

News Release

P170/18e
April 17, 2018

BASF's new personal care ingredients protect and beautify skin and hair

- **New active ingredient solutions from the research of BASF's epigenetics and extraction platforms**
- **Polymer Rheocare® XGN allows formulations for vegan personal care solutions inspired by nature**
- **Tinosorb® S Lite Aqua enables the creation of extra light sun care formulations**

Amsterdam, Netherlands – April 17, 2018 – As external influences and stresses have a huge impact on skin and hair, today's health-conscious consumers are looking for personal care solutions that provide protection together with a flawless appearance. At this year's in-cosmetics (booth E40), BASF presents new ingredients for skin and hair care products that have been proven to help protect and rebalance the skin and to slow down the hair aging process. They enable manufacturers of personal care products to respond to current market trends and meet the consumers' demand for products supporting their lifestyle.

Replexium™ – rapid improvement of visible signs of skin ageing

A BASF study revealed that an overwhelming majority of women expected a quality skincare product to make them look five to ten years younger. These consumer expectations drove BASF to develop Replexium™ as a solution for their needs. Replexium is a skin-bioavailable synergistic complex of two patented peptides. This peptide blend has been shown to work on various layers of the skin by targeting specific proteoglycans (lumican and syndecan-1) and collagen XVII that all

decrease with age. These dermal and epidermal components are responsible for providing skin's biomechanical properties. In vitro studies demonstrated Replexium's ability to increase the synthesis of lumican, syndecan-1, collagen types I and XVII. In clinical studies, Replexium demonstrated its ability to significantly decrease the appearance of fine lines and wrinkles: 11 percent after three weeks, and 23 percent after eight weeks. It also improved dermal density (21 percent) within three weeks, significantly faster than a peptide-benchmark.

Proteasyl® – entering the connected skin era

Connected skin is firm and elastic benefiting from proteoglycans and fibers emitting a strong tonicity signal at all skin levels. With age, these tonicity signal emitters become depleted causing the signal to decrease. As a result, the skin loses its firmness and elasticity. The active Proteasyl® is a natural polypeptidic ingredient acting as a protease inhibitor that quickly improves skin elasticity. It rebalances the regenerative and destructive processes in the skin and increases the synthesis of proteoglycan and fibers (collagen I, III, V and elastin). At the same time, it protects the skins' architecture against proteolytic damage. New study results proved the efficacy of Proteasyl on multiple body parts: arms, chest, face. Extracted from peas, Proteasyl is Ecocert-approved and IECIC-listed.

RNAge® – reshaping facial harmony

As it ages, the skin loses its firmness and begins to sag, causing the face to lose its youthful contours. Based on the latest findings of BASF's epigenetics platform, the new active RNAge® rebalances Let-7b – the microRNA that downregulates the production of proteins which are key to building dermal architecture. In doing so, the active helps the dermis to stay dense, rebuilding it from deep within and finally firming facial shape. Extracted from sea buckthorn, RNAge is COSMOS-approved and IECIC-listed.

Hyalurosmooth® – counteracting harmful effects of daily stress

Daily stresses are known to translate into cutaneous stress, with cortisol as its main mediator. Hyalurosmooth® represses the damaging impact of cortisol on skin, restoring collagen type I and hyaluronic acid that are affected. Bringing the positive effect of a mindful lifestyle – rested from the inside – Hyalurosmooth helps the skin recover its hydration and radiance. Extracted from the Indian Cassia angustifolia,

Hyalurosmooth is IECIC-listed.

DN-Age® – youthfulness from inside the hair

BASF's anti-aging active ingredient for hair, DN-Age® slows down the hair graying process and reduces hair loss. The active ingredient acts on the scalp by preventing UV-induced DNA damage. It also protects hair follicle cells and thus prevents hair graying and hair ageing. A placebo-controlled clinical study conducted by BASF with 38 volunteers over a six months period showed that DN-Age leads to greater hair density: 80 percent of the participants using DN-Age perceived their hair to be stronger, fuller, and thicker. Extracted from Cassia alata leaves and titrated in flavonoids, DN-Age is also COSMOS-approved and IECIC-listed. DN-Age is available as a concentrated powder and a hydro-glycerin solution.

Rheocare® XGN – the vegan, stabilizing and thickening polymer

Rheocare® XGN is the first polymer launched by BASF based on pure vegan xanthan gum. It is 100 percent based on renewable feedstock and not produced from genetically modified organisms (GMO). Rheocare XGN is a powerful thickening agent and stabilizer for emulsion and surfactant based formulations. It creates crystal-clear formulations, has a high electrolyte and ethanol tolerance, can be processed cold and is easy to use even without neutralization step. This highly flexible polysaccharide can be used for various cosmetic applications and is suitable for oral care. Rheocare XGN is COSMOS-compliant and suitable for NATRUE formulations.

Tinosorb® S Lite Aqua – a lighter way to protect your skin

Tinosorb® S Lite Aqua is based on a unique technology to bring broad-band UV protection to the water phase. It is the water-dispersible form of its oil-soluble counterpart Tinosorb® S. This allows cosmetic manufacturers to reduce the UV-filter load in the oil phase for more formulation flexibility and lighter formulations. Distributing the UV filter load between the oil and water phase boosts the SPF and UV-A protection factor. Thus, Tinosorb S Lite Aqua is an ideal candidate for low viscous formulations, which benefit from a reduced oil phase. Due to the unique properties of Tinosorb S Lite Aqua, water resistance can be achieved in spite of having a UV filter in the water phase.

About the Care Chemicals division at BASF

The BASF division Care Chemicals offers a broad range of ingredients for personal care, hygiene, home care, industrial & institutional cleaning, and technical applications. We are the global leading supplier for the cosmetics industry as well as the detergents and cleaners industry, and support our customers with innovative and sustainable products, solutions and concepts. The division's high-performance product portfolio includes surfactants, emulsifiers, polymers, emollients, chelating agents, cosmetic active ingredients and UV filters. Superabsorbent polymers developed for the full spectrum of hygiene applications complete the range. We have production and development sites in all regions and are expanding our presence in emerging markets. Further information is available online at www.care-chemical.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The more than 115,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into five segments: Chemicals, Performance Products, Functional Materials & Solutions, Agricultural Solutions and Oil & Gas. BASF generated sales of €64.5 billion in 2017. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (BAS). Further information at www.basf.com.