



United States Department of Agriculture

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Packers and Stockyards
Administration

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TO: FGIS POLICY BULLETIN BOARD

FROM: Anthony Goodeman */s/Anthony Goodeman*
Deputy Director
Field Management Division

SUBJECT: Milled Rice Fortification Determination

ORIGINATING OFFICE: Policies, Procedures, and Market Analysis Branch

1. PURPOSE

This policy memorandum provides instructions for determining whether a sample or lot of milled rice is fortified.

2. BACKGROUND

NOTE: The factor “fortified” is not defined under the United States Standards for milled rice, but may be determined at the request of the applicant.

U.S. Government food programs are currently contracting for milled rice that is fortified either by rice coating or extruded technology. In the past, U.S. Government food programs contracted for rice enriched with a powder form of a micronutrient pre-mix. This technique is known as dusting and makes the rice more susceptible to nutrient loss during transport, storage, preparation, and cooking.

The coated rice fortification technique consists of spraying several layers of a mineral & vitamin premix onto the surface of rice kernels to form a protective coating. The coated rice is then blended with non-fortified rice at a predefined dilution to produce fortified rice.

The extruded rice fortification is a mixture of rice flour, mineral & vitamins extruded to produce a kernel which mimics the physical characteristics of rice. The fortified kernels are then blended with non-fortified rice, typically at a 1:100 ratio. Since the micronutrients are inside the extruded kernels, they can't be rinsed out of the rice.

3. PROCEDURES

- a. Inspection. If an applicant requests testing for fortification (coated or extruded), analyze 500 grams and certify the results according to the procedures listed below.
 - (1) From the 500-gram (heat/seed) portion remove at least 15 coated or extruded kernels (approximately 1 gram.)
 - (2) Place the 15 selected kernels in a porcelain spot plate well. Reference Policy Bulletin #247, dated March 05, 2012, Attachment 1 “Prussian Blue Method for Iron Enrichment in Milled Rice.”
 - (3) After testing, if the fortified kernels turn blue, the rice sample is fortified. If the fortified kernels do not turn blue, the rice sample is not fortified.

NOTE: If an applicant requests an inspection for non-fortified milled rice and coated or extruded kernels are present they will function as foreign material.

- b. Certification. To certify rice that is fortified, type “yes” in the “Factor Result” section of the certificate next to the factor “fortified.” In the “Factor Remarks” section, type the following statement, “This Milled rice is fortified”. Located in the “Include in Certificate” section, select “Remarks.”

4. FILING INSTRUCTIONS

Retain a copy of this memo with Chapter 5 of the Rice Inspection Handbook until the handbook is revised to include new guidelines for determining and testing of fortification in milled rice. Field Office Managers please provide a copy of this memorandum to the official agencies within your circuit that are responsible for determining and testing of fortification in milled rice.

5. QUESTIONS

Direct any questions concerning this policy to Beverly Whalen, Policies, Procedures, and Market Analysis Branch (PPMAB) at (816) 659-8410 or email at Beverly.A.Whalen@usda.gov