



**NSRC**

National Institutes of Health  
University of the Philippines Manila  
Unit 304 New Gold Bond Building  
1579 F. T. Benitez St, Ermita, Manila, Philippines

**NEWBORN SCREENING REFERENCE CENTER**

Trunklines: (+63 2) 247 6002 / 04 / 06 | Fax: (+63 2) 247 6008

Email Address: [info@newbornscreening.ph](mailto:info@newbornscreening.ph) | Website: <http://www.newbornscreening.ph>



NIH10019021  
(2018)

15 April 2019

**CARMENCITA D. PADILLA, MD, MAHPS**

Professor and Chancellor

University of the Philippines Manila

8/F PGH Building, Taft Avenue, Manila

Through Channels

Dear **Chancellor Padilla**:

Re: Approval of additional specification in the Terms of Reference of Biochemical & Nutrient Analysis services for the Research Study of Dr. Juliet O. Sio-Aguilar

As suggested during the BAC 2 meeting held last 02 April 2019, hereunder are revisions to the TOR of the research study of Dr. Juliet O. Sio-Aguilar under item no. 2.2 and 2.3 of the Scope of Services, to wit:

From: 2.2) Vitamins and Mineral Analysis of 30 food products to include a) Phosphorus; b) Iron; c) Vitamin B1 (Thiamine); d) Vitamin B2 (Riboflavin); e) Vitamin B3 (Niacin); and f) Vitamin C (Ascorbic Acid);

To: 2.2) Vitamins and Mineral Analysis of 30 food products to include a) Phosphorus; b) Iron; c) Vitamin A /  $\beta$ -carotene; d) Vitamin B1 (Thiamine); e) Vitamin B2 (Riboflavin); f) Vitamin B3 (Niacin); g) Vitamin B6 (Pyridoxine); h) Vitamin B9 (Folic Acid); and i) Vitamin C (Ascorbic Acid);

and

From: 2.3) Amino Acid Profiling and Analysis of 30 food products; and

To: 2.3) Amino Acid Profiling and Analysis of 30 food products to include a) Histidine; b) Isoleucine; c) Leucine; d) Methionine; e) Phenylalanine; f) Threonine; g) Tryptophan; h) Valine; i) Lysine; j) Arginine; k) Asparagine; l) Glutamine; m) Glycine; n) Proline; o) Serine; p) Tyrosine; q) Alanine; r) Aspartate; s) Cysteine; t) Glutamate; and

In this connection, may we ask your approval of the above-mentioned specifications as addendum to the Terms of Reference of the research study of Dr. Juliet Sio-Aguilar on "Nutritional Therapy of Patients with Inborn Errors of Metabolism Using Locally Available Food Products Phase I."

Thank you very much and I am hoping for your favorable response to our request.

Sincerely yours,

**NOEL R. JUBAN, MD MSc**

Director, NSRC

Conforme:

**JULIET O. SIO-AGUILAR, MD, MSc**

**Recommending Approval**

**DR. EVA MARIA C. CUTIONGCO-DE LA PAZ**

Executive Director, NIH-UPM

Approved by:

**CARMENCITA D. PADILLA, MD, MAHPS**



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2014

16 January 2019

**CARMENCITA D. PADILLA, MD, MAHPS**

Professor and Chancellor

University of the Philippines Manila

8/F PGH Building, Taft Avenue, Manila

Through Channels

Dear **Chancellor Padilla:**

Re: Approval of additional specification in the Terms of Reference of Biochemical & Nutrient Analysis services for the Research Study of Dr. Juliet O. Sio-Aguilar

Per BAC 2 meeting yesterday, 14 January 2019, it was suggested to include that, *the service provider shall be certified on international standards for testing and calibration on laboratory procedures.*

In this connection, may we ask your approval of the above specification to be included in the Terms of Reference to the request for Biochemical & Nutrient Analysis of Selected Food Products for the Research Study of Dr. Juliet Sio-Aguilar on "Nutritional Therapy of Patients with Inborn Errors of Metabolism Using Locally Available Food Products Phase I."

Thank you very much and I am hoping for your favorable response to our request.

Sincerely yours,

  
**MA. ELOUISA L. REYES**


Officer-in-Charge

Conforme:

  
**JULIET O. SIO-AGUILAR, MD, MSc**

Principal Investigator

Approved by:

  
**CARMENCITA D. PADILLA, MD, MAHPS**

Professor and Chancellor, UP Manila





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NH 10019021

## TERMS OF REFERENCE

Biochemical and Nutrients Analysis of Selected Food Products for the Research Study on *Nutritional Therapy of Patients With Inborn Errors of Metabolism Using Locally Available Food Products Phase I* by Juliet O. Sio-Aguilar, MD, MSc.

### I. Overview:

The Newborn Screening Reference Center (NSRC) is providing this Terms of Reference to explicitly stipulate the terms and conditions relative to the request for biochemical and nutrients analysis of thirty (30) selected food products for the research study on *Nutritional Therapy of Patients With Inborn Errors of Metabolism Using Locally Available Food Products Phase I* by Juliet O. Sio-Aguilar, MD, MSc., in compliance with RA 9184 (Government Procurement Reform Act).

### II. Objective:

- 1) To determine the biochemical and nutrient content of commonly used food items using food composition tables and chemical analysis for selected nutrients.
- 2) To determine the carbohydrate, protein, fat, vitamin and mineral contents of commonly consumed foods using chemical analysis.
- 3) To determine the galactose content of different food products using high pressure liquid chromatography.
- 4) To determine the amino acid composition of different food products using high pressure liquid chromatography.

### III. Name of the Project:

Biochemical and nutrient analysis of thirty (30) selected food products to wit:

1. Bread, Pan de Sal (Gardenia) – 3 packs
2. Corn on Cob, Yellow (Honey Brand) – 8 packs 425 grams
3. Noodles, Mung Bean Starch (Komeya) – 3 kilograms
4. Pasta, Spaghetti (Del Monte) – 3 kilograms
5. Rice, Well-Milled (Dizon Farm) – 3 kilograms
6. Rice Porridge – 3 kilograms
7. Potato (Dizon Farm) – 3 kilograms
8. Sweet Potato (Dizon Farm) – 3 kilograms
9. Mung Bean Seed, Green (Shin-shin) - 3 kilograms
10. Bottle Gourd / White Squash Fruit (Dizon Farm) – 3 kilograms
11. Carrot (Dizon Farm) – 3 kilograms
12. Chayote Fruit (Dizon Farm) – 3 kilograms
13. Eggplant (Dizon Farm) -3 kilograms
14. Horseradish Tree Leaves (Dizon Farm) – 3 kilograms
15. Canned Mushrooms (Jolly) – 6 cans 850grams
16. Pechay Leaves (Dizon Farm) – 3 kilograms
17. Snap Bean Pod, Green – 3 kilograms
18. Squash Fruit (Dizon Farm) – 3 kilograms



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19. Swamp Cabbage Leaves (Dizon Farm) – 3 pieces
20. Tomato (Dizon Farm) – 3 kilograms
21. Banana, Latundan (Dizon Farm) -3 kilograms
22. Banana, Saba (Dizon Farm) – 3 kilograms
23. Mango, Manila super, ripe (Dizon Farm) – 3 kilograms
24. Papaya Fruit, ripe (Dizon Farm) – 3 kilograms
25. Pineapple (Dizon Farm) – 3 kilograms
26. Beef Ground (Robina) – 3 kilograms
27. Chicken, Breast (Magnolia) – 3 kilograms
28. Pork Ham (Robina) – 3 kilograms
29. Milkfish (Fresh Trade) – 3 kilograms
30. Scad, Round (Fresh Trade) – 3 kilograms

IV. Funding Source:

The estimated total amount chargeable against Trust Fund 142-B is Two Million Two Hundred Sixty-One Thousand Nine Hundred Fifty-Two Pesos (₱2,261,952.00) which is part of the research funding granted to the study of Juliet O. Sio-Aguilar, MD, MSc.

V. Scope of Services:

1. The sample size per food product is 1500 grams.
2. The sample test parameters include:
  - 2.1) Proximate Analysis of 30 food products to include a) Crude Protein; b) Crude Fat; c) Moisture; d) Ash; e) Total Carbohydrates; f) Calories from Fat, Protein and Carbohydrates; and g) Total Calories;
  - 2.2) Vitamins and Mineral Analysis of 30 food products to include a) Phosphorus; b) Iron; c) Vitamin B1 (Thiamine); d) Vitamin B2 (Riboflavin); e) Vitamin B3 (Niacin); and f) Vitamin C (Ascorbic Acid);
  - 2.3) Amino Acid Profiling and Analysis of 30 food products; and
  - 2.4) Galactose Level Analysis of 30 food products.
3. Custom Clearance charges of Amino Acid and Galactose level Analysis shall be billed to Newborn Screening Reference Center thru the Principal Investigator, Juliet O. Sio-Aguilar, MD, MSc.;

VI. Duration of the Project:

Turn-around time shall be thirty (30) working days from receipt of samples;



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VII. Other Specifications:

1. Result of food products analysis shall be sent to:  
Juliet O. Sio-Aguilar, MD, MSc.  
Department of Pediatrics  
College of Medicine-Philippine General Hospital  
University of the Philippines Manila  
Taft Avenue, Manila, Philippines
2. Payment shall be in Philippine Peso, inclusive of applicable VAT, payable not later than thirty (30) days from receipt of Invoice.

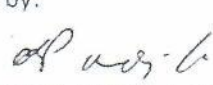
This is to certify that the information specified in this Terms of Reference is provided by the Principal Investigator of the research study.

  
RIZA CONCORDIA N. SUAREZ  
OIC, NSRC 10-12-18

Conforme:

  
JULIET O. SIO-AGUILAR, MD, MSc.  
Principal Investigator

Approved by:

  
CARMENCITA D. PADILLA, MD, MAHPS  
Professor and Chancellor  
UP Manila

03 DEC 2018