

REPORT OF THE ASEANFOODS WORKSHOP:
ASEAN MANUAL FOR FOOD ANALYSIS

9-11 October 2002

Submitted to UNU

By

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ACKNOWLEDGEMENT

On behalf of the Technical committee, the organiser and the participants of the ASEANFOODS workshop, we would like to acknowledge the generous

contribution from the United Nations University (UNU) for giving full support for the participants from seven countries and for the workshop expenses.

The Organiser would like to express sincere thanks to the technical coordinators: Dr Tee E Siong from Malaysia and Dr Julia Kantasubrata from Indonesia for their willingness and hard working in editing the ASEAN Manual for nutrient analysis, to Ms Teresita R. Portugal from the Philippines for her contribution in the additional sections on sample preparation and handling, methods validation and quality control system. We hope that with their kind assistance together with the ASEANFOODS technical coordinator, the Manual will be available by the end of 2002 or early 2003.

We would also like to record our heartfelt thanks to all participants for their active and untiring participation before and throughout the workshop. It has been realised that the constant spirit and goodwill among all participants from member countries can strengthen the ASEANFOODS in conducting the previous and future activities on food composition data system.

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REPC UNU
**ASEANFOODS Workshop 2002: ASEAN Manual for nutrient
analysis**
9-11 October 2002

**ASEANFOODS Regional Centre, Institute of Nutrition, Mahidol University,
THAILAND**

INTRODUCTION

ASEANFOODS was established in 1986, with 6 member countries including Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand. Institute of nutrition, Mahidol University (INMU) was designated as the Regional Centre. In 1996, Vietnam was included as a new country member and Cambodia, Lao and Myanmar in 2001. The main activities which have been carried out at the regional centre are to serve the specific objectives of ASEANFOODS.

To fulfill the needs in strengthening the analytical performance of food analysis laboratories in ASEAN, three activities have been performed. They are 1) the development of ASEAN food reference materials, 2) the organisation of laboratory performance studies and 3) the collaboration with other regional networks to strengthen the technical and analytical capabilities and quality assurance programme in member country, i.e. Indonesia.

Moreover, the food composition database (FCD) was compiled from the member countries and a hard copy of the ASEAN food composition tables was developed in 2000.

In order to strengthen the development of FCD, an International Graduate Course on Production and Use of Food Composition Data in Nutrition (FoodComp Asia 2002) was organised in Thailand. The aim of the course was to show how to produce good quality food composition data, and how those involved in the production and compilation of data contribute to the quality and usefulness of FCD.

One of the recommendation from the ASEANFOODS members at the second ASEANFOODS workshop in 1989 and from the participants of FoodComp course which involved participants from three regions – ASEANFOODS, MASIAFOODS, and SAARCFOODS was the documentation and distribution of analytical methods used in ASEAN. The analytical methods used among member countries were, therefore, compiled. The selection/identification of the standard and updating methods to be documented as the ASEAN methods for nutrient analysis was the main objective of this ASEANFOODS Workshop.

OBJECTIVES

This workshop was carried out with the aim to

1. document the ASEAN Manual for nutrient analysis
2. organise an ASEANFOODS meeting

The workshop for documentation of the first ASEAN Manual for nutrient analysis was very tedious. The workshop needs contribution of experts from different countries to review the analytical methods which have been used in member countries. The standard and updated methods must be selected to be documented in the ASEAN Manual. The developed manual can be used among laboratories in ASEAN, especially for the new-developing laboratories, and also for laboratories in other nearby regions.

Two representatives from each member country who have a lot of experience on analytical methodologies were invited to participate the workshop. They were all together 26 delegates from Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. (11 from 6 ASEANFOODS member countries and 15

participants from Thailand). List of participants, their addresses and areas of expertise are list in **Annex 1**.

This workshop was supported by the United Nation University (UNU).

WORKSHOP ACTIVITIES

The activities of the workshop were divided into three phases as follows.

1. Pre-workshop activities (15 July –23 August 2002)

- 1.1 The representatives from each country were requested to prepare and send the national methods of nutrient analysis to the technical coordinator at INMU by attached mails within the third week of August.
- 1.2 The analytical methods from member countries were divided into several groups of nutrients. During September, each participant was assigned to review the analytical methods (submitted from different countries) of one or 2 nutrients according their first and second area(s) of expertise (**Table 1**). They were requested to prepare recommended method(s) for each nutrient to be discussed at the workshop.

2. Workshop activities: 9-11 October 2002

At the workshop, small working groups were formed (as shown in **Table 1**). Each group composed participants from different countries, working together and independently as programme in **Table 2**. *On the first day*, the participants worked with their groups on the first priority nutrient and *the second day* on the secondary priority nutrients. Those who have been assigned to review only one nutrient attended the discussion of the other group of their interested nutrient. At the end of each day, each working group submitted a final copy of analytical methods under their responsibilities. *On the third day*, each group presented the selected method(s) for each nutrient. The ASEANFOODS Meeting was also organised. The previous activities of ASEANFOODS and the status of the country coordinators were reviewed. Future plan of activities were discussed and recommended. Issues for discussion and the report of ASEANFOODS Meeting is presented in the attached **Document No 1**.

3. Post-workshop activity (12-15 October 2002)

The documents prepared during the workshop were partly edited by the technical coordinators from Malaysia (Dr Tee E Siong), Indonesia (Dr Julia Kantasubrata) and Thailand (Dr Prapasri Puwastien). After that the rest of the work were divided among three of them. An ASEANFOODS manual for nutrient analysis will be prepared on a CD, as an electronic version and published as a hard copy. They will then be distributed among the country members and submitted to UNU and FAO for distribution to the needed countries. The manual should be available by the end of the year 2002.

Table 1. List of and nutrients to be reviewed and responsible participants, presented as an order of priority

Nutrient	Assigned to	Order of priority
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Moisture	<ul style="list-style-type: none"> • Roainah HJ Abdul Rahman (BRU) • Teresita R. Portugal (PH) 	1 1
Ash	<ul style="list-style-type: none"> • Roainah HJ Abdul Rahman (BRU) • Teresita R. Portugal (PH) 	1 1
Protein	<ul style="list-style-type: none"> • Teresita R. Portugal (PH) • Roainah HJ Abdul Rahman (BRU) • Julia Kantasubrata (ID) • Khatijah Idris (MY) 	1 1 2 2
Fat	<ul style="list-style-type: none"> • Khatijah Idris (MY) • Ratchanee Kongkachuichai (TH) 	1 1
DF	<ul style="list-style-type: none"> • Karuna Wongkrajang (TH) • Prapasri Puwastien (TH) • Poonsap Wichaipong (TH) • Elinda M. Castillo (PH) 	1 1 2 2
CHO	Group discussion and agreement (Proximate composition)	
Energy	Group discussion and agreement (Proximate composition)	
Sugars	<ul style="list-style-type: none"> • Somkiat Kosulwat (TH) • Julia Kantasubrata (ID) 	1 1
Starch	<ul style="list-style-type: none"> • Poonsap Wichaipong (TH) • Janet Loo (SG) 	1 1
Mineral: Ca, Na, K, Mg Ca, Na, K, Mg Fe, Cu, Zn All All	<ul style="list-style-type: none"> • <i>Komari (ID)</i> • Ha Thi Anh Dao (VN) • Paramee Pengprecha (TH) • Ratchanee Kongkachuichai (TH) • Aikkarach Kettawan (TH) 	1 1 1 2 3
Iodine	<ul style="list-style-type: none"> • Elinda M. Castillo (PH) • Kunchit Judprasong (TH) • Nuntaya Chongchaithet (TH) 	1 2 2
Phosphorus	<ul style="list-style-type: none"> • Aikkarach Kettawan (TH) • Philip John Barlow (SG) 	1 1
Vitamin A, β -carotene, vitamin E	<ul style="list-style-type: none"> • Tee E Siong (MY) • Pongtorn Sungpuag (TH), • Amornrat Pigoolthong (TH) • Le Hong Dung (VN) 	1 1 1 2
Vitamin C	<ul style="list-style-type: none"> • Nongnuch Mayteeyonpiriya (TH) • Niphaporn Lakshanasomya (TH) • Aikkarach Kettawan (TH) • Janet Loo (SG) 	1 2 2 3
Vitamin B1, B2-HPLC Vitamin B1, B2-others	<ul style="list-style-type: none"> • Naruemol Pinrapai (TH) • Niphaporn Lakshanasomya (TH) • Janet Loo (SG) 	1 1 2
Vit B12, niacin	<ul style="list-style-type: none"> • Nongnuch Mayteeyonpiriya (TH) 	2
Folate, B6	<ul style="list-style-type: none"> • Prapasri Puwastien (TH) 	2
Fatty acids, sat fat	<ul style="list-style-type: none"> • Kunchit Judprasong (TH) • Philip John Barlow (SG) • Pimporn Watcharangkul (TH) 	1 2 2
Cholesterol	<ul style="list-style-type: none"> • Pimporn Watcharangkul (TH) • Le Hong Dung (VN) • Somkiat Kosulwat (TH) 	1 1 2
Amino acids	<ul style="list-style-type: none"> • Nuntaya Chongchaithet (TH) • Teresita R. Portugal (PH) • Julia Kantasubrata (ID) 	1 2 3

PROGRAMME: ASEANFOODS WORKSHOP
9-11 October 2002 and 12-15 October 2002 (Post workshop)

Day/time	Activities
9th October	
9.00 - 9.15	<ul style="list-style-type: none"> • Welcome and opening <i>Assistant Director: Dr Anadi Nitithamyong</i>
9.15 - 9.35	<ul style="list-style-type: none"> • Strategic plan and workshop schedule <i>Prapasri Puwastien</i>
Morning session	<ul style="list-style-type: none"> • Small group discussion: analytical methods for the first order nutrients
Afternoon session 13.00 -	<ul style="list-style-type: none"> • Small group discussion (continued) • Preparation of the final documents • Preparation of flow chart for presentation • Submission of the final documents to Dr Pongtorn Sungpuag
17.30 -	Refreshment
10th October	
Morning session 9.00 -	<ul style="list-style-type: none"> • Small group discussion: analytical methods for the second (and third) order nutrient
Afternoon session 13.00 -	<ul style="list-style-type: none"> • Small group discussion (continued) • Preparation of the final documents • Preparation of flow chart for presentation • Submission of the final documents to Dr Pongtorn Sungpuag • Presentation of the recommended analytical method: flow chart <i>Chair: Assoc Prof Dr Prapasri Puwastien</i>
11st October	
Morning session (08:30 -)	<ul style="list-style-type: none"> • Presentation of the recommended analytical methods:(continued) <i>Chair: Assoc Prof Dr Prapasri Puwastien</i> <i>Co-chaire: Assoc Prof Dr Songsak Srianjata</i>
Afternoon session (14.00 -)	<ul style="list-style-type: none"> • ASEANFOODS Meeting <i>Chair: Assoc Prof Dr Songsak Srianjata,</i> <i>Director, INMU and ASEANFOODS Coordinator</i> <i>Co-chaire: Assoc Prof Dr Prapasri Puwastien</i> <i>: Dr Anadi Nitithamyong</i>
17.00	<ul style="list-style-type: none"> • Closing

ASEANFOODS MEETING
 October 11, 2002
Institute of Nutrition, Mahidol University

Chair: Assoc. Prof. Dr Songsak Srianujata

Director, INMU and ASEANFOODS Coordinator

The meeting began with a review on previous ASEANFOODS activities from 1985-2002 by Dr. Prapasri Puwastien, ASEANFOODS Technical Coordinator. Then the meeting proceeded according to the issues provided by the Coordinator.

1. Review the current situation of ASEANFOODS contact points of member countries

In the past, 1-2 representatives as country contacts or Technical coordinators were identified. They are FCD generator or compilers or users. Previous activities on development of reference materials, food composition database, and laboratory performance studies were conducted through the country contact persons. At present, some of them were retired and some changed their position and responsibilities. The representatives of each member country were therefore reviewed/confirmed/identified.

Outcome:

Brunei Darussalam, Indonesia and Vietnam confirmed the names of previous representatives. Dr Tee Siong, Malaysia, confirmed the status of Ms Khatijah Idris, as one of the country representatives (will be called "Alternate coordinator". Since he is now retired from IMR, he is now the President of the Nutrition Society of Malaysia and Scientific Director of the International Life Sciences Institute (SEAsia region). He would like to ask the active group on food composition data system in Malaysia whether they still would like him to be the Coordinator of Malaysia. After the workshop, we are pleased to be informed that he has been designated to continue his responsibility to the ASEANFOODS as the Technical Coordinator. FNRI, designated Ms Teresita R Portugal as the Technical Coordinator for Philippines (effective 1 January 2003). Dr Annie Ling and Janet Loo are the new Coordinator and Alternate coordinator for Singapore. The current list of Coordinators in ASEANFOODS is listed below.

Country	Name and Organisation	Position in ASEANFOODS
Thailand	Assoc. Prof. Dr Songsak Srianujata (INMU Director) Institute of Nutrition, Mahidol University (INMU)	Regional Coordinator
	Dr Prapasri Puwastien, INMU	Technical Coordinator
	Dr Pongtorn Sungpuag, INMU	Alternate Coordinator
Brunei Darussalam	Ms. Hjh Saaimah Haji Abdi Manaf Brunei Agriculture Research Centre, Department of Agriculture	Coordinator
Indonesia	Dr Julia Kantasubrata Research Center for Chemistry, Indonesian Institute of Sciences, Bandung	Technical coordinator (Food composition analysis)

Country	Name and Organisation	Position in ASEANFOODS
Indonesia (continued)	Dr Komari Nutrition and Food Research and Development Center, Bogor	Alternate Coordinator (Food composition database)
Malaysia	Dr Tee E Siong President of the Nutrition society of Malaysia, Scientific Director of the International Life Sciences Institute (SEAsia region)	Technical Coordinator
	Ms Khatijah Idris Food Technology Research Centre MARDI, Kuala Lumpur	Alternate Coordinator
Philippine	Dr Aida Aguinaldo Food and Nutrition Research Institute (FNRI), Department of Science and Technology,	Technical Coordinator
	Ms Teresita R. Portugal FNRI	Technical Coordinator (effective 1 January 2003)
Singapore	Dr Annie Ling	Coordinator
	Ms Janet Loo	Alternate Coordinator
Vietnam	Mr. Le Hong Dung National Institute of Nutrition, Hanoi	Coordinator

2. Extension of membership

In May 2001, ASEAN-COST, Thailand, informed the Regional Centre, INMU, that three countries in ASEAN: Cambodia, Laos and Myanmar, would like to be included in the ASEANFOODS. The Regional Centre agreed to have them as the new ASEANFOODS member countries. Identification of country contacts have been requested. However, till now no information is given. ASEAN FCTs and the ASEAN Manual for food analysis can be distributed to these new member countries. In the future, when the country contact points are identified, they will be invited to participate the ASEANFOODS activities.

Outcome:

The meeting agreed to include Cambodia, Laos and Myanmar in the ASEANFOODS. The ASEANFOODS Coordinator will contact FAO and ASEAN COST for assistance in identifying the contact person/agency.

3. ASEAN FCTs:

The ASEAN FCTs was published in 2000. The data covered were from Indonesia (limited number), Malaysia, Philippines, Singapore (cooked foods), Thailand and Vietnam. Several aspects including future activities on food composition data base of ASEAN were discussed

Outcome:

3.1 Food composition database

3.1.1 *Development of FCT CD-ROM with food photo.*

The meeting discussed about further development of the ASEAN FCTs and agreed to compile FCTs with photographs of uncommon food items into a CD-ROM and a website. The uncommon food items will be identified by each country and the list submitted to Dr. Prapasri.

The photographs of such items will be compiled/prepared later when funding can be secured.

3.1.2 Software for data compilation/installation

The meeting discussed about the possibility of developing a software for data compilation/installation. It was proposed that countries with existing software share it with other countries if possible. A follow-up activity was proposed on this matter.

3.1.3 Promotion of ASEAN FCT

The meeting deliberated about promotion of FCT and agreed to set up a web page to publicise the database and prepare a brochure, probably after the CD-ROM is finished. The web page can be set up on INFOODS website.

3.1.4 Users' training

The meeting agreed that educating the users is necessary. This can be done at national level through several means depending on each country

3.1.5 When will it be updating?

Based on the time for updating of the national FCTs given by each country, the meeting agreed to update the ASEAN FCTs in 2005.

3.2 License/Copyright of the ASEAN FCTs

There were requests of ASEAN FCD from different organisation, i.e. FAO, Singapore Health Promotion Company and users from different countries through e-mail. Some of them asked for the electronic database. What should be the best way to deal with these users.

Outcome:

The meeting discussed about the license/copyright of the ASEANFOODS FCTs. The meeting agreed that the database has a copyright and any commercial application should be charged a royalty/subscription fee. On the other hand, non-commercial utilisation should be allowed.

It was also proposed that the coordinator tries to look for a company to assist in putting the FCTs on the Web.

4. ASEANFOODS Manual of nutrient analysis:

Several issues, i.e. the name of the manual, form of documents, design of the cover and its use were discussed. A limited budget from ILSI/FAO left from the FoodComp 2002 will be used for publication of this manual.

Outcome:

4.1 The name of the manual, format, and contents

The meeting agreed to the name "**ASEAN Manual for Food Analysis**" for the manual of nutrient analysis prepared during the ASEANFOODS Workshop, October 9-11, 2002, Bangkok, Thailand. The format/cover was left for the editors to decide.

4.2 Forms produced: hard copy, diskette, CD-ROM, electronic files

The manual will be produced in the forms of hard copy (regular text binding), diskette and CD-ROM.

4.3 Number of manual per country

If the available budget is sufficient, each country would like to receive 20-30 hard copies of the manual. The manual will also be sent to other regional centers free of charge.

5. Food reference materials (RMs):

A questionnaire for reviewing the status of the use and needs of food reference materials (FRM) among ASEAN countries will be prepared by Dr Prapasri and distributed among the member countries.

Outcome: The meeting agreed that the questionnaires on the use of food RMs be sent to member countries and the countries will return the filled questionnaires within 2 weeks **after receiving**.

6. Laboratory performance study:

The needs for participation in the laboratory performance study and related issues were discussed. Laboratory performance study – round 7 (PT-7), to study the analysis of mandatory nutrients for nutritional labelling was announced. The study plan for laboratory study 7 is presented in **Annex 2**. The participants of the ASEANFOODS Workshop were invited to participate the study free of charge (It was expected that some limited budget might be left from this workshop). However, other laboratories in each country who would like to participate in the study, the registration fee for this round is 100 US\$. The results obtained from this study will show the performance status of various laboratories in ASEAN when their routine analytical methods are used. It is expected the ASEAN Manual for nutrient analysis will be useful for improvement of laboratory performance especially for those whose results are not satisfied.

Outcome:

Every participants registered for PT-7. The test materials and all documents were distributed among representatives from each country. This can reduce the cost for sample distribution and it can ensure that all received the test materials in a good condition.

The meeting agreed to carry out the regional laboratory performance study annually. The cost of the study may be shared among laboratories (100-150 USD each) if no funding can be secured. The organisation of the study at national level is encouraged and following the ISO guide 43 is emphasis.

7. Identification of experts and areas of expertise in ASEANFOODS

The meeting agreed that each member country will provide the list of experts and areas of expertise to the Coordinator by the end of the year 2002.

8. Logo: ASEANFOODS.

The Coordinator informed the meeting that use of ASEAN logo is not allowed. Participants are encouraged to submit the logo of ASEANFOODS. The meeting agreed to look for new designs to be selected by the end of the year 2002. The logo will be first used on the ASEAN Manual for food analysis.

9. Next ASEANFOODS workshop

The meeting proposed that the next **ASEANFOODS Workshop** could be organised in 2003 in conjunction with the ASEAN Food Conference in Vietnam. The topic proposed was on method validation and measurement of uncertainty.

10. Other matters:

- 10.1 The Philippines proposed training on data scrutinisation.
- 10.2 At regional Centre, updated information on ASEANFOODS activities, CODEX standards on methods and QA measures (calibration, method validation, traceability, measurement uncertainty, etc.) should be available (proposed by the Philippines).

- 10.3 % edible portion must be included in every national and regional FCTs – suggested by Dr Barbara Burlingame, FAO, Rome.
- 10.4 CHO by difference should be replaced by analysis of starch, sugars and Dietary fibre - suggested by Dr Barbara Burlingame, FAO, Rome

The ASEANFOODS Meeting closed at about 17.15 h.