**REVIEW ANALYSIS OF INDIAN STANDARD**

1. **Sectional Committee No. & Title: CHD 1 ( Inorganic Chemicals )**
2. **IS No: IS 6605: 1972**
3. **Title: Specification for Potassium Chromate**
4. **Date of review: 27/09/2021**
5. **Review Analysis**
6. **Status of standard(s), if any from which assistance had been drawn in the formulation of this IS.**

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| **Standard**  **(No. & Title)** | **Whether the standard has since been revised** | **Major changes** | **Action proposed** |
| - - Not applicable (as no such IS has been indicated in this IS) - - | | | |

1. **Status of standards referred in the IS**

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| **Referred standards**  **(No. & Title)** | **IS No. of this standards since revised** | **Changes that are of affecting the standard under review** | **Action proposed** |
| IS 1070: 1960  (Specification for Water, distilled quality) | IS 1070: 1992  (Reagent grade water) | Nil | Not applicable |
| IS 264: 1968  (Specification for nitric acid) | IS 264: 2005  (Nitric acid - Specification) | Nil | Not applicable |
| IS 265: 1962  (Specification for hydrochloric acid) | IS 265: 2021  (HYDROCHLORIC ACID SPECIFICATION) | Nil | Not applicable |
| IS 323: 1959  (Specification for rectified spirit) | IS 323: 2009  (Rectified spirit for industrial use - Specification) | Nil | Not applicable |
| IS 695: 1967  (Specification for acetic acid) | IS 695: 2020  (Acetic Acid — Specification) | Nil | Not applicable |
| IS 266: 1961  (Specification for sulphuric acid) | IS 266: 1993  (Sulphuric acid - Specification) | Nil | Not applicable |
| IS 4905: 1968  (Methods for random sampling) | IS 4905: 2015 / ISO 24153: 2009  (Random sampling and randomization procedures) | Nil | Not applicable |

1. **Any other standards available related to the subject & scope of the standard being reviewed (International/regional/other national/association/consortia, etc. or of new or revision of existing Indian Standard)**

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| **Standard**  **(No. & Title)** | **Provisions that could be relevant while reviewing the IS** | **Action proposed** |
| Draft IS 14499 (DOC No. CHD21(17058) F) -  (STRONTIUM CHROMATE FOR PAINTS SPECIFICATION) | 4.3 Lead restriction | Lead restriction or Indication pertaining to amount of lead in the product may be considered for specification.  *Testing method of IS 101 (Part 8/Sec 5), or by Atomic Absorption Spectrometer (AAS) or by ICP may be employed to estimate the amount of metallic lead in ppm.* |
| -do- | 4.4 Toxic heavy Metal Restriction | Toxic heavy Metal restriction or Indication pertaining to amount of lead in the product may be considered for specification.  *Testing method by Atomic Absorption Spectrometer (AAS) or by ICP may be employed.* |

1. **Technical comments on the standard received, if any**

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| **Source** | **Clause of IS** | **Comment** | **Action proposed** |
| - - Technical Inputs were sought from Seven manufacturers throughout India as identified through online research.  None received so far - - | | | |

1. **Information available on technical developments that have taken place (on product/processes/practices/use or application/testing/input materials, etc)**

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| **Source** | **Development** | **Relevant clause of the IS under review that is likely to be impacted**  **(Clause & IS No.)** | **Action proposed** |
| - - Nil - - | | | |

1. **Issues arising out of changes in any related IS or due to formulation of new Indian Standard**

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| **Related IS and its Title**  **(revised or new)** | **Provision in the IS under review that would be impacted & the clause no. or addition of new clause/provision** | **Changes that may be necessary in the Standards under review** | **Action proposed** |
| - - Nil - - | | | |

1. **Any consequential changes to be considered in other IS**

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| **Related IS to get impacted** | **Requirements to be impacted** |
| - - Nil - - | |

1. **Any other observation:**

Potassium chromate is carcinogenic. The compound is also corrosive and exposure may produce severe eye damage or blindness.

Human exposure further encompasses impaired fertility, heritable genetic damage and harm to unborn children.

It is thus proposed, to include a cautionary warning in the marking details of the IS.

*Note – Sources for above statement are (1) (IARC (2012) [17–24 March 2009]. Volume 100C: Arsenic, Metals, Fibres, and Dusts (PDF). Lyon: International Agency for Research on Cancer. ISBN 978-92-832-0135-9. Retrieved 2020-01-05. There is sufficient evidence in humans for the carcinogenicity of chromium (VI) compounds. Chromium (VI) compounds cause cancer of the lung. Also positive associations have been observed between exposure to Chromium (VI) compounds and cancer of the nose and nasal sinuses. There is sufficient evidence in experimental animals for the carcinogenicity of chromium (VI) compounds. Chromium (VI) compounds are carcinogenic to humans (Group 1). (2) Potassium dichromate MSDS.*

1. **Recommendations:** Above changes are recommended to be incorporated in the existing version of the standard.