

# ISO 6639-4:2025-06 (E)

## Cereals and pulses - Determination of hidden insect infestation - Part 4: Rapid methods

---

### Contents

Page

|          |   |           |
|----------|---|-----------|
| Foreword | v   |           |
| <b>1</b> | <b>Scope</b> .....  | <b>1</b>  |
| <b>2</b> | <b>Normative references</b> .....                                 | <b>1</b>  |
| <b>3</b> | <b>Terms and definitions</b> .....                                | <b>2</b>  |
| <b>4</b> | <b>Method by determination of carbon dioxide production</b> ..... | <b>2</b>  |
| 4.1      | Principle.....  | 2         |
| 4.2      | Apparatus.....  | 2         |
| 4.3      | Sampling.....   | 4         |
| 4.4      | Procedure.....  | 4         |
| 4.4.1    | Preparation of test sample.....                                   | 4         |
| 4.4.2    | Preparation of container and test portion.....                    | 4         |
| 4.4.3    | Carbon dioxide determination.....                                 | 5         |
| 4.4.4    | Determination times.....  | 5         |
| 4.5      | Expression of results.....  | 5         |
| 4.6      | Interpretation of results.....                                    | 5         |
| 4.7      | Test report.....  | 5         |
| <b>5</b> | <b>Whole grain flotation method</b> .....                         | <b>6</b>  |
| 5.1      | Principle.....  | 6         |
| 5.2      | Apparatus.....  | 6         |
| 5.3      | Sampling.....   | 6         |
| 5.4      | Test solution.....  | 6         |
| 5.5      | Procedure.....  | 7         |
| 5.5.1    | Preparation of test sample and test portion.....                  | 7         |
| 5.5.2    | Determination.....  | 7         |
| 5.5.3    | Number of determinations.....                                     | 8         |
| 5.6      | Expression of results.....  | 8         |
| 5.6.1    | Calculation.....  | 8         |
| 5.6.2    | Repeatability.....  | 8         |
| 5.7      | Interpretation of results.....                                    | 9         |
| 5.8      | Test report.....  | 9         |
| <b>6</b> | <b>Acoustic method operating on a grain sample</b> .....          | <b>9</b>  |
| 6.1      | Principle.....  | 9         |
| 6.2      | Apparatus.....  | 9         |
| 6.3      | Sampling.....   | 10        |
| 6.4      | Procedure.....  | 10        |
| 6.4.1    | General.....  | 10        |
| 6.4.2    | Preparation of the test sample and test portion.....              | 10        |
| 6.4.3    | Determination.....  | 11        |
| 6.4.4    | Number of determinations.....                                     | 11        |
| 6.5      | Expression of results.....  | 11        |
| 6.6      | Interpretation of results.....                                    | 11        |
| 6.7      | Test report.....  | 11        |
| <b>7</b> | <b>On-site assessment acoustic method</b> .....                   | <b>12</b> |
| 7.1      | Principle.....  | 12        |
| 7.2      | Apparatus.....  | 12        |
| 7.3      | On-site acoustic probing.....                                     | 12        |
| 7.4      | Operating method.....   | 12        |

|       |   |           |
|-------|---|-----------|
| 7.5   | Assessment.....   | 12        |
| 7.5.1 | General.....  | 12        |
| 7.5.2 | <i>In situ</i> acoustic probing a grain bulk in a means of transport..... | 12        |
| 7.5.3 | Operation of on-site acoustic probing in a static grain mass.....         | 13        |
| 7.5.4 | Number of measurements.....   | 14        |
| 7.6   | Expression of results.....  | 14        |
| 7.7   | Interpretation of results.....  | 14        |
| 7.8   | Test report.....  | 14        |
|       | <b>Bibliography.....</b>  | <b>15</b> |