Preface to the 2027 edition of the ISTA Rules

Since 2014, the *International Rules for Seed Testing* (ISTA Rules) are primarily available in electronic format. The ISTA Rules can be downloaded as a complete PDF file or as individual chapters from:

www.ingentaconnect.com/content/ista/rules

If required, users of the ISTA Rules can print their own copies. For further information on the ISTA Rules, see:

www.seedtest.org/en/publications/international-rules-seed-testing.html

The electronic version includes the English, French, German and Spanish versions of the ISTA Rules. If there are any questions on interpretation of the ISTA Rules, the English version is the definitive version.

Seed health testing methods

Previously, the seed health testing methods were published as a separate Annexe to Chapter 7 of the ISTA Rules. They are now available as separate method sheets from the ISTA website at:

www.seedtest.org/en/international-rules-for-seed-testing-rubric-3.html

Details of changes

The 2027 changes are editorial corrections or Rules changes adopted at the Ordinary General Meeting held in Calgary, Canada in June 2026. Edits were made in Adobe InDesign by Vanessa Sutcliffe of HeartWood Editorial (www.heartwoodeditorial.co.uk).

The changes in the text content from the previous edition of the ISTA Rules are listed below. They can be displayed with yellow highlight boxes as a 'layer' over the English version within the electronic copy, with comments on what has changed.

Janek Bartel, ISTA Rules Committee Chair

ISTA Secretariat

Changes to the ISTA Rules for 2027

Introduction

Form 1 Part 2: Addition of column to record minimum submitted sample for moisture testing for Table 2C. Editorial change proposed by ISTA Rules TCOM.

Form 1 Part 5: Addition of column to record Seedling Evaluation Group for Table 5A. Editorial change proposed by ISTA Rules TCOM.

Chapter 1

1.4.2: Provision that if several small packets of seed are packed in carton boxes (shipping containers), only carton boxes need to be marked with accredited member-allocated seed lot identification number (where applicable) and sealed by sampler. Consequential change proposed by Bulking & Sampling TCOM.

1.5.2: Requirement added to indicate test or determination information clearly on ISTA Certificates, ensuring transparency and traceability, allowing users to accurately interpret context and relevance of reported data in accordance with applicable test method. Change proposed by ISTA Rules TCOM.

1.5.2.2, 1.5.2.4: Consequential change to allow reporting of undesirable inert matter as individual components, important for use of ISTA Certificates in international trade. Change proposed by NZ ISTA Laboratory Members and discussed by Purity TCOM and ISTA ECOM with advice from ISTA Accreditation & Technical Dept.

1.5.2.4: Consequential change due to change made to 4.7 in 2024, to report to number of decimal places indicated in Table 4A, instead of to minimum number of decimals. Noticed by auditor and editorial change proposed by ISTA Rules TCOM.

1.5.2.6: Consequential change due to addition of dormancy breaking procedure using ethephon, to more efficiently overcome physiological dormancy of *Helianthus annuus* L. seeds. Results in requirement to report dormancy breaking solutions on ISTA Certificates. Change proposed by Germination TCOM and supported by validation study reviewed and approved by Statistics TCOM.

1.5.2.10: Requirement for specification of results for seed health tests under 'Other determinations' section of ISTA Certificates. Noticed by auditor and editorial change proposed by ISTA Rules TCOM.

1.5.2.12: Indication that words 'oven method' should be explicitly stated on ISTA Certificate to clearly identify method used to measure moisture content. Consequential editorial change proposed by Moisture TCOM.

1.5.2.17.6 [new section]: Consequential change due to addition of cold test method for *Zea mays* in Chapter 15. Change proposed by Vigour TCOM and supported by validation study.

Chapter 2

2.2.9, 2.2.10: Clarification of definition for 'container'. 'Self-sealing' containers included in 'Sealed' and definitions reordered for more logical flow. Change proposed by Bulking & Sampling TCOM.

2.5.1.1, 2.5.1.2, 2.5.1.3: Clarification of wording regarding sampling from seed stream. Editorial change proposed by Bulking & Sampling TCOM.

2.5.1.2: Formula added for determining sampling units, in line with *ISTA Handbook on Seed Sampling*. Clarification that seed lots with up to and including 15 containers must have same number of primary samples from each container sampled. Editorial change proposed by Bulking & Sampling TCOM.

2.5.4.3: Provision that if several small packets of seed are packed in carton boxes (shipping containers), only carton boxes need to be marked with accredited member-allocated seed lot identification number (where applicable) and sealed by sampler. Change proposed by Bulking & Sampling TCOM.

Table 2C: Addition of values for minimum submitted sample for moisture testing for *Pennisetum clandestinum* and *P. glaucum*.

Chapter 3

3.5.2, 3.7: Allowing reporting of undesirable inert matter as individual components, important for use of ISTA Certificates in international trade. Change proposed by NZ ISTA Laboratory Members and discussed by Purity TCOM and ISTA ECOM with advice from ISTA Accreditation & Technical Dept.

Table 3B Part 2: *Paspalum* included in species with 'no need to check for presence of caryopsis' to make purity test easier for analyst. Genera put in alphabetical order. Change proposed by Purity TCOM.

Chapter 4

4.1: Precision that number of seeds is not estimated but counted in other seed determination. Editorial change proposed by Purity TCOM.

4.1, 4.2.6 [new section], 4.5.2, 4.6, 4.7: Allowing reporting of undesirable inert matter as individual components, important for use of ISTA Certificates in international trade. Change proposed by NZ ISTA Laboratory Members and discussed by Purity TCOM and ISTA ECOM with advice from ISTA Accreditation & Technical Dept.

Chapter 5

5.6.2.3: Clarification of requirement for alternating temperatures to be 16 h at low temperature and 8 h at high temperature (changeover period permitted). Change proposed by ISTA Accreditation & Technical Dept. and supported by Germination TCOM.

5.6.3.1, 5.9, Table 5A Part 1: Addition of dormancy breaking procedure using ethephon, to more efficiently overcome physiological dormancy of *Helianthus annuus* L. seeds. Results in requirement to report dormancy breaking solutions on ISTA Certificates. Change proposed by Germination TCOM and supported by validation study reviewed and approved by Statistics TCOM.

5.6.3.1: Addition of cautionary statement for seedling evaluation when using potassium nitrate solution to break physiological dormancy. Change proposed by Germination TCOM.

5.6.3.3, Table 5A Part 1: Addition of drying temperature after presoaking to harmonise with drying temperature after prewashing. Editorial change needed to prewashing drying temperature in Table 5A Part 1 to align with 5.6.3.3.

5.7: Clarification of process for retesting and reporting test results when range of replicates exceeds maximum tolerated range. Figure 5.3 added. Editorial change proposed by Germination TCOM.

5.11, Table 5B: Addition of five tolerance tables for replicates of 50 and 25 seeds, reducing frequency of required retests due to replicates being out of tolerance. Change proposed by Germination TCOM and supported by Statistics TCOM.

Table 5A Part 1: Separate entry for *Brassica perviridis* removed and note added to *B. rapa* entry regarding use of KNO_3. Editorial change proposed by ISTA Rules TCOM and supported by Germination TCOM.

Chapter 6

6.4.1.1 [new section]: Introduction of criteria for quality checking of tetrazolium solution. Change proposed by Tetrazolium TCOM.

Table 6A Part 1: New tetrazolium method added for *Glycine max*. Change proposed by Tetrazolium TCOM and supported by validation study.

Table 6A Part 1: Correction of optimum staining time for longitudinal cut of *Urochloa* spp. (formerly *Brachiaria*). Editorial change proposed by Tetrazolium TCOM.

Chapter 7

7.6: Requirement for specification of results for seed health tests under 'Other determinations' section of ISTA Certificates. Noticed by auditor and editorial change proposed by ISTA Rules TCOM.

Table 7A: New method 7-035 for detection of *Fusarium* species on cereal seeds. Proposal submitted by Seed Health TCOM.

Methods 7-019a, 7-019b: Specified temperature ranges changed to more flexible temperature indication, in harmony with other seed health methods in Chapter 7. Change proposed by Seed Health TCOM.

Method 7-033: Addition of full information on pathogen nomenclature. Change proposed by Seed Health TCOM.

Method 7-035: New method for detection of *Fusarium* species on cereal seeds. Proposal submitted by Seed Health TCOM.

All Seed Health Methods: Execution flow diagrams added in ISTA colours, intended to assist laboratory technicians by visually outlining sequence of procedural steps necessary to obtain valid test results which can be used for reporting on ISTA Certificates. Change proposed by Seed Health TCOM.

Chapter 8

8.10.6 [new section]: Introduction of new DNA method for *Hordeum vulgare* varietal identification. Change proposed by Variety TCOM and supported by validation study.

8.11.4: Amendment to harmonise content of Chapter 8 on *Lolium* spp. with that of Chapter 5. Change proposed by Variety TCOM.

Chapter 9

9.2.6.2: Clarification on how to proceed with checking tolerances so results are in agreement with *ISTA Handbook on Moisture Determination* (2007) and Moisture Calculator. Editorial change proposed by Moisture TCOM.

9.2.7: Indication that words 'oven method' should be explicitly stated on ISTA Certificate to clearly identify method used to measure moisture content. Editorial change proposed by Moisture TCOM.

9.3.2.7: Harmonisation of wording for reporting moisture content for pelleted seed under oven method, with that of moisture meter method. Editorial change proposed by Moisture TCOM.

Chapter 11

11.9 [new section]: Detail added on testing for moisture content of pelleted seeds. Change proposed by Moisture TCOM.

Chapter 15

15.3, Table 15B: Addition of *Allium cepa* as species to which radicle emergence test can be applied. Change proposed by Vigour TCOM and supported by validation study.

15.3, 15.8.6 [new section]: Addition of cold test method for *Zea mays*. Change proposed by Vigour TCOM and supported by validation study.

15.8.2.6.2: Editorial change to align temperature tolerance for accelerated ageing test with 15.8.2.5.1.

15.8.4.4.1: Clarification that paper must only be moistened with water for radicle emergence test. Editorial change proposed by Vigour TCOM.

Table 15B: Clarification of criterion of radicle emergence for *Glycine max* evaluation. Change proposed by Vigour TCOM.