



 **Department of Science and Technology**  
**FOOD AND NUTRITION RESEARCH INSTITUTE**

## PROFICIENCY TESTING PROVISION IN THE PHILIPPINES

Leah C. Dajay  
PTL Head  
DOST - FNRI

  
Sprints ruin in...  
**Imported Baby Formula Tainted with Melamine**  
Possible Salmonella Contamination Respons for Recalled Salsa Containing Serrano Pepp  
**E. coli O157:H7-tainted Found at Area Restaur**  
ECAT.I.  
**PRODUCT RECALL**  
**Food Safety**

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**MISDECLARATION OF  
NUTRITIONAL  
CONTENT OF FOODS**

Amount Per Serving	% Daily Value
Calories 310	21%
Total Fat 15g	1%
Saturated Fat 2.6g	39%
Trans Fat 1g	28%
Cholesterol 118mg	4%
Sodium 560mg	4%
Total Carbohydrate 12g	4%
Dietary Fiber 1g	

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**dti**  
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19<sup>th</sup> - 21<sup>st</sup> June 2019, Bangkok, THAILAND



## 1984

- In support to the ASEANFoods objective for analytical quality assurance, DOST-FNRI organized its first PT Scheme on proximates, vitamins and minerals.



## In succeeding years

- The institute continued to provide PT Services to address challenges on upgrading the DOST-RSTL's and other food testing laboratories towards ISO 17025:2005 accreditation

## From 2006 - 2011

- PT rounds on wheat flour, powdered tonic food drink, dried shrimp and infant formula were conducted in preparation for the laboratories goal towards ISO 17043 accreditation.



## In 2012

- In order to improve its credibility as PT Provider and gain international recognition, the Proficiency Testing Laboratory of DOST FNRI applied for accreditation to ISO 17043 to BLA-DSS Thailand.

## At Present...

- DOST-FNRI is the only ISO 17043:2010 accredited PT provider in the Philippines (Accredited by BLA-DSS, Thailand since 2013)
- Committed to organize and provide quality proficiency testing (PT) services at reasonable cost to the satisfaction of its participants



## The FNRI - PTL PT Rounds

### General Objectives

- to provide participants with the basis to evaluate their laboratory performance in certain analysis (commonly nutrition labelling parameters); and
- to assist participants in conducting self-help investigative, corrective, and/or preventive actions to improve their laboratory performance

## PT PARTICIPANTS

### GOVERNMENT

DOST

Research and Development Institutes

Regional Standards & Testing Labs

Academe

Other Testing Laboratory

### PRIVATE

Testing & Services Labs

Industry (Food, Etc.)

### FOREIGN PARTICIPANTS

## Proficiency Test Item Preparation

- FNRI PTL did not subcontract the production of proficiency test item
- Choice of sample is based on the following:
  - Demand/ Commonly analyzed by testing labs
  - Availability of material
  - Concentration of analytes



### APFAN PT-2 Workshop

## Food Analysis Workshop: Proficiency Testing and Reference Materials Development



19<sup>th</sup> - 21<sup>st</sup> June 2019, Bangkok, THAILAND



## **Characterization (Homogeneity and Stability)**

- Usually subcontracted to FNRI Service Laboratory or other local testing labs (either ISO 17025 accredited or can provide competency in doing such test)

## **STATISTICAL EVALUATION OF RESULTS**

## SETTING OF SDPT

1

$$\sigma_{pt} = \frac{CV \times x_{pt}}{100}$$

*CVs were set based on the following:*

- ✓ previous PT Rounds on the same matrix
- ✓ by perception/ expert's suggestion
- ✓ participants' robust CV

## DETERMINATION OF CONSENSUS VALUE

2

Elimination of results with inapplicable  
methods

Robust statistics: consensus value

### SUITABILITY OF CONSENSUS VALUE

3

*Computation of the standard uncertainty:*

$$u(x_{pt}) = \frac{1.25 \times s^* \text{ or } MADe(x)}{\sqrt{n}}$$

- $u(x_{pt}) \leq 0.3\sigma_{pt}$  uncertainty is negligible,  
**z score** is issued
- $u(x_{pt}) > 0.3\sigma_{pt}$  uncertainty is high,  
**z' score** is issued instead

### PERFORMANCE SCORE

4

$$\mathbf{z \ score} = \frac{x - x_{pt}}{\sigma_{pt}}$$

**vs.**

$$\mathbf{z' \ score} = \frac{x - x_{pt}}{\sqrt{\sigma_{pt}^2 + u^2(x_{pt})}}$$

*Interpretation of performance scores:*

- $|z/z' \ score| \leq 2.00$  : "Satisfactory" performance
- $2.00 < |z/z' \ score| < 3.00$  : "Warning" signal
- $|z/z' \ score| \geq 3.00$  : "Action" signal



### APFAN PT-2 Workshop

Food Analysis Workshop: Proficiency Testing and Reference Materials Development

# The Pre- and Post PT Meetings/ Seminars



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# Future Plans and Programs

19<sup>th</sup> - 21<sup>st</sup> June 2019, Bangkok, THAILAND

**APFAN PT-2 Workshop**

Food Analysis Workshop: Proficiency Testing and Reference Materials Development



**PT Provision on Sensory Evaluation**



**Accreditation to ISO 17034  
as RM Producer**

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**APFAN PT-2 Workshop**

**Food Analysis Workshop: Proficiency Testing and Reference Materials Development**

**1** Access the Proficiency Testing Portal at <http://lab.fnri.dost.gov.ph/pt/>

**2** Register by **Signing Up** and providing information needed

**3** Click the current PT Round offered shown in the Latest News and Updates

**4** Select mode of payment, sample distribution and **measurands**

**5** Click **JOIN** and wait for approval of your registration.

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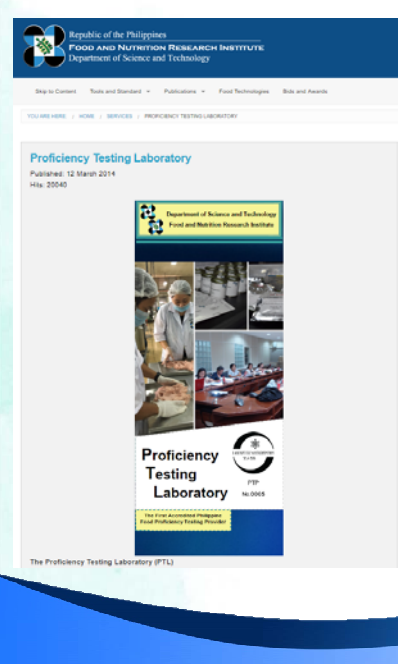


**Quality Data spells Quality Life**

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**Proficiency Testing Laboratory**  
PTL  
No. 0008

The Proficiency Testing Laboratory (PTL)

<https://www.fnri.dost.gov.ph/index.php/services/proficiency-testing-laboratory>

<http://lab.fnri.dost.gov.ph/ptl/frontend/web/>



FNRI

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**Proficiency Testing (PT)**  
ISO/IEC 17045:2010 Accredited

Overview

- Latest News/Updates
- FNRI PT 19-02 (Milk Powder)
- FNRI PT 19-01 (Food Oils)
- FNRI PT 18-02 (Whole Flour)
- FNRI PT 18-01 (Canned Tuna Fish)

REGISTRATION IS NOW OPEN  
FNRI PT 19-01 (Food Oils)

2008 PTMR conducts a training course on Proficiency Testing Provision to Food Distributors

**FNRI-PTL: "The First Accredited Philippine Food Proficiency Testing Provider"**

**PT Schemes Provided**

Programs include, but not limited to, the following:

- Inhalant Formula
- Preparation Method
- Milk Powder
- Whole Flour

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Thank you

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