METROLOGY SERVICE

Director
Metrology service Ltd.

Bozhko Nataliia
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PROFICIENCY TESTING PT.UA.1.4.2017
MILLING PRODUCTS (QUALITY)
PROFICIENCY TESTING PROGRAMME
– ROUND 6

Kyiv-2021

1. INTRODUCTION

Given the key role of reliable test results that are needed during world flour trade and agriculture in general, requirements for the competence of laboratories that perform such tests should be confirmed.

The purpose of proficiency testing in flour seeds testing is to determine the characteristics of the operation (as described in ISO/IEC 17043[1]) 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.

This proficiency testing scheme is registered in the EPTIS database.

The functioning management system Metrology Service Ltd. (further - Provider) complies with ISO/IEC 17043[1] requirements and covers all aspects of proficiency testing (further - PT) for all proficiency tests.

2. DESCRIPTION

2.1. PARTICIPATION

2.1.1. Minimum methods for participation. Any organization, providing testing by at least one of methods in clause 2.2 may participate in this voluntary Program.

2.1.2. Participant may provide results for all the methods according to clause 2.2.

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

2.1.4. Participation fee for participants from Ukraine is 4 500.00 UAH without paying VAT. Participation fee for participants from outside of Ukraine is 225.00 USD.

2.1.5. We are expecting from 10 to 30 Participants.

2.1.6. Each participant has a unique identification number what are assigned according to Application form for every round every Programme. This identification number is confidential and can be published only by the permission of the Participant. The Participant should write this unique identification number at Task sheet form for testing and reporting results for identification. If Provider is suspecting collusion or falsification, it applies own procedure for the work with unsatisfied results.

2.2. METHODS

Participants can provide test results for the following methods:

2.2.1. Methods

	Parameter	Method	Note
1.	Moisture, %	ISO 712:2009/ДСТУ ISO 712:2015	
2.	Crude protein content, %	ISO 20483:2013/ДСТУ ISO 20483:2016	Expressed on dry matter, factor for converting nitrogen content to protein content - 5.7
3.	Ash yield, %	ISO 2171:2007/ДСТУ ISO 2171:2009	Expressed on dry matter
4.	Falling number, s	ISO 3093:2009/ДСТУ ISO 3093:2019 (ISO 3093:2009, IDT)	
5.	Fat acidity, mg NaOH per 100g. of dry matter	ISO 7305:2019	
6.	Wet gluten content, %	ISO 21415-1:2006/ДСТУ ISO 21415-1:2009	
7.	Wet gluten content, %	ISO 21415-2:2015/ДСТУ ISO 21415-2:2009	

	Parameter	Method	Note
8.	Gluten index	ISO 21415-2:2015/ДСТУ ISO 21415-2:2009	
9.	Dry gluten content, %	ISO 21415-3:2006	
10.	Dry gluten content, %	ISO 21415-4:2006	
Alveograph properties of dough:			
11.	Deformation energy, W	ISO 27971:2015	
12.	Maximum pressure parameter, P	ISO 27971:2015	
13.	Mean abscissa at rupture, L	ISO 27971:2015	
14.	Index of swelling, G	ISO 27971:2015	
15.	Curve configuration ratio, P/L	ISO 27971:2015	
16.	Sedimentation index – Zeleni test, ml	ISO 5529:2007/ДСТУ ISO 5529:2014	
17.	Moisture content, %	Method based on ГОСТ 9404-88	
18.	Protein content, %	ГОСТ 10846-91	Expressed on dry matter
19.	Ash content, %	ДСТУ ГОСТ 27494:2019 (ГОСТ 27494–2016, IDT)	Expressed on dry matter
20.	Ash content, %	Method based on ГОСТ 27494-87	Expressed on dry matter
21.	Falling number, s	Method based on ГОСТ 27676-88	
22.	Acid value of fat, mg KOH per 100g. of dry product	ДСТУ 4250:2003	
23.	Wet gluten content, %	Method based on ГОСТ 27839-88	
24.	Index of gluten deformation	Method based on ГОСТ 27839-88	
25.	Whiteness of flour, c.u.	ДСТУ 4870:2007/ДСТУ ГОСТ 26361:2019 (ГОСТ 26361–2013, IDT)	
Alveograph properties of dough:			
26.	Deformation energy, W	ДСТУ 4111.4:2002	
27.	Maximum pressure parameter, P	ДСТУ 4111.4:2002	
28.	Mean abscissa at rupture, L	ДСТУ 4111.4:2002	
29.	Index of swelling, G	ДСТУ 4111.4:2002	
30.	Curve configuration ratio, P/L	ДСТУ 4111.4:2002	

The Information for methods of preparation of samples and way of testing Participant should use from methods according to clause 2.2.

2.3. SAMPLES

2.3.1. Metrology service Ltd. is using contractors for the selection, production, homogenization and division designs that are satisfactory for the purposes of this programme. The names and addresses of contractors can be given by request after publishing the final report.

Provider uses methods according to clause 2.2. for validation of homogeneity and stability. The quantity of methods can be decreased according to the decision of Provider's technical experts.

Tests, that are required to prove homogeneity and stability of samples are performed by competent contractors according to [2-6]. Provider uses a validated procedure of management system Metrology service Ltd for the samples' selection, production, division, checking of the quality and storage.

Requirements for the manufacture, quality control, storage and distribution of samples are determined by the relevant procedures of management system Metrology service Ltd. Metrology service Ltd uses the procedure Пр.ПК02-2017 for the manufacture, homogenization and separation of samples.

2.3.2. 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 or other delivery service chosen by participant. Shipping expenses outside of Ukraine are not included in the price of participation.

Wheat flour is used as a sample in round 6 in an amount of approximately 3kg. 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. Participant should use only this form for reporting.

Metrology Service Ltd use statistical methods to analyze results and provide report according to clause. 2.5.

2.4.2. Round 6 schedule.

Participants registration	**till 13-00 EET 27.05.2022**
Sample shipment	**30.05.2022**
Reporting results for participants	**till 13-00 EET 16.06.2022**
Report publication	**till 01.07.2022**

2.5. REPORT AND PROCESSING RESULTS

2.5.1. Metrology service Ltd. processes and analyses results according to [1-6].

2.5.2. Metrology service Ltd. publishes the Proficiency testing report according to [1].

2.5.3. Provider ‘ll express Participant’s results for quantitative methods as traditional z-scores.

2.5.4. The assigned value for each analyte was calculated as the robust mean of the trial data using Huber H15 method

2.5.5. Proficiency testing report will be published in two languages – English and Ukrainian. Basic (reference) language is English. Both version of the report ‘ll be published at internet http://www.metrologyservice.com.ua

3. PARTICIPANT INFORMATION

Participants must provide e-mail request for participation (Annex 1 to the Program) in accordance with the schedule Round (p.2.4.2.). Application form should be sent to the e-mail address pt.smetrology@gmail.com.

4. PROVIDER CONTACTS AND PROGRAM MANAGER

Metrology service Ltd., Ukraine, 03022, Kyiv, 18 Lomonosova st., office 704.
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5. NORMATIVE REFERENCE

1. ISO/IEC 17043:2010 Conformity assessment – General requirements for proficiency testing.
2. ISO 13528:2015 Statistical methods for use in proficiency testing by interlaboratory comparisons.
3. FOOD ANALYSIS PERFORMANCE ASSESSMENT SCHEME (FAPAS). Protocol for the organization and analysis of data, sixth edition, 2002.
4. Fearn, T. and Thompson, M, A new test for 'sufficient homogeneity', Analyst, 2001, 126, 1414-1417.
5. ISO Guide 35:2017 Reference materials – Guidance for characterization and assessment of homogeneity and stability.
6. ILAC Discussion Paper on Homogeneity and Stability Testing, April 2008.

Addition 1. Application form:

PT Program Name:	PT.UA.1.4.2017 MILLING PRODUCTS (QUALITY) – ROUND 6
The full name of the laboratory	
Full legal entity name:	
Address:	
Bank details:	
Name of the person signing the Contract and on the basis of which:	
Delivery address of the sample	
Name of the responsible person from the Participant:	
Contact telephone number (if possible, mobile) and email address of the responsible person from the Participant:	
Certificate delivery address	
Date of application:	

* All fields are required.