
GENERAL GUIDELINE

Proficiency Test Program

Organized by
National Referral Laboratory

**भाकृअनुप-राष्ट्रीय अंगूर अनुसंधान
केंद्र**

ICAR-National Research Centre for Grapes

डाक पेटी नं. 3, मांजरी फामम डाकघर, सोलापूर रोड, पुणे – 412 307
P.O. Manjri Farm, Pune - 412 307

GENERAL GUIDELINE FOR PROFICIENCY TESTING PROGRAM

Introduction

The proficiency test (PT) organized by the National Referral Laboratory is directed to the APEDA recognized laboratories or other commercial testing laboratories in the food testing sector who are planning for APEDA/FSSAI/EIC recognition, and are involved in food testing.

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

PT-Organisers and Committee:

The Organiser:

National Referral Laboratory
ICAR-National Research Centre for Grapes
Manjiri Farm, Pune- 412307, India

Organising Team:

Program director: Dr. R. G. Somkuwar, Director, ICAR-NRC for Grapes, Pune

Program coordinators:

Dr. Kaushik Banerjee, Principal Scientist, ICAR-NRC for Grapes, Pune
Dr. Ahammed Shabeer TP, Scientist, ICAR-NRC for Grapes, Pune

Other Team Members:

Dr. Sandip Hingmire, Research Associate, NRL, ICAR-NRC for Grapes, Pune
Ms. Zareen Khan, Research Associate, NRL, ICAR-NRC for Grapes, Pune
Ms. Manisha Dhanshetty, SRF, NRL, ICAR-NRC for Grapes, Pune
Mr. Santosh Taynath, Young Professional-II, NRL, ICAR-NRC for Grapes, Pune
Ms. Anita Pardeshi, Research Assistant, NRL, ICAR-NRC for Grapes, Pune

This team is responsible for all administrative and technical matters concerning the organisation of the PT, e.g. the PT announcement, production of Test Item, the undertaking of homogeneity and stability tests, packing and shipment of the Test Item, handling and evaluation of the results and method information submitted by the participants and the issuing of the preliminary and final reports.

PT- Advisory Committee

To complement the internal expertise of the NRL, ICAR-NRCG, Pune, a group of external **Advisory Committee** has also been appointed. The composition of advisory committee is as given below:

Shri. Devendra Prasad, DGM, APEDA, New Delhi

Dr. Cherukuri Sreenivasa Rao, Professor, ANGR Agricultural University,
Andhra Pradesh

Dr. Eldho Vargheese, Scientist, ICAR-CMFRI, Cochin, Kerala

The Advisory Committee's role is to help the organisers to make decisions regarding the PT design: the selection of the commodity, the selection of pesticides to be included in the Target Pesticide List, the establishment of the Minimum Required Reporting Levels (MRRLs), the statistical treatment and evaluation of participants' results (in anonymous form), etc.

Who can participate?

It is mandatory for all the APEDA recognised laboratories those are analysing grape and other fruits and vegetables samples for export under the Residue Monitoring Plan of APEDA.

Further, we also welcome all the other commercial food testing laboratories of the country who has at least 70% of the target list of pesticides given in this PT in their scope of accreditation, and are planning to apply for recognition from APEDA/FSSAI/EIC etc.

Confidentiality and Communication:

The sole proprietor of this PT data is National Referral Laboratory, ICAR-NRC for Grapes, Pune and has access to all information.

The laboratories are given a unique identification code (laboratory code), initially only known to themselves and the organisers. In the final PT-Report, the names of participating laboratories will not be linked to their laboratory codes. Furthermore, the NRL, ICAR-NRCG reserves the right to share the PT results and codes with the regulatory bodies (APEDA) and with NABL, if requested.

Communications among the participating laboratories during the test (from the start of the PT exercise until the distribution of the preliminary report) on any matters concerning this PT exercise are not permitted. Any such attempts by any of the participant laboratories might invite disciplinary actions against them.

Announcement / Invitation Letter

Announcement/Invitation letter will be placed on the ICAR-NRCG web-portal and will be distributed via E-mail to the mailing list of the recognized laboratories available with NRL, ICAR- NRCG.

Target Pesticide List:

The list contains the analytes (pesticides and their metabolites, and plant growth regulators) as per the Residue Monitoring Plan of APEDA, is enclosed along with the Minimum Required Reporting Levels (MRRLs) valid for the PT (Target pesticides list enclosed). All the participating labs must express their results as stated in the test report format.

Methodologies to be used by the participants:

The participating laboratories are instructed to use the analytical procedure(s) that they would routinely employ in official control activities (testing, monitoring etc.). In case, an analytical method has not yet been established, that should be stated.

General procedures for reporting results:

The participating laboratories are responsible for reporting their own quantitative results to the organiser within the stipulated deadline. Any pesticide that was targeted by a participating laboratory should be reported as “analysed”. Each laboratory will be able to report only one result for each analyte detected in the Test Item. The concentrations of the pesticides detected should be expressed in ‘mg/kg’ unless indicated otherwise in the specific guideline.

Correction of results for recovery

According to the Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed (SANTE 12682/2019), it is a common practice that pesticide analysis results are not corrected for recoveries if the recovery rates range between 70 to 120 %. Correction of results for recovery is recommended if the average recovery is significantly different from this range (typically, if outside the 70-120 % range). The approaches for recovery correction explicitly stated in the SANTE 12682/2019 document may be referred. The laboratories are required to report wherever their results have been adjusted for recoveries, and, if so, what were the recovery factors used, and how much were the recovery rate (in percentage).

No recovery data are required where the correction for recovery is automatic through the ‘standard addition’ approach, or involves isotopically-labelled internal standards (spiked into the Test Item at the beginning of the extraction procedures) or uses procedural calibrations. In these cases, the laboratories should report the actual approach that was followed clearly with evidence.

Methodology information

All laboratories are requested to provide information on the analytical method(s) they have used in the test report format provided. A compilation of the methodology information submitted by all participants is presented in an Annexure to the final report, if required.

Publication of results

The NRL, ICAR-NRCG will publish a preliminary report, containing tentative assigned values and Z-score values for all the test pesticides within the deadline. At this stage, a participant lab can resrepresent in the prescribed format for any irregulatrity (only typo mistakes or an error in data transferring) in the data reported by them.

The Final Report will be published after the Advisory Panel has approved the results and will be communicated to individual laboratories.

Certificates of participation

Together with the Final PT-Report, the NRL will deliver a Certificate of Participation, if required, to each participating laboratory showing the z-scores achieved for each individual pesticide. The final report will be hosted on the ICAR-NRCG website (<https://nrcgrapes.icar.gov.in/>).

Feedback

At any time before, during or after the PT, the participants will have the possibility to contact the organisers and make suggestions or or offer feedback. After the distribution of the Final Report, the participating laboratories will be given the opportunity to give their feedback to the organisers and make suggestions for future improvements.

Complaint/Appeal

The PT provider has a set procedure for receiving complaint/ appeal from the PT

participants during the period of the current PT. Under such situation, the participants can put their complaint or appeal in the prescribed format attached herewith.

Correction of errors

If any participant has reported any error in any of the documents issued prior to the PT, the corrected documents will be communicated to the participants through E-mails. Before starting the exercise, the participants should make sure to download the latest version of these documents from the communicated E-mails.

If substantial errors are discovered in the Preliminary PT-Report, the organiser will distribute a corrected version, where it will be stated that the previous version is no longer valid. Where substantial errors are discovered in the Final PT-Report, the PT-Panel will decide whether a corrigendum will be issued and how this should appear. Where errors are discovered in the PT-Certificates, the relevant laboratories will be issued with the corrected ones. Where necessary, the laboratories will be asked to return the incorrect certificates.

Follow-up activities

The laboratories are expected to undertake follow-up activities to trace back the sources of erroneous or strongly deviating results (typically those with $|z| > 2.0$) - including all false positives. Even results within $|z| \leq 2.0$ may have to be checked if there is indications of a significant positive or negative bias.

If required, outcome of any investigative activities for false positives, false negatives and for results with $|z| \geq 3.0$ or Z-scores between 2.0 and 3.0 will be reviewed by the Advisory Committee. Communication of the outcome of follow-up activities by each laboratory is optional but would be appreciated since the source of deviation could be identified and could be useful for other participating labs and in future PT programs.

Disclaimer

The NRL, ICAR-NRCG retains all the right to change any parts of the PT based on new scientific or technical information. Any changes will be communicated in due course of time.
