



1st ISTA DNA Proficiency Test

Announcement



ISTA DNA Proficiency Test (DNA-PT "1") on Wheat

(Triticum aestivum subsp. aestivum)

Information for participating laboratories



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1. AIM

The aim of the proficiency test is to check the ability of individual laboratories for obtaining DNA profiles for wheat using the marker set in the Rules. These DNA profiles will be compared against a Reference Matrix using two parameters, the number of varieties wrongly rated and the number of markers with wrong results.

PT "1" is aimed to test laboratory performance and is mandatory for ISTA accredited laboratories performing DNA tests on wheat and having this test in the accreditation scope. This PT is also open for not accredited laboratories willing to test their performance.

2. SAMPLE DESCRIPTION

Each participating laboratory will receive **6 blind numbered wheat seed samples**. Each sample contains **12 individual kernels**. Laboratories must report alleles sizes for 8 individual kernels. The other 4 kernels are received as back up.

Laboratories will also receive **2 reference samples**, composed of 1 bulk of 10 kernels, that will be used as an allele size guide for estimating the allele sizes for the samples. Alleles sizes for these two samples will be informed to the laboratory.

3. SAMPLE ANALYSIS

Samples will be analysed according to the validated protocol stated by the laboratory for the accreditation. ISTA Rules chapter 8 describes a recommended DNA extraction protocol (8.10.2.2) and a recommended PCR procedure (8.10.2.3). Table 8.5. Prescribed microsatellite markers and PCR primers for verification of wheat varieties, lists the markers that are mandatory for the PT.

4. REPORTING OF RESULTS

Participants are required to report the results using the file: **PT-F-31 DNAPT Results Reporting Form**. Other reporting formats will be rejected.

The report will contain the sample code and the allele size in base-pairs obtained for each individual kernel, per marker and sample.

For the reference samples, the reference sample code and the allele size in base-pairs obtained for the bulk will also be reported.



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5. PARTICIPATION FEE

ISTA Member Laboratories do not have to pay a participation fee. They must identify themselves on the registration form by referring to their ISTA member code.

6. REGISTRATION

For registration, please complete the document: PT-F-30-DNAPT_Registration Form – 2022, and send it back to ISTA Secretariat. Please notice that samples will be shipped from Canada. Please verify any special requirement of your country for receiving the samples.

7. Material Transfer Agreement (MTA)

Participating laboratories must return the signed Material Transfer Agreement (MTA). Samples will only be dispatched after the MTA has been received at the ISTA Secretariat.

The MTA will be sent to participating laboratories. You are kindly asked to check name and address of the person in charge for correctness on the MTA provided and inform the ISTA Secretariat if changes are necessary.

Please submit the signed MTA by email (nadine.ettel@gmx.de).

After receiving the final results report, all material shall be disposed.

8. SHIPPING

The dispatch of the samples to the laboratories will start in **November**.

The package contains 6 blind samples and 2 reference samples.

The seeds have not been treated. All kernels for a sample will be sent together in a single tube. Reference samples will be sent as grounded seeds.

Materials provided are for scientific purposes only.

If necessary, a phytosanitary certificate will be enclosed. If there are special requirements for shipping samples into your country, please let us know.

9. REPORTING RESULTS

Results will to be reported to the nadine.ettel@ista.ch, **latest by January 31th**.

Please submit the results using the results reporting form only and send it by email to ISTA Secretariat nadine.ettel@ista.ch.

Laboratories not having sent the results to the ISTA Secretariat two weeks before the deadline will receive a reminder. Laboratories encountering difficulties to report on time have to inform the ISTA Secretariat before the deadline stating reasons for the delay and an indication when results will be reported. It will be decided on a case-by-case basis whether delayed results can be included or not.

The final result report will show a rating based on the number of varieties wrongly rated and the number of markers with wrong results for each laboratory. These results will be obtained by comparing individual laboratory results against the Reference Matrix containing the reference allele calls for each variety in the set.

A summary of the results reported by all laboratories participating in this test round will be sent to the laboratories and published on the ISTA Website.



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10. TIME SCHEDULE

1. Confirmation of laboratories interested in participation	September 2022
2. MTA for signing	September - October 2022
3. Submission of the signed MTA	October 2022
4. Sample shipment	November 2022
5. Submission of test results to the ISTA Secretariat	January 31 st 2023
6. Reporting of results by the Secretariat	March 2023

Yours sincerely,

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