

**BUREAU OF INDIAN STANDARDS**

DRAFT FOR COMMENTS ONLY

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*Draft Indian Standard*

**Guidance for gamma spectrometry measurement of radioactive waste**

(ICS 17.240 27.120.30)

Nuclear Energy for Peaceful Applications  
Sectional Committee, CHD 30

**Last Date for Comments:** 04 April 2025

**NATIONAL FOREWORD**

*(Formal clause to be added later)*

A variety of non-destructive assay techniques are routinely used within the nuclear industry to measure or provide information to otherwise enable quantification of the radionuclide inventory of packages containing radioactive materials. This Standard specifically considers gamma spectrometry measurements made on packages containing radioactive waste.

This standard is applicable to gamma radiation measurements on radioactive waste. Radioactive waste can be found in different forms and exhibit a wide range of characteristics, including the following:

- a) Raw or unconditioned waste, including process waste (filters, resins, control rods, scrap, etc.) and waste from dismantling or decommissioning;
- b) Conditioned waste in various forms and matrices (bitumen, cement, hydraulic binder, etc.);
- c) Very low level (VLLW), low level (LLW), intermediate level (ILW) and high level radioactive waste (HLW);
- d) Different package shapes: cylinders, cubes, parallelepipeds, etc.

Considering the benefits of aligning standard with that of international standards, the Committee decided to prepare this standard by identical adoption of ISO 19017: 2015 'Guidance for gamma spectrometry measurement of radioactive waste' under dual numbering.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions and terminologies are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker in the International Standard, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards/documents where the standard atmospheric conditions to be observed are stipulated which are not applicable to tropical/subtropical countries. The applicable standard atmospheric conditions for Indian conditions are  $(27 \pm 2) ^\circ\text{C}$  and  $(65 \pm 5)$  percent relative humidity and shall be observed while using this standard.

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**ISO 19017: 2015**  
**January 2025**

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2: 2022 'Rules for rounding off numerical values (*second revision*)'.

**FOR COMPLETE TEXT OF THE DOCUMENT, KINDLY REFER ISO 19017: 2015**

**Note:** The technical content of the document has not been enclosed as these are identical with the corresponding ISO Standard. For obtaining the copy of the complete ISO Standard, please contact:

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