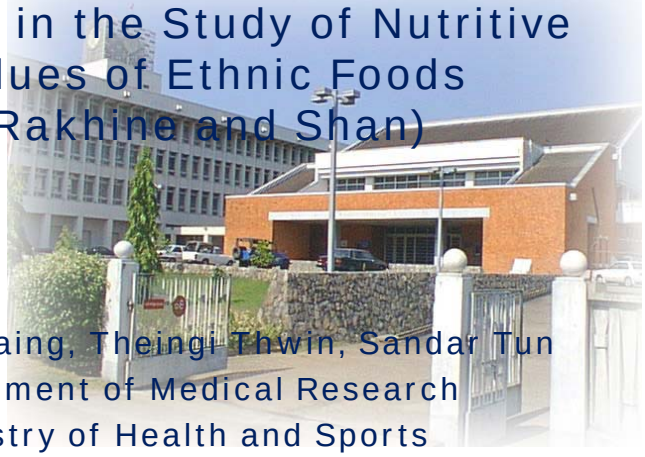
Use of the Reference Material derived from APFAN PT-1 for Quality Control System in the Study of Nutritive Values of Ethnic Foods (Rakhine and Shan)



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Ministry of Health and Sports
The Republic of the Union of Myanmar

Quality control in Food Laboratory

Internal quality control system:

- Precision: in-house QC sample/control chart
- Accuracy: CRMs, SRMs, RMs

External quality control system: proficiency

- testing (laboratory performance study)

Ref: Assoc.Prof. Kunchit Judprasong Internal Quality Control System

Validity/Accuracy

- is about determining whether something does what it is supposed to do

Precision

- Also know as reproducibility, repeatability, reliability all mean that the results of a test or measure are identical or closely similar each time it is conducted

Both accurate and precise

Precise but not accurate

Neither accurate nor precise

- Because of variation in laboratory procedures, observers, or changing conditions of test subjects (such as time, location), atest may not consistently yield the same result when repeated

Internal quality control in laboratory

- set of procedures undertaken by the staff to ensure quality of reports
- total process beginning with sample collection up to final reporting

Standard Operating Procedures (SOP)

- **= comprehensively written document that describes the laboratory procedure and all other related issues**
- **Essential for ensuring uniformity in laboratory procedures**

External Quality Assessment(EQA)

- According to the ISO definition, EQA (also known as 'proficiency testing' (PT) or 'EQ Control = EQC') refers to : a system of objectively checking laboratory results by means of an external agency including comparison of a laboratory's result at intervals with those of other laboratories the main objective being the establishment of trueness

Laboratory-performance study(Proficiency testing)

- Objective: to assess the performance of a laboratory (ies) [oranalyst (s)]

- Activities: a group of laboratories analyse one or more components of one or more homogenous and stable testsamples by the methods used or selected by each laboratory.

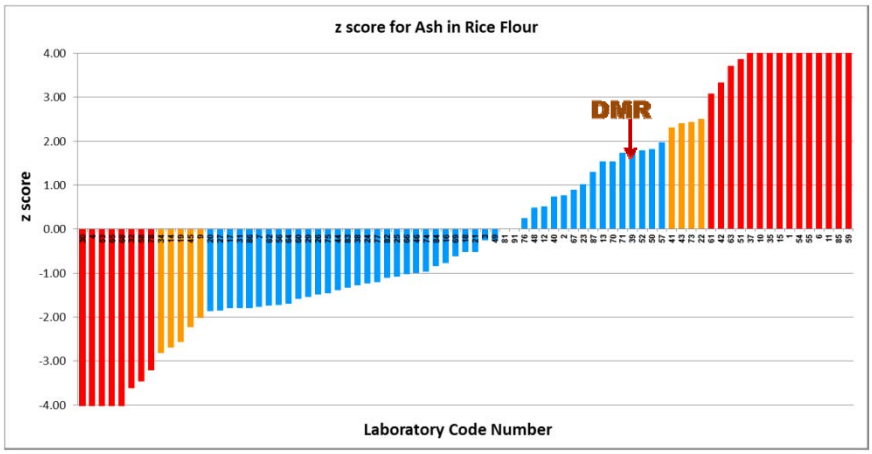
- Outcome: status of laboratory performance, selection of methods for specific analysis, development of consensus values of analytes (?)

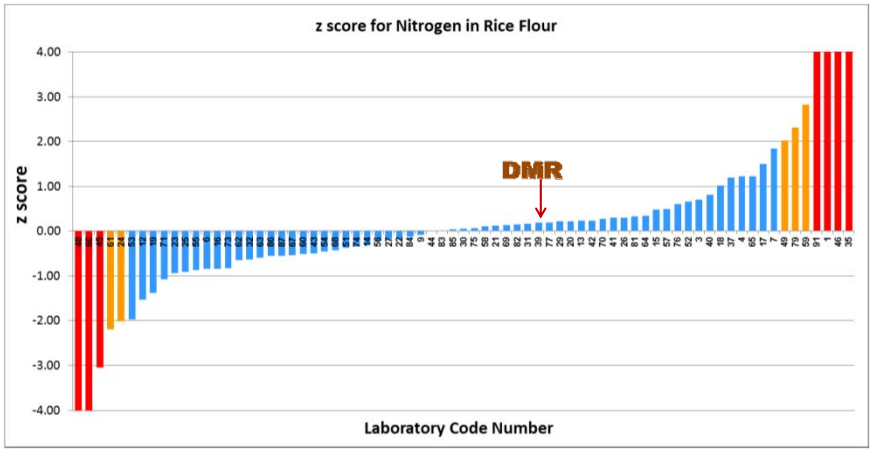
Participating Analytical Proficiency Testing (PT) to Improve Food Laboratory Analyses

Nutrients analysed in APFAN!

- Determination of moisture by Air Oven
- Determination of crude protein by Kjeldhal Method
- Determination of total fat by manual extraction
- Determination of ash by Gravimetric method

Reference: Regional Centre of ASEAN network of Food Data System.Institute of Nutrition, Mahidol University, Thailand,2011.ASEAN Manual of Food Analysis.


z score for Ash in Rice Flour
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
z score
DMR
Laboratory Code Number


z score for Nitrogen in Rice Flour
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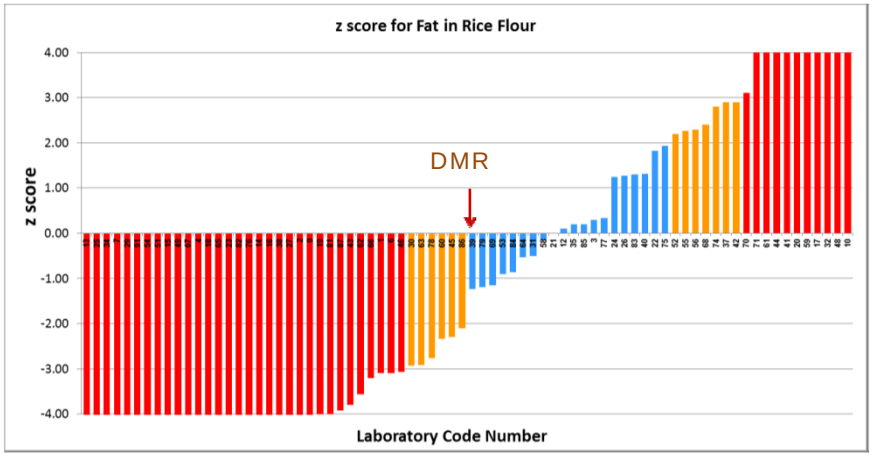
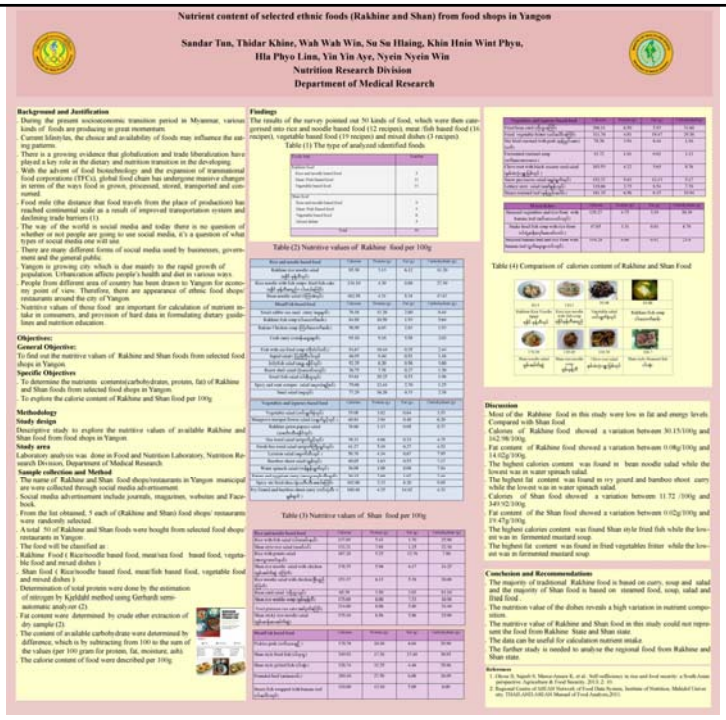
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
z score
DMR
Laboratory Code Number

APFAN PT-2 Workshop

Food Analysis Workshop: Proficiency Testing and Reference Materials Development





Nutrient content of selected ethnic foods (Rakhine and Shan) from food shops in Yangon

Sandar Tun, Thidar Khine, Wah Wah Win, Su Su Hlaing, Khin Hnin Wint Phyu, Hla Phyo Linn, Yin Yin Aye, Nyein Nyein Win

Nutrition Research Division

Department of Medical Research

19th - 21st June 2019, Bangkok, THAILAND

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