Number and Title of the Indian Standard: PCD 19 (14965)F 'Cosmetics — Sun protection test methods — *In vivo* determination of sunscreen UVA protection'

Scope: This standard specifies an *in vivo* method for assessment of the UVA protection factor (UVAPF) of topical sunscreen products. This standard is applicable to cosmetics, drugs and other products intended to be topically applied to human skin, including any component able to absorb, reflect or scatter UV rays.

It provides a basis for the evaluation of sunscreen products for the protection of human skin against UVA radiation from solar or other light sources.

b) Salient features of content:

This standard specifies the procedure to determine the Ultraviolet A Protection Factor (UVAPF) of a sunscreen product using the persistent pigment darkening method according to the principles recommended by the Japan Cosmetic Industry Association (JCIA) in 1995. The outcome of this test method can be used to determine the UVA classification of topical sunscreen products according to local regulatory requirements.

Topical sunscreen products are primarily rated and labelled according to their ability to protect against sunburn, using a test method to determine the *in vivo* Sun Protection Factor. This rating evaluates filtration of sunburn generating radiation across the electromagnetic UV spectrum (290 nm to 400 nm). However, knowledge of the Sun Protection Factor (SPF) rating does not provide explicit information on the magnitude of the protection provided specifically in the UVA range of the spectrum (320 nm to 400 nm), as it is possible to have high SPF products with very modest UVA protection (e.g. SPF 50 with a UVAPF of only 3 to 4). There is demand among medical professionals, as well as knowledgeable consumers, to have fuller information on the UVA protection provided by their sunscreen product, in addition to the SPF, in order to make a more informed choice of product, providing a more balanced and broader-spectrum protection. The UVAPF value of a product provides information on the magnitude of the protection provided explicitly in the UVA portion of the spectrum, independent of the SPF values.

The test method outlined in this standard is derived primarily from the UVAPF test methods as developed by the JCIA. Modifications have been made to attempt to harmonize with other methodologies without changing the integrity of the fundamental underlying principles of the test method.

c) Types/grades/classes, if any covered in the standard:

No

d) Disclaimer (to be automatically provided by the program/software)