

PRESS RELEASE

Cell phone screens do not damage skin: Beiersdorf study clears up misconceptions about blue light

- Research results confirm negative effect of natural blue light from the sun (HEV light) on the skin
- Effective ingredients with proven antioxidant effect offer reliable protection from natural HEV light
- Concerns about the artificial blue light of laptops, tablets, and smartphones unfounded

Hamburg, May 4, 2021 – The effect of UV rays on the skin has long been known, with the importance of sun protection firmly anchored in many minds. As one of the pioneers in sun protection, Beiersdorf has been conducting extensive research in this field for many decades, always with a focus on well-founded knowledge about the skin and informing consumers. As the number of hours we spend in front of laptop, smartphone, and TV screens increases, particularly during the coronavirus pandemic, so too does conjecture about the effect of these kinds of light sources on our stress levels, sleeping patterns or directly on our skin. It all comes down to the blue light emitted by end devices such as these. We are already well aware of the effects of the blue light from the sun, which is why there is suspicion that the artificial screen variant might also damage the skin – often on the basis of insufficient evidence. Beiersdorf research provides sound findings that offer some insights into the effects of natural blue light – high-energy visible (HEV) light – and artificial blue light on the skin.

Artificial blue light has negligible effect on skin

The Beiersdorf research team headed by Dr. Ludger Kolbe, Chief Scientist Photobiology, refuted the sometimes critical voices circulating on the subject of artificial blue light. “Public discourse has been characterized by a lack of knowledge and of scientific studies. But through our research activities, we’ve managed to prove that the amount of artificial blue light emitted during conventional use of electronic devices is nowhere near enough to trigger harmful skin effects,” explains Kolbe. If you were to spend an entire week in front of a monitor uninterrupted at a distance of 30 cm from the screen, this would be the same as just one minute outside on a sunny summer day in Hamburg at midday. “Compared to the emissions of the sun’s natural blue light, those of artificial blue light are virtually undetectable,” adds Kolbe. Even if you were to sit up close to the screen, this would have little impact on the results: while HEV intensity increases by a factor of 17, a ten-hour phone call on a smartphone, for example, would be the same as a minute in the sunlight on a sunny day in Hamburg. “The much-feared negative impact of increased screen use due to the coronavirus – for example, as a result of more online meetings or increased use of smartphones – is therefore scientifically untenable. The effect on the skin is negligible, which means concerns about negative impacts on the skin are unfounded,” explains Kolbe.

Actual danger comes from *natural* blue light

The discussions surrounding artificial blue light should not distract from the actual danger sufficiently proven by many years of research at Beiersdorf. Unlike the artificial variant, the sun's natural direct blue light poses a very high risk for the skin, which can and must be protected against. Natural blue light accounts for around 50% of sunlight and penetrates much deeper into the skin than UVA rays, which make up just 5% of sunlight. As a result, scientists have long labelled this light as "potentially dangerous." The Beiersdorf research team has scientifically proven the same in its comprehensive study, according to which HEV light generates oxidative stress, thus accelerating skin aging and increasing hyperpigmentation. The same study has also verified the protective effect of antioxidant ingredients such as licochalcone A, which is used in nearly every Eucerin sunscreen product as well as in the Sensitive-Allergy and UV Face range of NIVEA SUN products.

Underlying publications:

- Batzer J, Eggers K, Kolbe L, Weise J. Assessment of hazard potential of high-energy visible light from electronic devices for the skin. Poster, 27th EADV Congress, Paris, France 2018, Poster No. P1672.
- Mann T, Eggers K, Rippke F, Tesch M, Buerger A, Darvin ME, Schanzer S, Meinke MC, Lademann J, Kolbe L. High-energy visible light at ambient doses and intensities induces oxidative stress of skin – Protective effects of the antioxidant and Nrf2 inducer Licochalcone A in vitro and in vivo. *Photodermatol. Photoimmunol. Photomed.* 2020; 36 (2): 135-144.

About Beiersdorf AG

Beiersdorf has stood for innovative, high-quality skin care products as well as pioneering skin research for more than 135 years. Leading international brands such as NIVEA, the world's no. 1 skin care brand*, EUCERIN (dermocosmetics), LA PRAIRIE (selective cosmetics), and HANSAPLAST/ELASTOPLAST (plasters and wound care) are cherished by millions of people around the world day after day. Other renowned brands such as LABELLO, AQUAPHOR, FLORENA, 8X4, HIDROFUGAL, GAMMON, COPPERTONE, MAESTRO, CHAUL, and STOP THE WATER WHILE USING ME! round off our extensive portfolio. Through the wholly owned affiliate tesa SE, Beiersdorf is also a globally leading manufacturer of technical adhesive tapes and provides self-adhesive solutions to industry, craft businesses, and consumers.

The Hamburg-based company generated sales of €7,025 million as well as an operating result (EBIT) of €828 million in fiscal year 2020. Beiersdorf has more than 20,000 employees worldwide, who are connected by shared core values, a strong corporate culture and the Beiersdorf purpose "Care Beyond Skin." With its [C.A.R.E.+](#) business strategy, the company pursues a multi-year investment program focusing on competitive, sustainable growth. The program is consistent with the ambitious [sustainability agenda](#), with which Beiersdorf is generating clear added value for consumers, society, and the environment.

* Source: Euromonitor International Limited; NIVEA by umbrella brand name in the categories Body Care, Face Care, and Hand Care; in retail value terms, 2019.

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