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New UV Absorbers for Cosmetic Sunscreens – A Breakthrough for the Photoprotection of Human Skin

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Abstract: Two new UV filters for use in cosmetic sunscreens have been developed. Bis-ethylhexyloxyphenol methoxyphenyl triazine (BEMT) is a hydroxy-phenyl-triazine derivative, which has been designed for optimal spectral performance, excellent photostability, and solubility in cosmetic oils. Methylene bis-benzotriazolyl tetramethylbutylphenol (MBBT) is the active ingredient of a particulate UV-filter system, which is available as a 50% dispersion of MBBT. Since the UV-attenuating efficacy depends strongly on particle size, the material is micronised to particle sizes below 200 nm. The mode of action of this photostable filter system is governed to about 90% by absorption and 10% by scattering of UV light. Both filters show broad-spectrum characteristics with significant protection in the UVA range.

Keywords: Particle size · Photostability · Sunscreen · UV absorber · UVA · UVB