Number and Title of the Indian Standard: Doc No. PCD 19 (15029)F 'Cosmetics — Analytical approach for screening and quantification methods for heavy metals in cosmetics'

a) Scope: This standard introduces most common and typical analytical approaches for screening and quantification of heavy metals of general interest at both raw material and finished product level. This standard covers techniques from traditional colourimetric reaction, which can be executed without expensive instrument to the high-end one, like that of inductively coupled plasma-mass spectrometry (ICP-MS), which allows detection of elements at μg/kg level. Thus, this standard covers the advantages and disadvantages of each analytical technique so that a suitable approach can be chosen. The intent of this standard is not to set or suggest acceptable concentration limits of heavy metals in both raw materials and finished products which have to be determined by each regulatory authority.

NOTE 1 The term "heavy metals" is widely used without single definition.

NOTE 2 Elements can be specified as heavy metals by one legislation, while not by others.

b) Salient features of content:

Heavy metals occur naturally in the environment. Some heavy metals are utilized in many industries, and some in very small amount are essential minerals to life. On the other hand, heavy metals are often a concern due to their toxicity. Even for essential minerals, they can be a concern when excess amounts are ingested, or more generally, when the human exposure is too high, independently of the route of exposure.

Heavy metals are ubiquitous as they are found in nature (rocks, soil, water, amongst other sources). As such, these heavy metals can be found as impurities in raw materials, and, while not added intentionally to cosmetics, might be present as traces in finished products.

The term "heavy metals" is widely used without a single definition. Commonly recognized heavy metals include, but are not limited to: lead, mercury, cadmium, arsenic, and antimony.

While it is acknowledged that heavy metal traces in cosmetic products are unavoidable due to the ubiquitous nature of these elements, companies have implemented numerous measures to monitor and control the amount that might be present.

This standard presents the most common and typical analytical methods and tools for the detection of heavy metals in cosmetic raw materials and finished products.

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

No

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