AQUARICH® (eco)

Product Spotlight

January 2010

RAHN | Cosmetics

Skin and hair care in line with natural cosmetics

AQUARICH® (eco) is not only a unique skin moisturiser, but the active ingredient also cares for hair. Its active components are an extract fraction of Black Oats (Avena strigosa) and plant-based Lecithin.

Dear reader

Half past nine in the morning in Germany … During a customer visit, we discuss projects and present our active ingredients. After half an hour of questions and answers, comes the often killer question: "Is the active ingredient also in compliance with natural cosmetics?"

But we have always learned fast – so we are able to smile and answer yes.

In 2009, "botanical/herbal" and "moisturising" were amongst the top claims for facial care products worldwide. Almost 2/3 of the new products launched bore these claims.

This is a sufficient reason to adapt a plant-based moisturiser to the requirements of the natural cosmetics market: AQUARICH® (eco).

The natural cosmetics market is regulated very heterogeneously. The different requirements of the many natural cosmetics labels make it hard to decide what to do. In the end we made the definitive decision to go with Ecocert.

AQUARICH® (eco) is certified by Ecocert for use in natural cosmetics.

Happy reading!

Yours sincerely

the RAHN-team

RAHN AG
Dörflistrasse 120 | CH-8050 Zürich | T +41 44 315 42 00 | F +41 44 315 42 45
www.rahn-group.com | Cosmetics@rahn-group.com

Your partner for excellence

Active Ingredients

Black Oats or Bristle Oats are an ancient cultivated plant, which used to be grown in areas where Avena sativa, the common Oat, no longer flourished. AQUARICH® (eco) contains a hydrophilic fraction from Black Oats which has been obtained exclusively by RAHN and has a high level of water-retentive substances. These form a moisture film on the skin and strengthen the skin's own NMF (Natural Moisturising Factor). In hair care applications, the polysaccharides and amino acids from the Black Oats improve the hair's surface structure.

The phospholipid Lecithin is of plant origin. It stabilises the lamellar lipid matrix of the epidermis to reduce the transepidermal water loss (TEWL). In this way the skin is better protected against evaporation. The hair is coated in Lecithin, protruding scales are sealed and the surface of the hair is smoothed.

Effectiveness studies

***in-vivo* skin study**

The effect of AQUARICH® (eco) on skin hydration was tested in an *in-vivo* study: different concentrations of a gel containing AQUARICH® (eco) were applied once to the forearm. Using the Hydrascan® evaluation method, the skin moisture was tested at three different levels of the epidermis over a period of 24 hours.

At concentrations as low as 1% AQUARICH® (eco), skin moisture in the upper layer of the epidermis increases by up to 6% compared to a placebo with 0% AQUARICH® (eco). The effect depends on the dose: the higher the use concentration, the more sustainable is the improvement in skin moisture. The test concentration of 4% AQUARICH® (eco) leads to a constant increase in skin moisture in all layers of the epidermis over a period of 24 hours.

Deeply effective and long-lasting improvement in skin hydration

AQUARICH® (eco) is not only deeply effective, but also has a long-lasting effect in improving skin hydration.

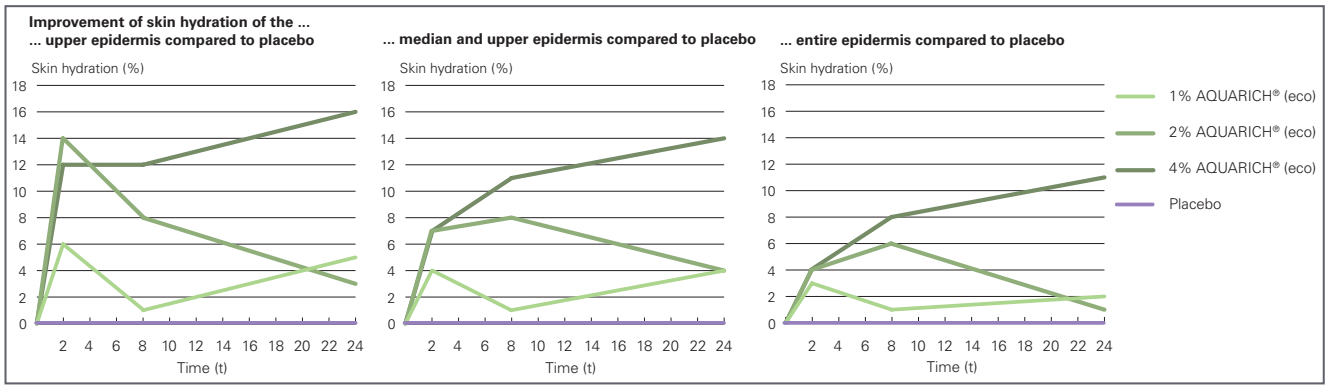
This effect is visible: seven days application of a gel containing AQUARICH® (eco) to very dry, flaky skin leads to a visible improvement in the skin's condition.

Non treated

Placebo

2 % AQUARICH® (eco)

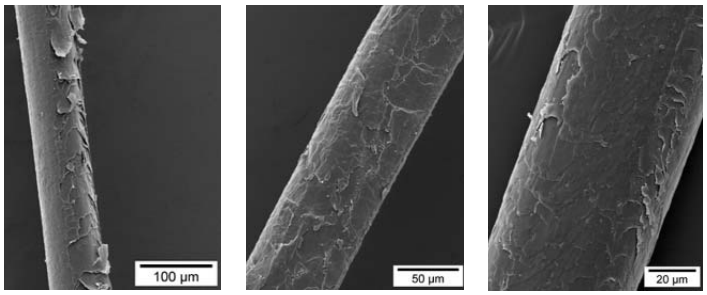
4 % AQUARICH® (eco)



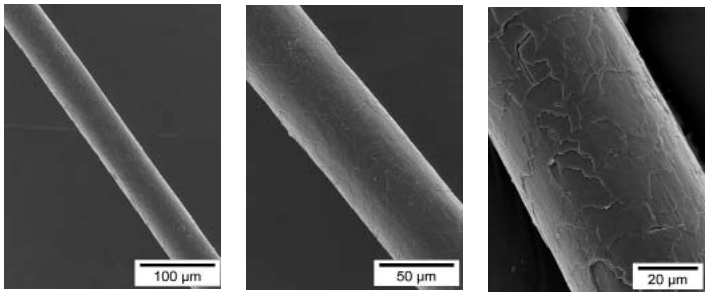
Quantitative evaluation of skin moisture following treatment with 4% AQUARICH® (eco), 2% AQUARICH® (eco) and 1% AQUARICH® (eco), versus placebo with 0% AQUARICH® (eco). The moisture content of the three different layers of the epidermis was determined using a Hydrascan®. The changes in comparison to the placebo were measured after 0h, 2h, 8h and 24h.

ex-vivo hair study

When used on the hair, AQUARICH® (eco) exerts a repair effect: the degree of damage to the hair and the surface structure of already damaged hair are clearly improved. To demonstrate this, AQUARICH® (eco) was applied in a shampoo to naturally bleached hair with surface damage. Following each of 5 washing and drying cycles (moistening the hair, shampooing for 5 minutes, rinsing, blow-drying for 2 minutes), the structure of the hair surface was recorded using S.E.M. (scanning electron microscopy) and the degree of damage to the hair surface was assessed using a defined scale.The restructuring effect can very clearly be seen even on the photographs.



Bleached seriously damaged hair before application

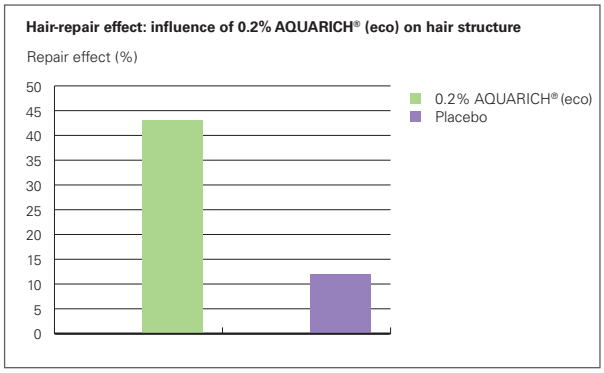


Bleached seriously damaged hair after the application of a shampoo with 0.2% AQUARICH® (eco)

Improvement of the hair structure and repair effect of damaged hair

Areas of application

The active ingredient is water-soluble and very easy to process. It is very well suited to moisturising care for the face and body in compliance with natural cosmetics, barrier-reinforcing products for very dry skin areas (e.g. hands and feet), restructuring hair care and sun care to restore skin moisture.



A concentration for use of 0.2% AQUARICH® (eco) in a shampoo improves the structure of the hair by 43% in comparison to non-treated hair.

AQUARICH® (eco)

Product Spotlight

January 2010

Guide Formulation

In compliance with Nature

ID-number	BODY Care/HVL 228/3
pH-value	approx. 5.5
appearance	slightly ivory emulsion
Specialities	natural cosmetics

Phase	Substance	INCI Name EU	Pos.*	% [w/w]
A	Water demin.	Aqua	1	61.00
	Dermosoft GMCY	Glyceryl Caprylate	2	0.80
	Potassium Sorbate	Potassium Sorbate	1	0.20
	Citric Acid solution 10%	Citric Acid, Aqua	1	1.00
B	Dermofeel GSC	Glyceryl Stearate Citrate	2	3.00
	Sisterna SP70-C	Sucrose Stearate	5	0.50
	Amisoft HS-11P(F)	Sodium Stearoyl Glutamate	10	0.30
	Dermofeel Sensolv	Isoamyl Laurate	2	5.00
	Olive Oil organic	Olea Europaea (Olive) Fruit Oil	9	13.00
	Dermofeel Toco 70 Non-GMO	Tocopherol, Helianthus Annuus Seed Oil	2	0.20
	Lanette O	Cetearyl Alcohol	3	2.00
	Keltrol CG-SFT	Xanthan Gum	4	0.50
C	Parfum True Love	Parfum	6	0.50
D	Peppermint org.dist. HA10	Mentha piperita (Peppermint) leaf water, Alcohol	8	10.00
E	AQUARICH® (eco)	Glycerin, Aqua, Lecithin, Avena Strigosa Seed Extract	7	2.00

Production

Mix A, heat to 75° C
Mix B, heat to 75° C
Add B to A while stirring, homogenise strongly
Cool down to 40° C while stirring
Add the remaining ingredients separately
Homogenise, cool down to 25° C while stirring

***Pos. Manufacturer**

1	Several
2	Dr. Straetmans, Germany
3	Cognis, Germany
4	CP Kelco, USA
5	Sisterna B.V., Netherland
6	Essencia, Switzerland
7	RAHN AG, Switzerland
8	Greentech, France
9	Gustav Heess, Germany
10	Ajinomoto, Japan

RAHN AG
Dörflistrasse 120
CH-8050 Zürich
Tel. +41 44 315 42 00
Fax +41 44 315 42 45

RAHN GmbH
Hahnstrasse 70
DE-60528 Frankfurt am Main
Tel. 0800 1 816 015
Fax 0800 1 816 016

RAHN (UK) Ltd.
75 Park Road
GB-Peterborough
PE1 2TN
Tel. 0800 0 323 743
Fax 0800 0 323 744

RAHN USA Corp.
1005 North Commons Drive
Aurora, Illinois 60504, USA
Tel. +1 630 851 4220
Fax +1 630 851 4863

Cosmetics@rahn-group.com
www.rahn-group.com