

**ILSI SEA Region & ASEANFOODS FOODCOMP Training Course 2018:
Development and Evaluation of Quality Food Composition Database**

Nutrition Research Division, Department of Medical
Research, Ministry of Health and Sports,
No.5. Ziwaka Road. Dagon township. Yangon. Myanmar

September 3-7, 2018

Session	Training Programme
1	<p>Introduction:</p> <ul style="list-style-type: none"> • Components of food composition data system • Conceptual framework for FCDB development • Course content • General characteristics of foods in different food groups
2	<p>Organisation and activities related to FCDB</p> <ul style="list-style-type: none"> • Requirements and uses of compositional databases at different levels • Organisation, activities, and achievement: international, regional and national levels
3	<p>Strategic plan and practices for developing national FCTs/FCDB:</p> <p>3.1 Selection and prioritisation of foods and nutrients for FCDB development</p> <p>3.2 Sampling plan, sampling, sample handling</p> <p>3.3 Photography</p> <p>3.4 Experimental design for developing FCDB related factors</p>
4	<p>Food composition data generation I:</p> <p>4.1 Sample preparation and storage</p> <p>4.2 Analysis of nutrients - proximate composition, minerals, vitamins, fatty acids, cholesterol, sugars</p>
5	<p>Food composition data generation II:</p> <p>5.1 laboratory quality control systems (internal and external)</p> <p>5.2 Implementation of ISO standards throughout FCDB developing system</p>
6.	<p>Development of national food composition databases</p> <p>6.1 General food composition issues</p> <p>6.2 Preparation of archival, reference and user FCDBs: Lecture and demonstration</p> <p>6.3 National FCTs and on-line national FCDB</p>
7	<p>Quality evaluation and checking at different steps throughout the developing process of national FCDB</p> <p>7.1 Evaluation of data quality using EuroFIR guidelines – demonstration</p> <p>7.2 Checking of FCD/FCDB before publication: FAO/INFOODS Guidelines</p> <p>7.3 Quality assessment of national FCDB: INFOODS/ASEANFOODS Guidelines</p>
8	<p>Effective uses of food composition database</p> <p>Discussion, question-answer</p>
9	<p>Hands-on Training</p> <p>Course evaluation and Closing</p>

Lecturers/resource persons:

New Zealand: Prof. Barbara Burlingame

Thailand: Assoc. Prof. Prapasri Puwastien; Assoc. Prof. Kunchit Judprasong and
Mr. Piyanut Sridonpai

ILSI SEA REGION & ASEANFOODS FOODCOMP TRAINING COURSE 2018:
Development and Evaluation of Quality Food Composition Database
 September 3-7, 2018. Yangon, Myanmar

Time	Programme	Lecturers
Day 1. Monday, 3 September 2018		
Opening		
09.00-09.30	Opening and Welcome Speech	<ul style="list-style-type: none"> • Director General, Department of Medical Research • ILSI SEA Region • ASEANFOODS
Session 1. Introduction and Conceptual framework for FCDB development		
09.30-10.15 45 min	Introduction: 1.1 Food composition data system; Conceptual framework and quality systems in FCDB development	Prapasri
10:15-10.30	Morning break and group photo	
10:30-11.15 45 min	1.2 General characteristics of foods in different food groups	Prapasri
Session 2. Organisation and activities related to FCDB		
11.15-12.15 1 h	2.1 Requirements and uses of food composition databases for different sectors 2.2 Organisation, activities and achievement <ul style="list-style-type: none"> • International networks (INFOODS) • Regional level (ASEANFOODS and website) • National level - THAIFOODS 	Barbara. Kunchit, Barbara
12:15-13.00	Lunch break	
Session 3. Strategic plan and practices for developing national FCTs/FCDB		
13.00-14.15 1 h, 15 min	3.1 Selection and prioritisation of foods and nutrients for FCDB development	Prapasri, Piyanut
14.15-15.30 1 h, 15 min	3.2 Sampling plan, sampling and sample handling	Kunchit, Piyanut
15.30-15:45	Afternoon break	
15.45-16.15 30 min	3.3 Photography of food samples	Piyanut
16.15-16.30 30 min	Questions & Answers	All lecturers

Day 2. Tuesday, 4 September 2018		
Time	Programme	Lecturers
Session 3. Strategic plan and practices for developing national FCTs (cont.)		
09.00-10.30 1.5 h	3.4 Establishing FCDB related components/factors: - density (liquid samples) - edible portion - yield factor (cooked food) - nutrient (vitamins) retention factor	Prapasri, Piyanut
10.30-10.45	Morning break	
Session 4. Food composition data generation I: sample preparation and analysis of nutrients		
10.45-12:00 1 h	4.1 Detailed information of food samples to be recorded	Kunchit, Piyanut
12.00-13.00	Lunch break	
13.00-14.00 1 h	4.2 Sample preparation and storage	Kunchit
14.00-15.30 1.5 h	4.3 Food composition analysis: 4.3.1 Main nutrients and energy: proximate composition, dietary fibre 4.3.2 Minerals: AAS, ICP and other methods	Kunchit
15.30-15.45	Afternoon break	
15.45-16.30 45 min	Discussion: Critical control points of main nutrients and minerals analyses: visiting laboratories and facilities	Prapasri, Kunchit
Day 3. Wednesday, 5 September 2018		
Time	Programme	Lecturers
Session 4. Food composition data generation I: Analysis of nutrients (cont.)		
09.00-10:00 1 h	4.3 Food composition analysis (cont.): 4.3.3 Sugars 4.3.4 Fatty acids and cholesterol 4.3.5 Vitamins: fat soluble and water soluble	Kunchit
10.00-10.15	Morning break	
10.15 -11.00 45 min	Discussion: Critical control points of sugars, fatty acids, cholesterol and vitamins	Kunchit, Prapasri

Day 3. Wednesday, 5 September 2018 (cont.)		
Session 5. Food composition data generation II: laboratory quality control system		
Time	Programme	Lecturers
11.00-12.00 1 h	5.1 Internal quality control (QC) systems in food analysis laboratory <ul style="list-style-type: none"> • Repeatability, reproducibility and criteria for acceptance • In-house quality control (QC) sample, quality control chart and its use to demonstrate good performance in precision 	Kunchit
12.00 -13.00	Lunch break	
13.00-13.45 45 min	5.2 External quality control system: Proficiency testing scheme	Kunchit
13:45-14.30 45 min	5.3 Implementation of ISO standards throughout FCDB developing system	Kunchit
14.30-14.45	Afternoon break	
14.45-15.15 30 min.	5.4 Nutrients analyses/analytical methods linked to health, food regulation and food trade	Barbara
Session 6. Development of national food composition database		
15.15 - 16.30 1h 15 min	6.1 General food composition database issues <ul style="list-style-type: none"> • Data sources: analysed (Lab report, published paper, NL, theses, etc), <i>calculated, borrowed</i> • Food identification: food names and description • Food groups • Components identifier: INFOODS Tagnames • Component conventions and expression: <ul style="list-style-type: none"> - Units and denominators, - Significant figures and number of decimal places 	Prapasri, Barbara
Day 4. Thursday, 6 September 2018		
Session 6. Development of national food composition database (cont.)		
09.00-10.30 1.5 h	6.2 Preparation of archival, reference and user FCDB <ul style="list-style-type: none"> • INFOODS and THAIFOODS food composition database template • Preparation of archival, reference and user FCDBs using laboratory data: step-by-step lecture and demonstration 	Prapasri, Piyanut
10.30-10.45	Morning break	
10.45-12.00 1 h	6.3 Preparation of national FCTs and online FCDB: developing plan, components and documentation: hard copy and electronic version - <i>lecture and demonstration (Bangladesh, Thai and INDIA FCTs hard copy and online Thai FCDB database)</i>	Prapasri, Piyanut, Kunchit
12.00-13.00	Lunch break	

Day 4. Thursday, 6 September 2018 (cont.)		
Session 7. Quality evaluation and checking at different steps throughout the developing process of national FCDB		
Time	Programme	Lecturers
13.00-14.30 1 h 30 min	Quality Checking: 7.1 Evaluation of data quality using EuroFIR Guidelines – objectives, process and criteria for evaluation	Prapasri
14.30-14.45	Afternoon break	
14.45-16.15 1 h 30 min	7.2 Exercise: Evaluation of data quality using EuroFIR Guidelines: research paper (Se)	Prapasri, Kunchit, Piyanut, Barbara

Day 5. Friday, 7 September 2018		
Session 7. Quality evaluation and checking at different steps throughout the developing process of national FCDB (cont.)		
09.00-9.45 45 min	7.3 Checking of FCD/FCDB before publication: FAO/INFOODS Guidelines – Version 1.0 (2012)	Barbara
09:45-10:30 45 min	7.4 Quality assessment of national FCDB using INFOODS/ASEANFOODS Guidelines	Kunchit
10.30-10:45	Morning Break	
Session 8. Effective uses of food composition databases		
10:45-11:30 45 min	8.1 Common problems, tips and awareness in using FCTs /FCDB	Prapasri
11:30-12:00 30 min	8.2 Scientific publishing of food composition data	Barbara
12.00-12.30	Recipe calculation	Barbara, Piyanut
12:30-13.30	Lunch break	
Session 9. Hands-on Training		
13.30-15.30 2 h	Group 1. Hand-on training: systematic compilation and development of FCDB	Prapasri, Piyanut, Kunchit
15.30-16.00 30 min	Certificate presentation and Closing	Lecturers and participants
16.00-16.30	Afternoon break	