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Nutritional Labelling Proficiency testing scheme description

2020-21

NMISA-PT-ORG52

Nutritional Parameters in Corn Soya Cereal

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1 FOREWORD

This is the call for participation in the NMISA proficiency testing (PT) scheme for the determination of selected nutritional labelling parameters in a corn soya cereal. Participants will be required to report on all parameters which form part of their routine laboratory services. A confidential report will be issued to all participants after completion of the PT scheme. Information on the material, parameters included as well as dates for the registration, distribution and reporting is listed in Table 1.
This forms part of a range of ISO 17043 accredited PT services offered by NMISA. Please consult our website www.nmisa.org or our NMISA store https://store.nmisa.org/ for further information on our PT schemes. NMISA can also assist with the preparation of traceable gravimetrically prepared spike solutions for benchmarking *ad-hoc* analyses for which commercial PT schemes are not available.

2 SCHEME AIMS

This scheme will assist laboratories that routinely analyse nutritional labelling parameters to monitor their laboratory performance. This covers aspects such as the accuracy and comparability of measurement results produced; the continued competency of analytical staff and the maintenance and effectiveness of the current quality assurance systems within the laboratory. In addition, this information may also be used to provide accreditation bodies or clients with objective evidence of laboratory performance.

3 PARTICIPATION FEES AND ADDITIONAL CHARGES

The cost of participation in the PT schemes is R 5 000 excluding costs associated with delivery (0% VAT, please note that we are not a VAT registered company). This fee includes the material and a confidential report upon completion.

Since many of the South African participants are located within proximity to NMISA, the option of collecting the PT scheme samples from NMISA premises is permitted.

International laboratories will have test samples sent by courier and appropriately packaged to maintain sample integrity. International participants must provide NMISA with any import or quarantine permits that might be required to complete sample delivery well in advance of the shipment date and are liable for any customs or import duties charged.

Upon registration for participation an official quotation will be provided. Participation in the scheme is confirmed following receipt of a purchase order and/or proof of payment.

4 PT SCHEME DESCRIPTION

The timeline for the PTS is presented in Table 1. Laboratories are requested to report results for as many of the parameters specified as possible, to allow for maximum benefit to be obtained from the participation. This study is designed to support laboratories routinely performing nutritional labelling measurements. The levels of the analytes should be easily achievable using analytical methods typically applied, however, some of the trace elements and vitamins can be expected to represent a measurement challenge. Instructions for proper handling and storage of the samples prior to sample preparation will accompany the PT scheme samples. Participants should adhere to these instructions to ensure sample integrity.

A Result Submission Template will be emailed to participants following distribution of the samples.

Table 1: PTS details for NMISA-PT-ORG52, analysing the nutritional parameters in corn soya sugar cereal.

NMISA-PT-ORG52 Nutritional Parameters in corn soya cereal		Distribution/ Dispatch	Result reporting
Material description	150 g corn soya sugar cereal blend will be provided to each participant. Blend comprises: 64.3% Maize; 24% Whole soya beans; 10% sugar, 0.2% vitamin and mineral fortification mix; 1.2% anhydrous calcium phosphate; 0.3% potassium chloride		
Parameters	**Minerals** (1 – 1000 mg/100 g): Iron, zinc, calcium, potassium, phosphorus **Proximates** (2 – 20 g/100 g): Moisture, protein, total fat, crude fibre, total ash **Vitamins:** Vitamin A Retinol (20 – 2000 µg/100 g) Vitamin B1 Thiamine (0.05 – 10 mg/100 g) Vitamin B2 Riboflavin (0.05 – 10 mg/100 g) Vitamin B3 Niacin (0.05 – 10 mg/100 g) Vitamin B6 Pyridoxine (0.05 – 10 mg/100 g) Vitamin B9 Folic acid/Folate (0.5 – 500 µg/100 g)	Oct 2020	Dec 2020
Result Reporting	Participants will be required to perform the analysis using their normal laboratory procedures, and required to report **two results for all selected parameters measured** Participants are encouraged to include an uncertainty estimate for each result obtained. The result reporting form will be distributed to participants and will request additional information on the measurement technique and parameters, any recovery correction application, calibration standards used etc.		
PT conduct	**Assigned value** • The assigned value for the elements with be the reference values obtained through ICP analysis at the NMISA Inorganic Analysis Laboratory. • The assigned values for the proximates and the vitamins will be the consensus values determined from participant results (and/or expert laboratories) in accordance with ISO 13528:2017 statistical principles.* **Laboratory performance** • Laboratory performance will be evaluated using the z-score **Standard deviation of proficiency assessment** • Where applicable, the standard deviation for proficiency assessment will be in accordance with the tolerances stipulated in section 3 of Guideline 5 referred to in the South African regulations related to food labelling (R146). • Where no prescribed tolerances are available, NMISA may use the Horwitz model to estimate a standard deviation that can typically be expected. The standard deviation of participant results will also be included in the final PT report for reference. **PT report** • The PTS report will be distributed within 1 week following the result submission deadline. Reports will be provided in electronic format only (Adobe Acrobat- pdf) files. • The scheme is fully confidential. Each participant will be issued with a unique identification number. For multiple participants within the same laboratory the participating laboratory is required to identify its analysts by a code known only to the laboratory.		

The assigned value and subsequent performance evaluation can only be determined on parameters where at least 10 results have been received.