ardanatura
THE HEART OF NATURE

ArdaQuat

THE HEART OF NATURE

We help people to take care of themselves through richness of nature.

We produce plant extracts and active ingredients to promote a lifestyle of wellness and equilibrium.

Our best is connected to the earth, through science and thus enriching people.

This is how we are the heart of nature.

ardanatura

THE HEART OF NATURE

About us

We are Arda Natura, specialist in developing and producing plant extracts, active ingredients and distilled plant waters for cosmetics and nutraceuticals applications.
Our name reflects the strong connection we have with our local area, the Val d'Arda and the homonymous river that runs through it, together with the natural origin of our products.
Since 1990, the year our company was founded, our actions have been driven by the same goal: extracting the wealth that nature offers while respecting the environment, people and their specific needs.

Values

Reliability
We are honest and determinated, we do not make promises that we cannot keep. Quality and safety of our products are our best guarantee.

Passion
We are passionate about what we do, and we would like to help people to discover the extraordinary properties of plants.

Sharing
We are always improving and constantly confronting ourselves with people: with customers to meet their needs and with the Society of research to develop new products.

Ethics
We communicate transparently to generate awareness in regard to the composition, origin and benefits of our ingredients.

Environmental awareness
We assume the responsibility for our environment. This commitment for us is not a waiver but means quality and well-being.

Made in Italy
We produce our ingredients in Italy, enhancing locally sourced raw materials and maintaining a connection with the artisan tradition. This is what distinguishes us.

Services

Customized products
Supporting documents
Chemical, physical and microbiological analysis
Formulations

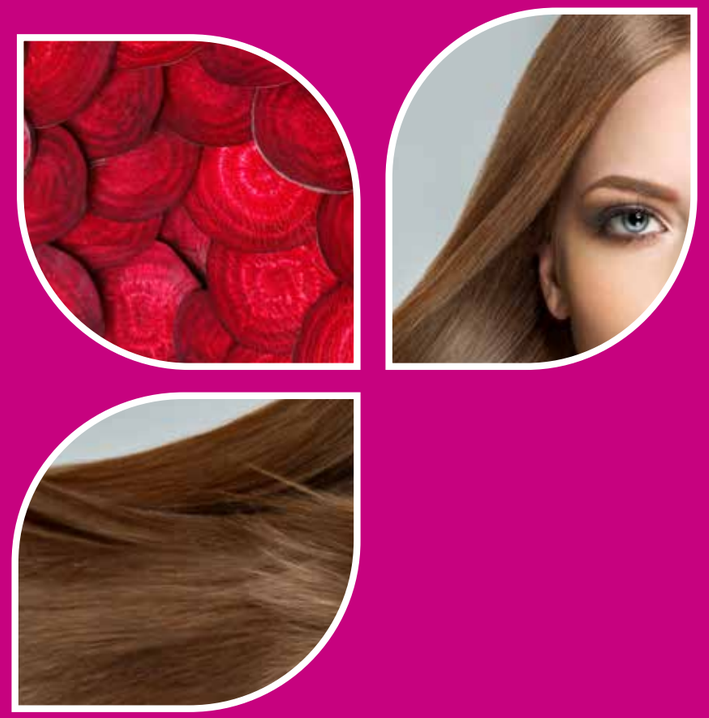
ArdaQuat

Composition
The ArdaQuat line combines the action of hydrolysed proteins, pure amino acids and quaternary agents of natural origin. All our products do not contain added preservatives but contain instead Betaine (Trimethylglycine), a natural amino acid obtained from Beet. Particular attention was given in choosing the starting proteins of natural origin and with a well-defined amino acid composition.

In fact, it is the protein base that characterizes the products of the ArdaQuat line: Collagen, Keratin, Keratin Veg, Milk, Soy and Wheat.

Benefits for end customers
The composition of ArdaQuat products has more objective and subjective benefits on skin and hair keratin than simple protein derivatives. In particular their conditioning, substantive, moisturising and protective properties are enhanced with no build- up effect on hair.

Benefits for formulators
ArdaQuat products are perfectly water soluble, stable over a wide pH range and at high salt concentrations, compatible with anionic, non-ionic and amphoteric surfactants and emulsifiers.



Proteins, Peptides and Amino Acids

Proteins are essential molecules for our body as they contribute to tissue formation. In order to understand how important they are for life itself, just think that they make up the 90% of the dry blood weight, the 70% of skin, the 80% of muscles and the 15% of the entire body mass weight.

Chemically proteins are macromolecules made up of a long chain of amino acids linked to each other by peptide bonds. This bond is so called as it combines together peptides, i.e. a combination of short chain amino acids. The difference between proteins and peptides is usually linked to the size of the amino acid chain and to its molecular weight: chains consisting of at least 50 residual amino acids and with a molecular weight higher that 10,000 Dalton are generally referred to as proteins.

Cosmetic activity

The use of proteins and their derivatives in cosmetics is wide ranging, multifaceted and long established. How could we not mention Cleopatra and her donkey milk bath, and the fishermen of the Japanese island of Hokkaido with their mask made of soy flour.

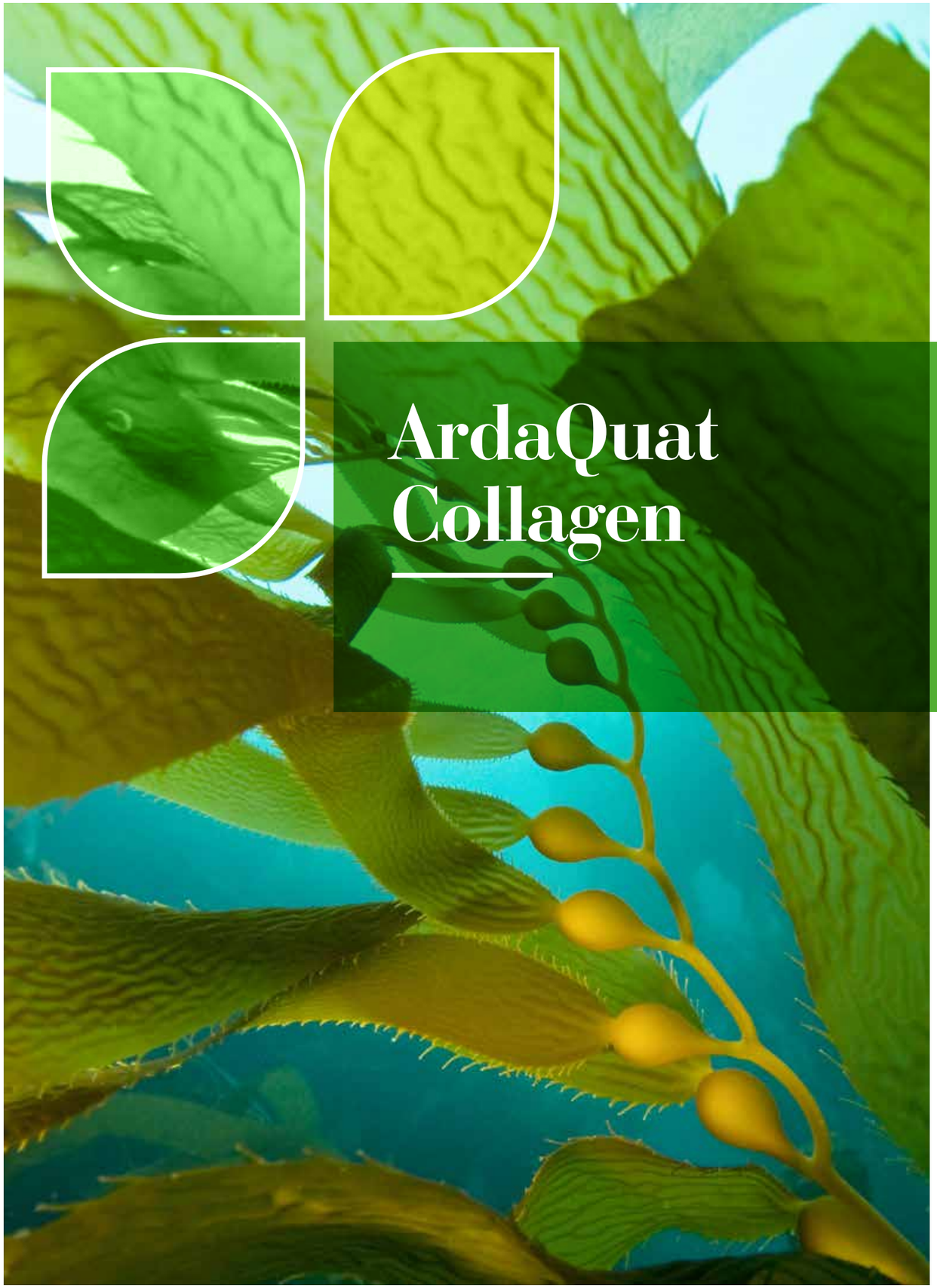
Initially, two factors have determined the success of proteins in cosmetics: first of all, the fact that they are source of well-being and nourishment, and then their ability to mitigate the aggressiveness of surfactants by reducing the formation of covalent bonds with skin proteins, thus improving the rinsability. Only later proteins were successfully added to creams and in leave-on products for their moisturing, film-forming smoothing and substantive properties.

Numerous studies conducted to determine the cosmetic action of proteins and their derivatives have shown that their basic characteristic is their substantivity, meaning that their ability to bind themselves through non-covalent bonds with keratinous structures existing on the outer surface of the skin and hair, thereby reinforcing them.

Molecular size and weight tend to influence protein substantivity. In particular, the smallest molecules are likely to penetrate the hair fibres, acting not only as conditioners but also as emollients, but also as skin revitalizers and protective agents against external factors and aggressive substances.

HAIR	SKIN
Protective	Protective
Elasticizing	Moisturing
Film-forming	Film-forming
Substantivity	Regenerating
Reinforcing	Improve skin-feel

Table 1
Action of proteins in cosmetics.



ArdaQuat Collagen

Collagen is a protein that plays a key role in the connective tissue as it helps keeping the skin moisturized and compact. Its composition is a sequence of 19 amino acids – including proline and hydroxyproline – with a molecular weight of 300.000 Dalton.
The collagen is present in the dermis, where together with elastic fibres and glycosaminoglycans forms the three-dimensional structure that holds and supports the skin in giving strength and elasticity benefits. As a result of ageing, collagen synthesis tends to decrease, thus significantly affecting skin tone and firmness. Based on marine-derived collagen, ArdaQuat Collagen has strong conditioning and substantive properties for the skin and hair. Collagen leaves the skin more hydrated and firm while reducing the appearance of age-related imperfections.

Benefits for formulators

ArdaQuat Collagen is perfectly soluble in water and it’s compatible with most raw materials used in cosmetics. It can be used effectively in conditioners, shampoos, shower gels and leave-on skin products. The percentage of use of the product varies from 1 to 5%.

Characteristics

Appearance:	pale yellow liquid
Odour:	characteristic
TVC:	<= 100 ufc/g
Yeasts and moulds:	<= 10 ufc/g

INCI Name

Aqua, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Hydrolyzed Collagen, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Phenylpropanol, Citric Acid.

ArdaQuat Keratin

Keratin is a fibrous protein made up of long chains of amino acids, interspersed with vitamins and trace elements. It is the main element of body hair, hair and nails and has a high content of cysteine, a sulphur-amino acid. Due to numerous sulphur atoms and the bonds that they form, so called Disulphide bridges, the keratin chains are bound together in a helix-like structure. It is this special structure that ensures rigidity and resistance to nails and hair. Multiple factors, both internal and external to our organism such as stress, certain pathologies, exposure to atmospheric pollutants, physical treatments, use of harsh chemicals tend to gradually degrade the structure of keratin over time.

ArdaQuat Keratin helps strengthening the damaged hair fibre. Due to its cationic nature, it has strong conditioning and substantive properties for hair. It also improves distrigability of hair adding volume and brilliance even at low concentrations.

Benefits for formulators

ArdaQuat Keratin is perfectly soluble in water and is compatible with surfactants commonly used in cosmetic preparations. It can be used effectively in conditioners, shampoos and leave-on hair products. The percentage of use of the product varies from 1 to 5%..

Characteristics

Appearance:	pale yellow liquid
Odour:	characteristic
TVC:	<= 100 ufc/g
Yeasts and moulds:	<= 10 ufc/g

INCI Name

Aqua, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Hydrolyzed Keratin, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Phenylpropanol, Citric Acid.

ArdaQuat Keratin Veg

Plant keratin or phyto-keratin is the green alternative to animal derived protein created to meet the demands of a cosmetic sector which increasingly emphasis on plant derived cosmetic ingredients. Obtained from a selected combination of hydrolysed hemp and rice proteins, plant keratin has a proteic structure similar to the animal derived keratin and is therefore particularly rich in sulphurous amino acids, which are essential for healthy and strong nails and hair.

ArdaQuat Keratin Veg helps to create a protective restructuring film around the damaged hair fibre. Due to its cationic nature, it also improves distrigability of hair adding volume and brilliance even at low concentrations.

Benefits for formulators

ArdaQuat Keratin Veg is perfectly soluble in water and is compatible with surfactants commonly used in cosmetic preparations. It can be used effectively in conditioners, shampoos and leave-on hair products. The percentage of use of the product varies from 1 to 5%.

Characteristics

Appearance:	pale yellow liquid
Odour:	characteristic
TVC:	<= 100 ufc/g
Yeasts and moulds:	<= 10 ufc/g

INCI Name

Aqua, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Hydrolyzed Rice Protein, Hydrolyzed Hemp Seed Extract, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Phenylpropanol, Citric Acid.

ArdaQuat Milk

Milk is a natural emulsion made up of water, fat and other valuable components, such as sugars, proteins, non-protein nitrogenous substances, mineral salts, vitamins and numerous enzymes. As far as protein content is concerned milk contains different types of proteins mainly caseins: a protein complex belonging to the phosphoprotein family, which contains the essential amino acids lysine and tryptophan as well as glutamic acid. Due to its high proteic content milk has been considered a key ally against dryness, dehydration and skin ageing since ancient times.

ArdaQuat Milk provides moisture and nourishment to skin. It also mitigated the potential aggression of surfactants thus giving a final product more gentle and eudermic. On hair it has a strong substantive, repairing and restructuring action, as well as providing volume and brilliance.

Benefits for formulators

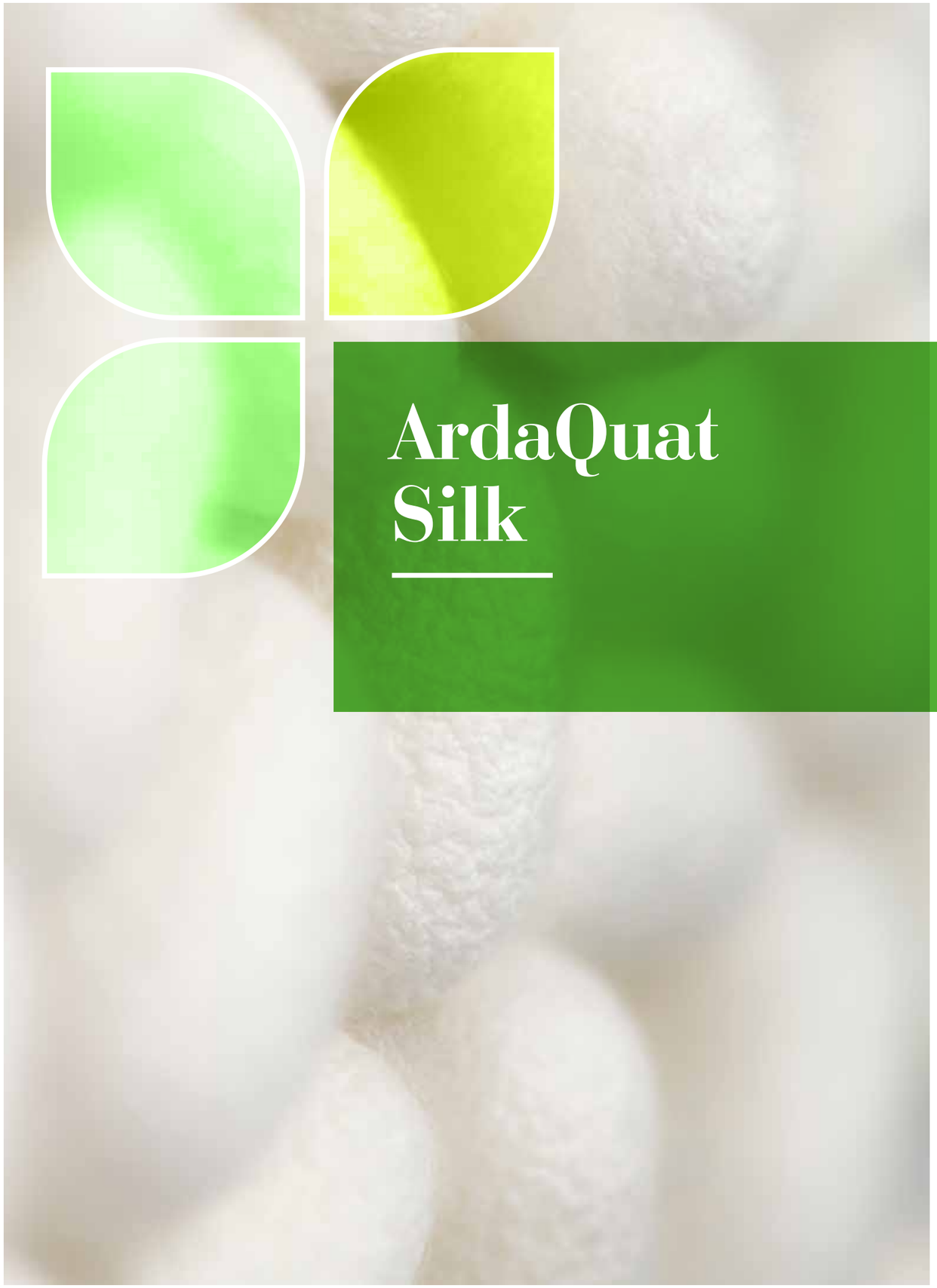
ArdaQuat Milk is perfectly soluble in water and is compatible with surfactants commonly used in cosmetic preparations. It can easily be added into a large variety of skin and hair care formulations including mild detergents, body moisturisers, conditioners and shampoos. The percentage of use of the product varies from 1 to 5%.

Characteristics

Appearance:	pale yellow liquid
Odour:	characteristic
TVC:	<= 100 ufc/g
Yeasts and moulds:	<= 10 ufc/g

INCI Name

Aqua, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Hydroxypropyltrimonium Hydrolyzed Casein, Lactose, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Phenylpropanol, Citric Acid.



ArdaQuat Silk

Silk is a protein fibre produced by numerous species of insects, including the well-known silkworm *(Bombyx-mori).* The main protein components of silk are fibroin and sericin. Fibroin forms the central axis of the silk thread and is mainly composed of amino acids glycine and alanine. It contains very little sulphur and has a sheet structure Beta similar to the keratine Beta structure thus ensuring strength and compactness to the fibre. Sericin is the outer layer of the silk thread thus ensuring a protective and lubricating function. Compared to fibroin, it has an amorphous structure, thus being soluble in hot water and similar to skin and hair keratin. Due to these characteristics, they have an emollient and protective action.

ArdaQuat Silk has excellent moisturising and restructuring properties leaving hair shiny and soft. Silk proteins create a protective film on the surface of the skin and hair offering improved and long-lasting hydration and once fully absorbed the skin and hair fibres are smooth and silky.

Benefits for formulators

ArdaQuat Silk is perfectly soluble in water and compatible with most raw materials used in cosmetics. It can be used into a large variety of formulations for the well-being of skin and hair including face and body moisturisers, conditioners and shampoos. The percentage of use of the product varies from 1 to 5%.

Characteristics

Appearance:	pale yellow liquid
Odour:	characteristic
TVC:	<= 100 ufc/g
Yeasts and moulds:	<= 10 ufc/g

INCI Name

Aqua, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Cocodimonium Hydroxypropyl Silk Amino Acids, Hydrolyzed Silk, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Phenylpropanol, Citric Acid.

ArdaQuat Soy

Soybean is a legume of Asian origin, that includes more than 10.000 different species in seed size and colour. Soybeans have a high protein content (36%), rich in unsaturated fatty acids and they also have other important substances such as vitamins, minerals, isoflavones and phospholipids. Specifically, the main isoflavones, genistein and daidzein have an effective antioxidant action thus promoting skin elasticity. In addition to all these properties we must add the moisturising and protective action of soy protein the reason why it has a widespread use in the cosmetic industry.

ArdaQuat Soy helps recompacting the surface of the damaged hair fibre forming a protective film around the hair thus maintaining and improving hydration. Particularly indicated for stressed and brittle hair, it provides brilliance and distrigability. The film forming action of soy proteins also affects the scalp and the skin, to which they provide protection and an improved elasticity.

Benefits for formulators

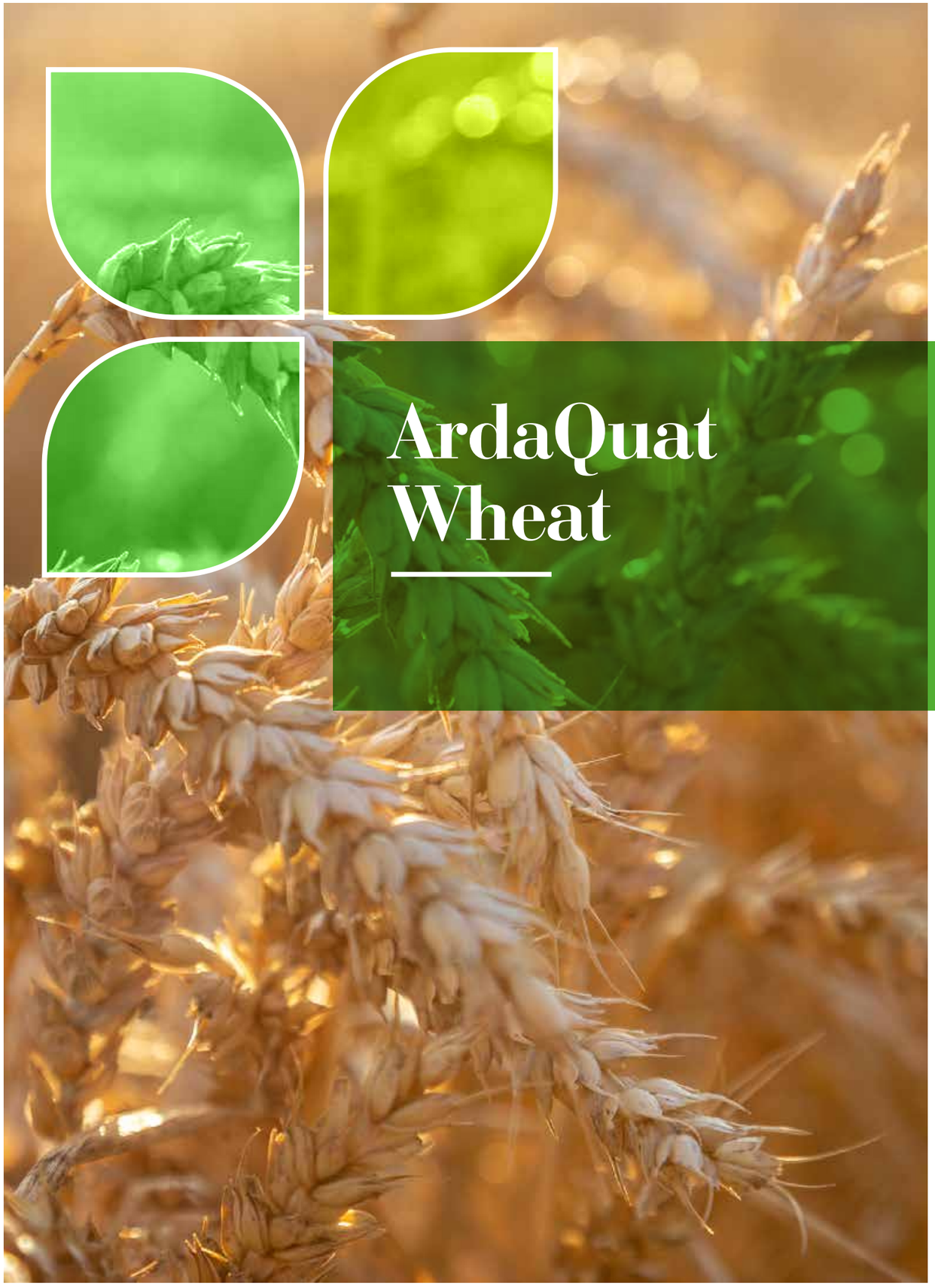
ArdaQuat Soy is soluble in water and is compatible with surfactants commonly used in cosmetic preparations. It can used into a large variety of formulations for the well-being of skin and hair, including mild detergents, body moisturisers conditioners and shampoos. The percentage of use of the product varies from 1 to 5%.

Characteristics

Appearance:	pale yellow liquid
Odour:	characteristic
TVC:	<= 100 ufc/g
Yeasts and moulds:	<= 10 ufc/g

INCI Name

Aqua, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Laurdimonium Hydroxypropyl Hydrolyzed Soy Protein, Hydrolyzed Soy Protein, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Phenylpropanol, Citric Acid.



ArdaQuat Wheat

Wheat proteins are naturally derived from wheat seeds. These are mainly glutenins, gliadins, albumins and globulins, processed to obtain smaller protein fragments that are more soluble than the original proteins. The fact that they contain amino acids similar to those found in our hair and skin (glutamic acid, leucine, proline, arginine and glycine) means that they have excellent affinity and a better penetration within the skin and hair structure.

ArdaQuat Wheat has excellent substantive and restructuring properties for hair. The fact that wheat proteins are able to create a protective film on the surface of the hair fibre ensures a better and long-lasting hydration therefore facilitating hair styling and giving a silky feeling. On the skin, it acts as a moisturiser and conditioner. In detergents, it also mitigates the potential aggressiveness of surfactants thus with a final product mild and eudermic.

Benefits for formulators

ArdaQuat Wheat is soluble in water and is compatible with surfactants commonly used in cosmetic preparations. It can be added into a large variety of formulations for the well-being of skin and hair including mild detergents, body moisturisers, conditioners and shampoos. The percentage of use of the product varies from 1 to 5%

Characteristics

Appearance:	pale yellow liquid
Odour:	characteristic
TVC:	<= 100 ufc/g
Yeasts and moulds:	<= 10 ufc/g

INCI Name

Aqua, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Laurdimonium Hydroxypropyl Hydrolyzed Wheat Protein, Hydrolyzed Wheat Protein, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Phenylpropanol, Citric Acid.

Formulation ideas

Conditioner shampoo sulfated and peg free with ArdaQuat Keratin Veg*

	INGREDIENTS	INCI	%
1	ACE APG-L	Aqua / Water, Lauryl Glucoside	9,000
2	REWOTERIC AM 2 C NM	Disodium Cocoamphodiacetate	11,000
3	ANTIL SPA 80	Aqua / Water, Isostearamide MIPA, Glyceryl Laurate	1,300
4	WATER	Aqua / Water	q.b. a 100
5	TEGOBETAINE F 50	Aqua / Water, Cocamidopropyl Betaine	20,000
6	CITRIC ACID MONOHYDRATE (SOL.30%)	Aqua / Water, Citric Acid	2,500
7	ARDAQUAT KERATIN VEG.	Aqua / Water, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Hydrolysed Rice Protein, Hydrolysed Hemp Seed Extract, Phenylpropanol, Citric Acid	5,000
8	MULTIVITAMIN COMPOUND PE	Aqua / Water, Sodium Ascorbate, Niacinamide, Panthenol, Polysorbate 20, Calcium Pantothenate, Pyridoxine HCl, Thiamine HCl, Tocopheryl Acetate, Biotin	2,000
9	TEGO REMO 95 MB	Sorbitan Caprylate, Glyceryl Oleate	0,340
10	FRAGRANCE AND PRESERVATIVES	Fragrance and preservatives	q.b.

pH 5.5, Brookfield viscosity (Mod. DV-I+) 1794 mPas (20°C impeller 3 - 20 rpm).

PROCESSING:
- In a stainless steel container add ingredients 1,2,3,4, and 5 under slow stirring until a homogenous mass is obtained.
- Add 7 and 8 under stirring.
- Then add 6 always under stirring.
- Add 9 until complete homogeneity.
- Verify viscosity and pH in order to have a value of 5.5.
- Add chosen perfume to the surfactant mix evaluating transparency of the product and wether a suitable solubiliser shoud be added.
- Add preservative at the end of the process, while eventual chelating agent can be pre-dissolved in water 4.

Delicate bathfoam sulfate and peg free with ArdaQuat Soy*

	INGREDIENTS	INCI	%
1	TEGOSOFT LSE 65K SOFT	Aqua / Water, Sucrose Cocoate	3,000
2	ACE APG-L	Aqua / Water, Lauryl Glucoside	15,000
3	REWOTERIC AM 2 C NM	Aqua / Water, Disodiumcocoamphodiacetate	10,000
4	TEGOBETAINE F 50	Aqua / Water, Cocamidopropyl Betaine	20,000
5	CITRIC ACID MONOHYDRATE (SOL. 30%)	Aqua / Water, Citric Acid	2,200
6	WATER	Aqua / Water	q.b. a 100
7	ARDAQUAT SOY	Aqua / Water, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Pentylene Glycol, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Laurdimonium Hydroxypropyl Hydrolysed Soy Protein, Hydrolysed Soy Protein, Phenylpropanol, Citric Acid	5,000
8	PANTHENOL 50% GLYCEROL	Panthenol, Glycerin	2,000
9	TEGO REMO 95 MB	Sorbitan Caprylate, Glyceryl Oleate	0,800
10	FRAGRANCE AND PRESERVATIVES	Fragrance and preservatives	q.b.

pH 5.47, Brookfield viscosity (Mod. DV-I+) 3900 mPas (20°C impeller 3 - 20 rpm).

PROCESSING:
- In a stainless steel container add ingredients 1,2,3,4,6 under slow stirring until a homogenous mass is obtained.
- Add 7 and 8 under stirring.
- Then add 5 to 9 until complete homogeneity.
- Verify viscosity and pH.
- Add chosen perfume to the surfactant mix evaluating transparency of the product and wether a suitable solubiliser should be added. Add preservative at the end of the process, while eventual chelator can be pre-dissolved in water 6.

Restructuring rinse-off balm with ArdaQuat Keratin Veg*

	INGREDIENTS	INCI	%
PHASE A			
1	PURIFIED WATER F.U.	Aqua / Water	q.b. 100
2	VEGETABLE GLYCEROL 99.7% Ph.Eur. E422 COSMOS	Glycerin	2,000
PHASE B			
3	ACEMULGOR LAM "V"	Potassium Palmitoyl Hydrolysed Wheat Protein, Glyceryl Stearate, Cetearyl Alcohol	5,000
4	CETEARYL ALCOHOL TA 1618	Cetearyl Alcohol	2,000
FASE C			
5	ARDAQUAT KERATIN VEG.	Aqua / Water, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Hydrolysed Rice Protein, Hydrolysed Hemp Seed Extract, Phenylpropanol, Citric Acid	5,000
6	MULTIVITAMIN COMPOUND PE	Aqua / Water, Sodium Ascorbate, Niacinamide, Panthenol, Polysorbate 20, Calcium Pantothenate, Pyridoxine HCl, Thiamine HCl, Tocopheryl Acetate, Biotin	2,000
PHASE D			
7	FRAGRANCE, PRESERVATIVES, pH correctors	Fragrance, preservatives, pH correctors	q.b.

pH 5.62, Brookfield viscosity (Mod. DV-I+) 1630 mPas (20 °C impeller 2 - 20 rpm); after 24 hours 2160 mPas (20 °C impeller 3 - 20 rpm).

PROCESSING:
- In a stainless steel melter add ingredients 1 and 2 under slow stirring and heat up to 65°C.
- In reactor add 3 and 4 and heat up to 65°C under stirring until completely melted.
- Add phase B to phase A under fast stirring using a turbo for 5 min.
- Cool down under stirring.
- At 30°C add ingredients 5 and 6 under stirring cooling down at room temperature add perfume and the chosen preservative system. Stirr until complete homogeneity.
- Verify viscosity and pH adding if necessary citric acid (30% solution).

Moisturising and nourishing body cream with ArdaQuat Milk*

	INGREDIENTS	INCI	%
PHASE A			
1	ACEMULGOR LAM "V"	Potassium Palmitoyl, Hydrolysed Wheat Protein, Glyceryl Stearate, Cetearyl Alcohol	3,000
2	CETEARYL ALCOHOL TA 1618	Cetearyl Alcohol	1,000
3	TEGIN M PELLETS MB	Glyceryl Stearate	1,000
4	TEGOSOFT OS	Ethylhexyl Stearate	4,000
5	SPERMACETI (CETYL PALMITATE)	Cetyl palmitate	4,000
6	TEGOSOFT DEC	Diethylhexyl Carbonate	7,000
PHASE B			
7	VEGETABLE GLYCEROL 99.7% Ph.Eur. E422 COSMOS	Glycerin	3,000
8	WATER	Aqua / Water	q.b. 100
9	TRANSPARENT XANTHAN GUM CG	Xanthan Gum	0,500
PHASE C			
10	ARDAQUAT MILK	Aqua / Water, Methylpropanediol, Palmitamidopropyltrimonium Chloride, Propylene Glycol, Betaine, Hydroxypropyl Hydrolysed Casein, Lactose, Hydroxypropyl Guar Hydroxypropyltrimonium Chloride, Caprylyl Glycol, Phenylpropanol, Citric Acid	5,000
11	SODIUM HYALURONATE SOLUTION 1% PE	Aqua / Water, Sodium Hyaluronate	1,000
PHASE D			
12	FRAGRANCE AND PRESERVATIVES	Fragrance and preservatives	q.b.

pH 5.5; Brookfield viscosity (Mod. DV-I+) 7900 mPas (20 °C impeller 4 - 20 rpm).

PROCESSING:
- In a stainless steel melter add ingredients 1,2,3,4,5, and 6.
- Heat up to 75°C under slow stirring until everything is melted.
- In reactor add 7,8,9, heat up to 75°C under stirring taking care that the Xanthan Gum is completely dispersed.
- Mix the 2 Phases under fast stirring using a turbo for 5 min.
- Start to cool down under stirring.
- At 30°C add ingredients 10 and 11 under stirring. Homogenize for 2 min. while cooling.
- At room temperature add perfume and the chosen preservative system stirr until complete homogeneity
- Verify viscosity and pH.

www.ardanatura.it

ardanatura
THE HEART OF NATURE

ARDANATURA Srl
Via Umbria, 2, 29017
Fiorenzuola d'Arda (PC)
Tel. +39 0523 982165
info@ardanatura.it

www.ardanatura.it