
SPECIFIC GUIDELINE

NRL-Proficiency Test for Aflatoxin residues analysis in peanut homogenate (NRL/PT- Peanut/2022/AFL-1)



Conducted by
**National Referral
Laboratory**



ICAR-National Research Centre for Grapes

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Introduction:

This proficiency test (PT) is directed to laboratories belonging to APEDA recognized laboratories, FSSAI recognized laboratories, official laboratories of FSSAI and other commercial food testing laboratories that are planning for APEDA recognition/possess APEDA recognition/ FSSAI recognition for testing of aflatoxin residues.

The aim of the PT is to obtain information regarding the quality, accuracy and comparability of test results for aflatoxin residue in peanut reported by the laboratories from the country for export/domestic purposes. Participating laboratories will be provided with an assessment of their analytical performance that they can use to demonstrate their analytical performance and compare themselves with other participating laboratories.

Registration for the proficiency test:

This PT is mandatory for all the APEDA recognized laboratories that are intended to analyse the RMP sample of peanut and peanut for export for the ongoing/upcoming season. The other food testing laboratories who can analyze the target analytes in the scope of the laboratory can also be voluntarily participate.

To participate, each laboratory must complete the registration form in the prescribed format and return via E-mail communicated (apedanrlpt@gmail.com) before the deadline of the registration. The registration fee per laboratory as follows:

Registration fee/ Lab = Rs. 10,000 + GST (18%)
= Rs. 11,800 (eleven thousand eight hundred only)

Note:

Please note that the **registration fee does not include the shipment charge of PT test item**. It should be played by the participant directly to the courier agent subcontracted by the PTP upon communication from PTP.

The registration form should clearly indicate the delivery address of the Test Item. The organizer of the PT/ the courier agent will not be responsible for the non-delivery of the Test Item due to wrong delivery address provided by the laboratory.

On successful registration, the laboratory will receive a confirmatory mail from the organizer regarding the registration fee and delivery address.

Test item:

This proficiency test is based on the incurred residue of aflatoxin in peanut homogenate. The test item will be homogenized with required quantity of water and sub-sampled into coded bottles. Ten of those bottles containing the test item will be chosen randomly and analysed to check for homogeneity. The test item will be stored frozen ($-20 \pm 2^{\circ}\text{C}$) prior to shipment to participants. Three bottles, again chosen randomly, will be analysed by the organiser over a period of time to confirm the stability of the aflatoxin in the test item (firstly, when the test items are shipped and a few days immediately after the deadline for receiving participant results).

Amount of Test Item: Participants will receive **approximately 100 g of peanut homogenate**

Shipment of the Test Item:

The sample will be shipped to the participating laboratory on the scheduled date through the official courier agent identified by the organizer and on the same day the laboratory will receive the courier details, the tracking number and the invoice (on actual basis) in the name of the laboratory for the shipment through E-mail.

Laboratories must make their own arrangements for the receipt of the Test Item. The laboratories should make the necessary arrangements for receiving the shipment, even if the laboratory is closed during the period. The organizer will not be responsible for any return of the shipment item.

Subcontracting activity:

All the activities related to PT plan, including preparation of test item, analytical testing, statistical calculation (homogeneity, stability, assigned value, z-score calculation etc.), report preparation etc. were done by PTP using its own facility and manpower. Only the activity related to shipment of the test item under controlled temperature condition will be subcontracted to our official courier agent.

Test item Receipt by the laboratory:

The test item will be delivered to the participant laboratories on/or before the scheduled date.

The shipment charge as per the invoice communicated should be paid by the laboratory to the courier agent at the time of delivery. Any failure on payment of shipment charge to

the courier agent will disqualify the laboratory from the PT and no registration fee will be refunded.

Once the laboratory received the test item, its arrival must be reported to the organizer in the prescribed format on the same day by e-mail. The deadline for acceptance (or non-acceptance) is **8th May, 2022**. If the laboratory does not respond by this date, the organiser will assume that the test item has been received and accepted.

If any laboratory has not received the test item by **8th May, 2022**, they must inform the organiser immediately by e-mail (apedanrlpt@gmail.com).

Advice on test item handling:

Once received, the test item should be stored deeply frozen ($-20 \pm 2^{\circ}\text{C}$ or less) prior to analysis to avoid any possible deterioration/spoilage. The test item should be mixed thoroughly before taking the analytical portion(s). All participants should use their own routine standard operating procedures for extraction, clean-up and analytical measurement and their own reference standards for identification followed by quantification.

Submission of results:

Once the laboratory has analysed the test item and is ready to submit their test results, they must enter their results in the format provided by the organisers and send it to the following E-mail address: apedanrlpt@gmail.com. All analyte concentrations must be expressed in **µg/kg** together with the associated recovery expressed as percentage. The number of significant figures should be based on the guidelines provided in SANTE/11813/2017. Additional significant figures may be recorded for the purpose of statistical analysis. Please bear this in mind when reporting data.

Residue levels above the reporting level should be rounded to two decimal points.

Results should not be reported where an aflatoxin was not detected or was detected below the laboratory's LOQ. In both cases, this will be considered as 'ND' (Not Detected) or <LOQ. If an aflatoxin was not sought, it will be considered as 'NA' (Not Analysed). The actual results/residue levels measured must be reported as numbers.

The deadline for receiving the result by the organizer is **15th May, 2022**.

Announcement of the PT result:

The organizer will evaluate the results at the end of the proficiency test, once the deadline for the receipt of results has passed. The organizer will communicate the electronic version of the preliminary report to the individual participants through E-mail within the time schedule. The

electronic copy and the hard copy of the final report will be communicated to each participant laboratory via, e-mail and post, respectively. This report will include information regarding the design of the test, the homogeneity and stability results, a statistical evaluation of the participant's results as well as graphical displays of the results and any conclusions. Further relevant information considered to be of value may also be included.

ACTIVITY AND DEAD LINE:

Activity	Dead line
Opening Registration	11 th April 2022
Deadline for Registration	25 th April 2022
Shipment of the Test Item by	01 st May 2022 to 05 th May 2022
Deadline for receiving Test Item by the laboratory	8 th May 2022
Deadline for receiving the result from the laboratory	15 th May 2022
Preliminary Report	25 th May 2022
Final Report	15 th June 2022

Organiser and Committee: NRL/PT- Peanut/2022/AFL-1

The Organizer:

National Referral Laboratory
ICAR-National Research Centre for Grapes Manjiri Farm, Pune- 412307,
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Organizing Team:

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