



Alexandre Lapeyre

Since its launch in April this year, new skin care active B-Circadin™ from Clariant Active Ingredients has been receiving broad interest from the industry for its uniqueness and effectiveness in combatting the impact of intense lifestyles on skin's well-being

We talked with Alexandre Lapeyre, Global Technical Marketing Manager, Clariant Active Ingredients, to tell us more about what this already award-winning innovation means for future beauty product development

**EURO COSMETICS:** *Why all the buzz around B-Circadin?*

**Alexandre Lapeyre:** Let me start by saying how pleased we are with the response. But we're also not surprised. B-Circadin™ is a nature-inspired active that fits with the new well-being direction in the cosmetics industry. The trend is towards revealing the skin's natural beauty rather than fighting to seem younger and to achieve this the most important approach is to improve skin conditions 'upstream' helping it to protect itself and cope better with external aggressions.



Whatever the cause, stressors in daily life show themselves on our face. B-Circadin is proven to combat the effects and help our skin recover, rapidly improving the complexion while decreasing puffiness and dark circles. It boosts the efficiency of major biological functions which need to be activated, often at a specific time of day, to be completely efficient. Skin is consequently better equipped to address its specific day and night needs.

**EURO COSMETICS:** *How does it achieve these benefits?*

**Alexandre Lapeyre:** Like our body, our skin cells have a circadian rhythm – a 24 hour biological clock – that governs their biological functions. Detoxification is a very important one. Skin is the largest organ on our body, and skin cells have an efficient detoxification mechanism to eliminate free radicals. Known as the Nrf2 pathway, it is one of the most important detoxification pathways in the body and is also regulated by circadian rhythm. Normally activated when protection is needed, the pathway plays a major role in the anti-oxidant defense mechanism that helps detoxify the skin. Maintaining epidermal hydration is another rhythm-dependent function. This is referred to as aquaporin-3.

Stress, jetlag, shift working hours, intense lifestyles and even exposure to blue light emissions disrupt the body's circadian clock, which in turn knocks off the skin's rhythm. As a result, the skin's detoxification and key metabolism processes such as hydration and protection mechanism are weakened and become less efficient. The skin shows signs of fatigue, is more prone to external aggressions, and you get a dull complexion. Because of its unique formulation, B-Circadin is able to resynchronize the skin with its circadian rhythm, getting it back on track so that the biological functions can do their job, skin is stronger and even enhanced.

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**EURO COSMETICS:** *Was the “well-being” trend the only inspiration for its development?*

**Alexandre Lapeyre:** We were inspired by the work of the 2017 Nobel Prize in Physiology or Medicine, awarded for discoveries on how molecular mechanisms control the circadian rhythm. Our team at Clariant Active Ingredients and partner BioSpectrum have successfully further advanced the knowledge of both the biological responses to this critical cycle and what occurs when it is disrupted. We were also inspired by nature. This ingredient is a great example of biomimicry in practice. The circadian cycle regulating human skin is also part of plant rhythm, notably explaining how leaves and flowers open out during the day and close at night. B-Circadin has been inspired by this wonderful ability and adapted for the skin. We extract from the *Lespedeza Capitata* plant, a form of bush clover grown and harvested in South Korea, for our active ingredient because it contains two key glycosylated flavonoids directly involved in regulating and maintaining the circadian cycle - carlinoside and isoschaftoside.

**EURO COSMETICS:** *How unique is it for formulators?*

**Alexandre Lapeyre:** B-Circadin emulates the ability to resynchronize the circadian cycle within the skin cells, to regulate rhythm-dependent biological functions. On a unique synchronized skin model, when exposed to blue light as a stressor to deregulate the rhythm, essential functions were seen to be improved. B-Circadin also blocks the direct oxidative stress induced by blue light radiating from digital screens. To our knowledge, it is the only active ingredient capable of achieving such performance.

**EURO COSMETICS:** *So in addition to well-being it provides a specific response to another Millennial-linked concern, the impact of blue light exposure?*

**Alexandre Lapeyre:** Yes, some studies suggest that blue light from digital screens deregulates sleep. Lack of sleep leads to a poor skin well-being, skin disorders, and lessens the skin's ability to defend itself. In a double-blind study over a four-day period, volunteers applied a cream containing 3% B-Circadin along with a placebo cream every day. During this study, they were exposed nightly to the blue light effect from a tablet in order to induce sleep perturbation. After the four days, eye contour was noticeably improved and puffiness decreased, with B-Circadin guarding the skin's well-being.

**EURO COSMETICS:** *Can you share further clinical results that are getting formulators really excited?*

**Alexandre Lapeyre:** Clariant Active Ingredients studied the impact of a deregulated circadian cycle on skin properties in a further double-blind clinical study. With volunteers working at night, so

having their biological rhythms strongly disrupted, a cream containing 3% B-Circadin was applied to one half of the face and a placebo to the other half, for 28 days. After only a week, volunteers saw their complexion visibly upgraded by over 17% compared to the placebo – and by 4 weeks, upwards of 35%.

**EURO COSMETICS:** *Finally, when can consumers expect to see the first products featuring B-Circadin?*

**Alexandre Lapeyre:** Within its first six months on the market, B-Circadin has attracted the interest of many customers and launches by several cosmetic brands will be seen next year. The ingredient has already been recognized with an innovation award, the BSB innovation award presented during the in-cosmetics 2018 tradeshow in Amsterdam, and we are looking forward to seeing how formulators and brands translate its uniqueness and effectiveness into novel Personal Care products. Stay tuned!

**EURO COSMETICS:** *Thank you for speaking with us.* ■

