % natural origin
- Water soluble

LUBRICANTS

Lubricants are used to prevent clumping within and adhesion to the machinery during the production of solid pharmaceutical dosage forms.

VIVASTAR® CS 15 SSF

- INCI: Sodium Stearyl Fumarate
- Particle size: 20 µm
- ISO 16128: 81.8 % natural origin

FILLERS

Fillers: These sorts of excipients could likewise be alluded to as bulking ingredients. The reason for **fillers** is to include substance with the goal that the extent of a **tablet** or container is filled out as active agents i.e. actual drug are used in very small quantity.

FILLERS

VIVAPUR® CS 9 FM

- INCI: Microcrystalline Cellulose
- Particle size: 9 µm
- ISO 16128: 100 % natural origin

VITACEL® CS 40 Bamboo

- INCI: Cellulose
- Particle size: 40 µm
- ISO 16128: 100 % natural origin

CARRIERS

A carrier is used to transport/ carry active ingredients in a stable form in a tablet. The carrier must also allow for the release of the „API“ at the appropriate time.

VIVAPUR® CS 150 C5

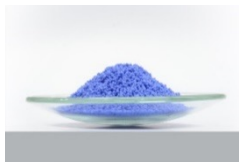
- INCI: Microcrystalline Cellulose, Cellulose
- Particle size: 150 µm spherical
- ISO 16128: 100 % natural origin

PEELING & VISUAL EFFECTS

VIVAPUR® CS 310 R

- INCI: Microcrystalline Cellulose
- Particle size: 310 µm angular
- ISO 16128: 100 % natural origin

Broad range of **Scrubs & Abrasives** available in various abrasiveness and colors (no bleeding of colored scrubs)



SOLIDS & WATERFREE

Benefits:

- JRS is your excellent partner with experiences in solid solutions
- Wide product range of excipients
- Own application lab
- Assistance in formulation work





CONCLUSION

CONCLUSION

- Thickeners & stabilizers
- Upcycling
- Solids & waterfree
- JRS as your partner

GET IN TOUCH WITH NATURE.
GET IN TOUCH WITH US.

Ask for your free sample!

personalcare@jrs.de

FOLLOW US ON
LinkedIn



J. RETTENMAIER & SÖHNE
GMBH + CO KG



Fibers designed
by Nature

Sales Team
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THANK YOU VERY MUCH FOR YOUR ATTENTION