

Director  
Metrology service Ltd.



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**PROFICIENCY TESTING PT.UA.1.1.2016**  
**GRAIN ANALYSIS FOR QUALITY**  
**PROFICIENCY TESTING PROGRAMME – ROUND 2(ENG)**

Kyiv-2016

## 1. INTRODUCTION

Given the key role of reliable test results that are needed during crops trade, requirements for the competence of laboratories that perform such tests should be confirmed.

The purpose of proficiency testing in grain testing is to determine the characteristics of the operation (as described in ISO/IEC 17043 [1], the GD-08.15.31 [2]) and improve the reliability of test results.

This proficiency testing involves the use of inter-laboratory comparisons to confirm the performance of individual laboratories' abilities and/or identify areas of improvement.

## 2. DESCRIPTION

### 2.1. PARTICIPATION

2.1.1. Minimum methods for participation. Any organization, providing testing by at least one set of methods according to clause 2.2.1. – numbers 1,2,3,4,5,8 or according to clause 2.2.2 – numbers 1,2,3,4,7 may participate in this voluntary Program.

2.1.2. Participant may provide results for all the methods according to clause 2.2.1 and 2.2.2., or by only part of the methods, but with the minimum methods set according to clause 2.1.1.

2.1.3. Metrology service Ltd. assigns a unique identification number to each participant that is reported only to this participant.

2.1.4. Participation fee for participants from Ukraine is 2 700.00 UAH without paying VAT. Participation fee for participants from outside of Ukraine is 150.00 USD.

### 2.2. METHODS

Participants can provide test results for the following methods:

#### 2.2.1. International methods

|    | Parameter                   | Method            | Note  |
|----|-----------------------------|-------------------|---|
| 1. | Broken grains, %            | EU 742/EN 15587   |   |
| 2. | Grain impurities, %         | EU 742/ EN 15587  | Including:<br>- shrivelled grains (2.0×20)<br>- other cereals<br>- grains damaged by pests, including grains damaged by bug<br>- grains overheated during drying<br>- grains with discolored germ<br>(only where the content exceeds 8 %) |
| 3. | Sprouted grains, %          | EU 742/ EN 15587  |   |
| 4. | Miscellaneous impurities, % | EU 742/ EN 15587  | Including:<br>- extraneous seeds<br>- unsound grains<br>- extraneous matter<br>- husks<br>- ergot<br>- bunted grains<br>- impurities of animal origin   |
| 5. | Protein content, %          | ISO 20483/Express | Expressed on dry matter, factor for converting nitrogen content to protein content - 5.7.   |

|     |                       |                 |   |
|-----|-----------------------|-----------------|---|
|     |                       |                 | Express - infrared spectroscopy method, calibrated to ISO 20483 |
| 6.  | Wet gluten content, % | ISO 21415-2     | Result of grinding of whole wheat                               |
| 7.  | Gluten Index          | ISO 21415-2     | Result of grinding of whole wheat                               |
| 8.  | Moisture content, %   | ISO 712/Express | Express - infrared spectroscopy method, calibrated to ISO 712   |
| 9.  | Test weight, kg/hl    | ISO 7971-3      |   |
| 10. | Falling number, s     | ISO 3093        |   |

### 2.2.2. National methods

|    | Parameter                   | Method                   | Note   |
|----|-----------------------------|--------------------------|--|
| 1. | Foreign impurities, %       | GOST 30483/<br>DSTU 3768 | Including:<br>- fines through the sieve 1.0×20<br>- mineral impurities<br>- organic impurities<br>- weed seeds<br>- seeds of other plants<br>- harmful impurities<br>- damaged grains  |
| 2. | Grain impurities, %         | GOST 30483/<br>DSTU 3768 | Including:<br>- broken grains<br>- shrivelled grains (2.0×20)<br>- sprouted grains<br>- grains overheated during drying<br>- grains damaged by pests<br>- other cereals<br>- grains with discolored germ<br>(only where the content exceeds 8 %) |
| 3. | Grains damaged by Bug, %    | GOST 30483/<br>DSTU 3768 |  |
| 4. | Protein content, %          | GOST 10846/<br>Express   | Expressed on dry matter, factor for converting nitrogen content to protein content - 5.7.<br>Express - infrared spectroscopy method, calibrated to GOST 10846  |
| 5. | Wet gluten content, %       | GOST 13586.1             |  |
| 6. | Index of gluten deformation | GOST 13586.1             |  |
| 7. | Moisture content, %         | GOST 13586.5/<br>Express | Express - infrared spectroscopy method, calibrated to GOST 13586.5   |
| 8. | Test weight, kg/hl          | DSTU 4234                |  |
| 9. | Falling number, s           | DSTU 27676               |  |

## 2.3. SAMPLES

Metrology service Ltd. is using a validated procedure and appropriate technical experts and contractors for the selection, production, homogenization and division designs that is satisfactory for the purposes of this program.

Metrology service Ltd .will send appropriately identified and packaged sample together with task sheet form for testing and reporting results via courier delivery service of Nova Poshta LLC by the participant.

**Wheat(*Triticum aestivum*) is used as a sample in round 2 in an amount of 2 kg for each participant.**

## 2.4. SCHEME AND SCHEDULE

2.4.1. This proficiency testing program is a simultaneous participation schemes according to A.3 of appendix A ISO\IEC 17043[1]. Selected samples, prepared according to clause 2.3, from a source of material being distributed simultaneously to participants for concurrent testing. After completion of the testing, the results are returned to Metrology service Ltd. Task sheet form for testing and reporting results is distributed with the sample according to clause 2.3. Metrology use statistical methods to analyse results and provide report according to clause.2.5.

2.4.2. Round 2 schedule.

|                                    |                           |
|------------------------------------|---------------------------|
| Participants registration          | till 13-00 EET 02.11.2017 |
| Sample shipment                    | 06.11.2017                |
| Reporting results for participants | till 13-00 EET 22.11.2017 |
| Report publication                 | 13.12.2017                |

## 2.5. REPORT AND PROCESSING RESULTS

2.5.1. Metrology service Ltd. processes and analyses results according to ISO\IEC 17043[1], GD-08.15.31[2] та ISO 13528[3].

2.5.2. Metrology service Ltd. publishes the Proficiency testing report according to ISO\IEC 17043[1] та GD-08.15.31[2].

2.5.3. Proficiency testing report will be published in two languages – English and Ukrainian.

## 3. PARTICIPANT INFORMATION

Participants must provide the following information by **e-mail**:

1. Full name (English and Ukrainian), Bank details, address, registration number, detail of person, who will sign a contract;
2. Full name and address of laboratory (testing facility) if it is not equal to clause 1;
3. Address of shipment of samples or Nova Poshta LLC department number (with the choice of shipment type);
4. Participant contact person full name;
5. Contact telephone number (e.g. mobile) and e-mail address of the participant contact person.

## 4. PROVIDER CONTACTS AND PROGRAM MANAGER

Metrology service Ltd., Ukraine, 03022, Kyiv, 45 Vasilkivska st., office 403.

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## 5. NORMATIVE REFERENCE

1. ISO/IEC 17043:2010 Conformity assessment -- General requirements for proficiency testing

2. National accreditation agency of Ukraine GD 08.15.31 Management system General document «Conformity assessment. General requirements for proficiency testing»
3. ISO 13528:2015 Statistical methods for use in proficiency testing by interlaboratory comparisons