PHILIPPINE RICE SAFE FROM ARSENIC

| ELLA LOIS T. BESTIL AND
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Here's good news to our local rice-eating comrades: Philippine rice is arsenic-safe.

"Unlike some 60 rices and rice products in the US that the Food and Drug Administration reported to contain cancer-causing arsenic, locally grown rice varieties are safe from it," said PhilRice chemist Joy Bartolome Duldulao.

Our local rices are safe as our irrigation water is arsenic-free.

Arsenic is a naturally occurring metal in the soil in very negligible amounts, if not for environmental pollutants such as arsenic-containing fertilizers that seep through water and soil.

In his recent study, Duldulao found rices sampled all over the country to have safe levels of arsenic. These samples included 18 milled rices of commonly grown varieties, with one from a commercial outlet, and seven brown rices.

The samples were analyzed using an inductively coupled plasma-optical emission spectrometer (ICP-OES), and their arsenic levels were below the ICP-OES detection limit of 15 parts per billion (ppb).

The Philippines has not yet set a maximum limit of arsenic in rice. Australia and New Zealand (1000 ppb total arsenic in cereals) and China (150 ppb inorganic arsenic for rice and rice products) have set limits.

The global "normal" range for arsenic concentration in rice is 80-200 ppb. A study by Yamily Zavala and John Duxbury at Cornell University in New York revealed that arsenic concentrations in rice from the US and Europe were similar (198 ppb), and significantly higher than rice from Asia (70 ppb).

The Cornell study showed that arsenic-contaminated irrigation water, not soil, led to increased grain arsenic concentration. As rice is grown in flooded soils, it absorbs and stores a lot more arsenic compared to other plants through its roots.

While some Philippine rices are safe, Duldulao said there is no data yet on whether rice imported into the country is safe from arsenic.

Arsenic content of rice may vary across locations and not varieties, he said. As arsenic levels in countries outside Asia are reported to be higher, the more should the public regulate the amount of rice they eat to avoid health risks such as cancer associated with arsenic consumption.

"A person [may eat] less rice with arsenic. Eat the right amount of rice and you'll be safe," Duldulao said.

Other carbohydrate sources should also be tried by Filipinos, Duldulao said, since the elevated level of arsenic in rice as compared to other starchy foods is associated with its being grown in flooded soil conditions. Alternative staples do not grow in flooded soils. A diversified diet also helps guarantee that daily nutritional requirements of the body are met. ◪

Heirloom rice from the Cordillera was not tested in in the samples reported on in the article. Eighth Wonder, Inc. (USA) contracted with the same company, SGS Philippines, to test its line of rice. The following results are consistant with what was found with other rice varieties grown in the Philippines. No arsenic was detectable.

SGS

Manila, 20 May 2013
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PHL13-02928

RESULTS OF ANALYSIS

CLIENT : DULDULAO, JOY BARTOLOME
ADDRESS : PHILRICE, MALIGAYA, NUEVA ECIJA
DATE RECEIVED : 10-May-2013
DATE REPORTED : 20-May-2013

Analysis based on sample(s) submitted by DULDULAO, JOY BARTOLOME, SGS Philippines, Inc. does not guarantee that shipment/delivery corresponds to sample(s) submitted nor does SGS Philippines, Inc. guarantee that sample(s) submitted is a (are) random preparation of the shipment/delivery.

CLIENT'S REFERENCE / LABORATORY NO	Arsenic (As) (Trial 1)	Arsenic (As) (Trial 1)	Arsenic (As) (Average)
RICE SAMPLE / OMINIO / PHL13-02928.001	< 0.05 ppm	< 0.05 ppm	< 0.05 ppm
RICE SAMPLE / UNOY / PHL13-02928.002	< 0.05 ppm	< 0.05 ppm	< 0.05 ppm
RICE SAMPLE / JEKOT / PHL13-02928.003	< 0.05 ppm	< 0.05 ppm	< 0.05 ppm
RICE SAMPLE / DIKET / PHL13-02928.004	< 0.05 ppm	< 0.05 ppm	< 0.05 ppm
RICE SAMPLE / TINAWON / PHL13-02928.005	< 0.05 ppm	< 0.05 ppm	< 0.05 ppm
RICE SAMPLE / ULIKAN / PHL13-02928.006	< 0.05 ppm	< 0.05 ppm	< 0.05 ppm

Methodology: Acid Digestion and Quantitation by Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES)
Note: 1. "<" : less than means the test result is lower than the Minimum Detection Limit.
2. Minimum Detection Limit: Values after the less than (<) sign.

Signed for and on behalf of
SGS PHILIPPINES, INC.

Meden L. Peneyra
Laboratory Operations Manager

LTR 159001