CODEX ALIMENTARIUS COMMISSION E

Food and Agriculture Organization of the United Nations

World Health Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: codex@fao.org - www.codexalimentarius.net

Agenda Item 3(a) **CX/ASIA 10/17/3**
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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

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DRAFT REGIONAL STANDARD FOR EDIBLE SAGO FLOUR (N06-2007)

COMMENTS AT STEP 6

(Replies to CL 2009/25-ASIA of Philippines)

Philippines

The Philippines would like to extend its appreciation to Indonesia for the development of the Proposed Draft Regional Standard for Edible Sago Flour (N06-2007).

The following is the Philippine Position on the Proposed Draft Regional Standard for Edible Sago Flour:

1. In Section 2.1, Product Definition:

   The Philippines would like to suggest this new product definition:

   "Edible Sago Flour is the product derived from the pith or soft core of sago palm tree (*Metroxylon sp.)* through the process of extraction, purification and dehydration."

   Rationale:

   The process definition is very specific and may not cover other processes used to extract flour from the sago palm tree. The use of the terms "extraction, purification and dehydration" is more general and encompassing.

2. Section 3.1.1
   The Philippines would like to propose the following new text:
   "Edible sago flour shall be free from off-flavours and odors."

   Rationale:
   Edible flour should be free from either living or dead insect. Moreover, this should be included in the provision on "filth"

3. In Section 3.1.2.
   The Philippines would like to propose the following text:
   "It must be free from filth and other extraneous matters."
   Rationale:
   Delete the phrase in open and close parenthesis as the statement is sufficient as it is.

4. In Section 3.2.2, Ash Content
   The Philippines would like to propose that the ash content for Edible Sago Flour to be at 2.0% maximum.
   Rationale:
   The proposed standard for edible sago flour is more stringent than Codex Standard 176-1989 (revised 1995) for cassava, which stipulates an ash content of 3.0% maximum.

   Whereas wheat flour does not require any, it is because the worst bran content as in whole wheat flour is still edible. Codex Standard for wheat flour (Codex 152-1985) stipulates no value but states that "buyer

preference“. This means that the degree of bran contamination or impurity (as reflected in the ash content) might not be a quality requirement anymore for wheat flour.

Based on the paper[1] prepared by Prof. Dulce M. Flores, PhD of the University of the Philippines in Mindanao, ash content of sago flour can go as high as 6 or 9 %. However, it is now so rough to the palate and thus, it is almost inedible. The biggest difference from all the rest of the flours is this ash content comes from the plant's main trunk, not just kernel or tuber, thus the fibrous content is so high. From sensory evaluation, 2% is the optimum and acceptable ash content in sago flour-based food preparations. In the case of cassava, 3% is still tolerable. Thus, we propose for the ash content for edible sago flour to be at 2.0% maximum.

5. In Section 3.2.5. Crude Fiber
   We would like to propose the crude fiber content for edible sago flour to be at 2.0% minimum.
   Rationale:
   The proposed crude fiber level at 0.1% is too stringent. Codex standard for wheat flour does not even stipulate crude fiber anymore. The results obtained from the study[1] by Prof. Flores showed crude fiber to be as low as 1% in the fine 60-mesh fraction, whose ash content is 2.4%.
6. In Section 3.2.8, Color

   The Philippines would like to propose that Section 3.2.8 for Color in 'L' value be added at 90 minimum.

   Rationale:
   Sago starch has an inherent color which differs from other type of starch, thus there should be a parameter pertaining to it and should be in a measurable value.

   Sago flour or sago starch can be produced pure white like any other starch especially using chemical bleaching. However, for sago flour for food purposes, the inherent color can go uncontrollably dark brown if the process is not carefully protected from water, or if the sedimented starch after washing and decanting is not dried quickly. Thus, color can be a quality parameter and a minimum color standard of deviating from white should be set.
7. In Section 7.1, Name of Product
   We propose to change the wording of the section to be written as follows:

   The name of the product, as declared on the label shall be "sago flour".

   The name "sago flour" shall have in its close proximity a declaration of "Food Grade".

   Rationale:
   The use of the word edible in the label is quite redundant and its use is not normally practiced in the food industry.
8. In Section 8.1
   We would like to suggest that the work "nutrition" from the statement.
   Rationale:
   The packaging material does not necessarily protect the nutritional property of sago flour and in most Codex standard, protection of nutritional property is not reflected.

[1] Please see attached file (p. 4 of this document) on the excerpts from paper of PROF, DULCE M. FLORES, PhD of the University of the Philippines - Mindanao

EXCERPTS FROM THE PAPER OF PROF. DULCE M. FLORES, PhD:

FLORES, D.M. 2009. *From the sago log to the table: an alternative method of sago flour processing* Keynote paper presented at the First ASEAN Sago Society Symposium, 29-31 October 2009 Riverside Majestic Hotel, Kuching, Sarawak, Malaysia.

Table 1. Proposed grading of sago flour fractions by chemical composition[a].

Proposed Grade	**Flour fraction**	**Moisture %**	**Total Ash.% (db)**	**Crude Fiber % (db)**	**Total Polyphenols % (db)**	**Total Starch % (db)**	**pH**
		Max.	**Max.**	**Max.**	**Max.**	**Min.**	
A[b]	F200[c]	13.00	1.60	0.08	0.35	95.60	6
B	F100	13.00	2.00	1.06	0.56	91.40	6
C	F60	13.00	2.40	1.50	0.78	86.52	6
D_1	C200	13.00	9.02	8.40	5.04	63.53	6
D_2	C100	13.00	6.30	8.05	4.81	67.70	6
D_3	C60	13.00	4.80	6.40	3.83	73.40	6

[a] Crude fat and protein combined are less than 1% and are thus considered negligible.
[b] The superior grade in this study based on starch content and it is lightest in color, as related to crude ash content, and the suitability in food applications.
[c] F200 means fines, from Sieve no.200 in this case, and so on. C for coarse.

NOTES: THE THREE FLOUR GRADES RECOMMENDED IN THIS STUDY WOULD BE:

FLOUR GRADE	FLOUR MESH SIZE	BASIS
A	F200	Purity of starch content and color
B	F100	"
C	F60	"
But F60 could be Grade A		If basis is on nutritional value, like crude fiber, crude ash, total polyphenols (as antioxidants)

TABLE 4. COMPARISON OF SAGO STANDARDS FROM LITERATURE, AND OTHER FLOURS

Parameter	Cassava flour CODEX 176-1989	Wheat flour CODEX 152-1985	DRAFT PROPOSED BY THE COMMITTEE	My Proposed	Karim, et al. MS470(1992) For sago starch* SIRIM std
Moisture Content	13%m/m max	15.5 % m/m max	13%m/m max	13%m/m max	13%m/m max
Total Ash (dry basis)	Max 3.0%	Buyer preference	0.5% m/m max	2.0% m/m max	0.2% max
Acidity,mg KOH/100g	none	70mg/kg as sulfuric acid: Fat acidity	220 max	220 max	4.5-6.5
Crude Fiber (dry basis)	Max 2.0%	none	0.1% m/m max	Max 2.0%	0.1 max
SO_2, ppm	none	200mg/kg for SO2	200mg/kg as residual SO2	200mg/kg as residual SO2	30ppm
Particle Size	Min: fines (0.6mm sieve) 90%shall pass through or 28-mesh	98% 0r more of flour shall pass through a 212micron (No.70) sieve	*Not a quality parameter*	99% min shall pass through No.60 or Sieve 60-mesh	125mesh

* not necessarily food grade but industrial and starch purity is the standard, approaching 99%db.