

## LANXESS Distribution presents PUROLAN® Glucan: A natural anti-aging active

The demand for natural cosmetic products is unbroken, with an increasing number of new product launches to be seen on the market. However, a lack of performance caused by the limited availability of natural actives turns out to be a major show-stopper for consumers looking for both naturalness and performance.

A new product launched by LANXESS Distribution can help with exactly these two requirements: it is 100% natural and delivers excellent performance in skin care formulations.

### The benefits of beta-glucan

Beta-glucan has long been known for its positive influence on the human body. As a food supplement, it strengthens the immune system, thus improving the skin's appearance and health. Beta-glucan can also be incorporated into skin cosmetics where it triggers multiple beneficial effects, such as helping the skin to optimise its moisture balance or to reduce the formation of wrinkles.

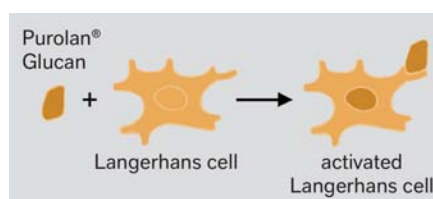
### Natural sources

Beta-glucan is derived from natural sources, including oats, mushrooms and yeast. The yeast-derived beta-glucan additionally offers benefits to the skin's immune system. However, due to its branched structure, its water solubility is poor. Chemical modification can improve solubility to some extent, but may also change the structure of the molecule, thus jeopardizing its properties and its status as a natural ingredient.

### Wide range of skin care applications

By applying a new and innovative process, yeast beta-glucan can now be obtained without chemical modification and at high

purity. This product is marketed under the brand name PUROLAN® Glucan. Possible application areas are anti-aging products or sunscreen formulations where beta-glucan helps to reduce damage caused by ultraviolet (UV) radiation. PUROLAN® Glucan is also a perfect ingredient for skin protection formulations as it contributes to the regeneration of irritated skin.



### 3 Questions to Dr. Matthias Kunze, Technical Marketing Personal Care at LANXESS Distribution GmbH

**Euro Cosmetics:** Which particular benefits are offered by yeast-derived beta-glucan compared to other types of beta-glucan? In particular, why do you promote this product for use in sunscreens?

**Dr. Matthias Kunze:** UVB radiation from sunlight has a twofold negative effect on human skin. On the one hand it causes DNA damage, on the other hand it reduces the number of Langerhans cells, which form a vital part of the skin's immune system to deal with this damage. In contrast to other beta-glucans, namely those obtained from oat, dermal application of yeast-derived beta-glucan activates Langerhans cells. This means a combination of PUROLAN® Glucan with sunscreens offers optimal protection from sunlight-induced skin damage. At the same time, the positive effect of beta-glucan on the skin's moisture content helps in the event of sunburn.

**Euro Cosmetics:** It seems that beta-glucan can vary in effectiveness, depending on its source and treatment. How have you verified the effectiveness of PUROLAN® Glucan?

**Dr. Matthias Kunze:** As a matter of fact, not just the source but also the extraction process can impact the properties of beta-glucan. For example, impurities can significantly impair its effectiveness. In order to test the performance of beta-glucan obtained through the innovative purification process, a comprehensive dermatological study has been done by an independent test laboratory. A panel of 40 women tested our product over a period of 4 weeks. The results showed an impressive improvement of the women's skin condition with regard to wrinkle reduction and the skin's elasticity. The beauty of the applied purification process is that it does not involve chemical modification. This allowed us to obtain a NATRUE certification.

**Euro Cosmetics:** One obstacle for the wider use of natural yeast-derived beta-glucan has been the difficult processability. Do you have any advice for the handling of PUROLAN® Glucan?

**Dr. Matthias Kunze:** PUROLAN® Glucan comes as a 5% aqueous dispersion, therefore it can easily be incorporated into cosmetic formulations, without heating and allowing fast production times. However, heating is no problem if required by other ingredients. The comparatively high active concentration of beta-glucan in PUROLAN® Glucan allows higher glucan concentrations in final products. For example, a formulation containing 2% beta-glucan can easily be manufactured. Furthermore, our dispersion is very stable, so we can offer a shelf life of one year.

### LANXESS Distribution GmbH

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