

MOST URGENT

F. No: 36-5/2018-QCC (Part)
Government of India
Ministry of Consumer Affairs, Food & Public Distribution
Department of Food & Public Distribution
(Quality Control Cell)

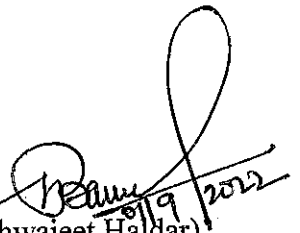
Krishi Bhawan, New Delhi
Dated 01.09.2022

Office Memorandum

Sub: Draft Operational Guidelines on Quality Control for Fortified Rice Kernels (FRK) and Fortified Rice (FR)-reg

I am directed to forward herewith a copy of Draft Operational Guidelines on Quality Control for Fortified Rice Kernels (FRK) and Fortified Rice (FR) formulated by the Department of Food and Public Distribution. In this regard, you are requested to provide comments/suggestion (if any) on Draft Operational Guidelines on Quality Control for Fortified Rice Kernels (FRK) and Fortified Rice (FR) to this Department within 15 days of receipt of this communication.

Encl: As Above


(Vishwajeet Halder)
Deputy Commissioner (S&R)
Tel: 23384784

To,

- All State/UT, Principal Secretary/Secretary (Food and Civil Supplies Department).
- The PSO to the Secretary (DFPD), D/o of Food and PD, Krishi Bhawan, New Delhi.
- The PPS to the Secretary, Department of School Education, Shastri Bhawan, New Delhi.
- The PPS to the Secretary, Department of Women and Child Development, Shastri Bhawan, New Delhi.
- The Director General, BIS, Bahadur Shah Zafar Marg, New Delhi.
- The CEO, FSSAI, FDA Bhawan, New Delhi.
- The CEO, NITI, Aayog, New Delhi.
- The PPS to the AS&FA, D/o Food and PD, Krishi Bhawan, New Delhi.
- The PPS to the JS (Impex & IC)/JS (BP&PD)/ JS (P&FCI)/ JS (Stg. &PG), D/o Food and PD, Krishi Bhawan, New Delhi.
- The CMD, FCI Hqrs., New Delhi.
- The Executive Director (QC), FCI, Hqrs., New Delhi.
- All the Executive Director (Zones), FCI.
- The MD, CWC, New Delhi.
- The PS to the Director (PD)/ Director (Finance)/DS (FCA/Cs)/DS (BP)/ DS (FCI)/DS (Py-I).
- The Director (Technical), NIC-with request to host the same on Department's website.

Draft Operational Guidelines on Quality Control for Fortified Rice Kernels (FRK) and Fortified Rice (FR).

In pursuance of the announcement made by Hon'ble Prime Minister in his address on 75th Independence day, Government of India has approved supply of fortified rice throughout the Targeted Public Distribution System (TPDS) under the National Food Security Act (NFSA), Integrated Child Development Service (ICDS), Pradhan Mantri Poshan Shakti Nirman (PM POSHAN) and other welfare schemes (OWS) of Government of India in all states and Union Territories (UTs) in phase wise manner.

The overall objective of the scheme is to address the anemia and micronutrient deficiencies reported in the vulnerable sections of the society. Here, the Quality Control (QC) of Fortified Rice Kernel(FRK)/ Fortified Rice (FR) will play a magnificent role in achieving the desired objective. In view to this, all stakeholders involved under domestic food supply chain/social security programmes may be encouraged to ensure the quality standards of FRK & FR. In order to ensure that, the quality product is produced and reaches to the Targeted beneficiaries, it would require all the stakeholders to perform a proactive role in the entire ecosystem of rice fortification.

The detailed operational guidelines as mentioned below will act as a ready reference for all the stakeholders involved from production to distribution of FRK/FR throughout the country.

I. Quality Control at the level of Fortified Rice Kernel (FRK) Manufacturer/ Supplier:

- a. FRK manufacturers should have FSSAI License/registration as well as quality certification such as ISO: 22000 etc.
- b. FRK manufacturer should procure the premix for FRK production from the premix supplier/vendors having valid FSSAI license of 99.5 food category as well as empanelled with FSSAI.
- c. The Standard Operating Procedure formulated by FSSAI for Fortified Rice Kernel production (issued during year 2022) may be strictly followed. In order to avoid the micronutrient loss during procurement to distribution, the level of added micronutrients/fortificants should be preferably at the mean value of range suggested by FSSAI/BIS
- d. Potable water shall be used for mixing of ingredients (complying Indian Standards for Potable Water Standards IS 10500: 2012 with up to date amendments).
- e. FSSAI approved emulsifiers / acid regulators / antioxidants shall be used as per the allowances prescribed in Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011.
- f. The specifications of Rice Floor, Vitamins-Minerals premix for preparation of FRK & level of micronutrients in FRK should be as per the Food Safety Standards (Food Products, standards & food Additives) amendment regulation 2022.
- g. Sanctity of the raw material/fortifiers/ingredients used for FRK production should be verified by the State Authorities/Food Safety Officers (FSO) on regular basis.
- h. BIS approved equipment/machinery via IS 17853: 2022, "*Equipment for Manufacture of Fortified Rice Kernel-Specification*" should be adopted by the FRK manufacturers to maintain the grain density, shape, size etc. In addition, Colour/texture to be aligned with the locally procured/consumed varieties in a particular State/Area.
- i. Certificate of Analysis (CoA) is to be obtained from an independent third party NABL accredited laboratory under section 43 of FSS Act 2006 and FSS Regulation, 2018.
- j. FRK manufacturer will obtain a COA for each batch from an independent third party NABL accredited lab along with self certification. The batch may be defined based on

the Quality Management System (QMS). The QMS should be in accordance with the FSSAI Manual on General Guidelines on Sampling- 2016.

- k. FRK manufacturers will strictly maintain the records of COAs, other test records & FRK standardization count/BET etc. A test check will be done to verify the self certification procedure adopted by FRK manufacturer (*format for self certification enclosed as Annexure*) by S&R Division of DFPD. FCI may also test check these records at the time of procurement.
- l. All the standards/protocols specified under the operational guidelines of the pilot scheme should be in line at the end of empanelled FRK producers, before its delivery to the rice millers/ procuring agencies.
- m. The finished products should not be stored directly on the floor. Preference for dispatch of may be given to the FRK lots manufactured on earlier date.

II. Quality Control during production of Fortified Rice at Rice Mills :

- a. The rice miller should have a valid milling license and a valid license for processing of fortified rice under food category 6.0 of Indian Food Categorization System (Food Safety & Standards Act, 2006).
- b. The Standard Operating Procedure formulated by FSSAI for fortified rice manufacturer (issued during year 2022) may be strictly followed while manufacturing the fortified rice.
- c. The procuring agencies or millers should procure FRK from FSSAI licensed/registered FRK manufacturers only.
- d. The capacity building of rice millers/staff for BET test, Iron spot test, compliance of storage guidelines and maintenance of good hygienic and manufacturing practices, packaging & record keeping etc. should be done prior to the commencement of FRK production.
- e. Rice millers should maintain batch wise record of FRK procurement and its usage for rice fortification as per CoA obtained from the FRK manufacturers.
- f. In order to ensure that only good quality FRK is used for blending, the state procurement agency concerned may get random samples drawn directly from the fortified rice prepared by the mills and get them tested from any FSSAI approved NABL accredited labs.
- g. Rice Millers will also be ensuring about packaging protocols of fortified rice as per FSSAI Packaging and Labelling Guidelines, related to packaging and Stencilling for proper identification of fortified rice stock.
- h. Rice millers should make provisions for internal audit once in six month and external audit once in a year for maintaining the quality management system.
- i. Millers should have Automatic Blending Machine having the standards prescribed by BIS *i.e.* IS 17854: 2022 to ensure accurate blending at a ratio of 1:100. During the production of fortified rice, quality checks should be done through blending efficiency counts conducted on hourly basis and proper record should be maintained.
- j. Millers should get +F logo endorsed from FSSAI. All bags of fortified rice offered for procurement to the procuring agencies must bear blue coloured +F logo stencilled on it as well as on rexin slips & regulatory instructions suggested by FSSAI from time to time. The offered lot of fortified CMR should be uniformly blended with FRK (1:100).
- k. FCI/ State Agencies should specify all pre-requisites including blending ratio (1:100) of FRK with conventional rice, availability of CoA, validated FSSAI license of rice millers etc. in their tenders to ensure uniformity and ease of QC protocols.
- l. Procuring agency (FCI/State agency as the case may be) may use the range of (\pm)10% for blending efficiency for their operational ease.

III. Quality Control at the level of agencies during Procurement/Sourcing of Fortified Rice

From Millers

- a. Fortified rice consignments are to be checked by the quality control personnel of procuring agencies/Ministry as per the existing procedure for analysis of food grains (BIS methods with latest version/up to date amendments).
- b. All the responsibilities are lying with agencies (FCI/State Government etc), for the stocks delivered to them. This aspect may be cross checked during the inspections to be conducted by Ministry and FCI as per Standard Operating Procedure (SOP) for inspection of DCP stocks.
- c. For Qualitative and Quantitative tests of fortified rice the provisions mentioned under Standard Operating Procedure on Quality Management protocols for Fortified Rice Kernels and Fortified Rice issued by Government of India dated: 15.03.2022 shall be applicable.
- d. Additionally, all the provisions of the Standard Operating Procedure (SoP) for monitoring quality of foodgrains stocks procured under Decentralized Procurement (DCP) Scheme, which have already been defined and circulated on dated 16.07.2021 will also be applicable.

IV. Quality Control at the level of State/ District Authorities (Food Safety)

- a. State and District authorities should undertake random inspection visits at the rice mills to check if the rice miller is adhering to the QC protocols and all documents are in line as prescribed by Ministry, FSSAI & BIS. The samples of fortified rice may also be lifted for analysis at FSSAI empanelled NABL accredited Labs.

Role of FSSAI

- a. The role of FSSAI shall be in accordance with the guidelines mentioned under Standard Operating Procedure on Quality Management protocols for Fortified Rice Kernels and Fortified Rice issued by Government of India dated: 15.03.2022
- b. In addition to this, FSSAI may also address various qualitative and quantitative /technical/ regulatory/ promotional issues or doubts raised by the personnel's/individuals/FBOs/other stakeholders for smooth implementation of the scheme.

In addition to above provisions, the Standard Operating Procedure on Quality Management protocols for Fortified Rice Kernels and Fortified Rice issued by Government of India dated: 15.03.2022 shall also be applicable.

Format for Self Assessment Certificate

Name of the Laboratory: _____

NABL Accreditation no.: _____ dated _____ Validity upto _____

FSSAI License no.: _____ dated _____ Validity upto _____

Name of Manufacturer: _____ Details of Sample:

FSSAI No. _____ i. Date of sampling: _____

Address: _____ ii. Date of Submission of sample: _____

Contact no.: _____ iii. Date of Analysis: _____

Capacity: _____ tons/hr. iv. Batch no.: _____

v. Representing Batch: _____

vi. Sample weight (gms): _____

Details of Testing:

(A)

Micronutrient	Reference Range	Test Value	Reference method	Test	Test method followed
Iron (Micronized Ferric Pyrophosphate)	2800-4250 mg/kg		AOAC 944.02 or AACC 40-70.01 (Total iron present in ferric form by Atomic Absorption Spectroscopy or AOAC 984.27 (using ICP Emission))		
Folic Acid	7500-12500 µg/kg		AOAC 992.05 or EN 14131 (using microbiological extraction)		
Vitamin B12 (Cyanocobalamine or Hydroxycobalamine)	75-125 µg/kg		IS 16640		

(B)

Sl. No.	Physical attributes	Reference Range	Test Value	Reference method	Test	Remarks
1.	Moisture Content %	12%		IS 4333(Part 2)		
2.	Broken Fortified Rice	1%		IS 4333(Part 1)		
3.	Foreign matter	0.001%		IS 17782:2021		
4.	Damaged grains	Absent		IS 4333(Part 1)		
5.	Discolored grains	Absent		IS 4333(Part 1)		
6.	Chalky grains	Absent		IS 4333(Part 1)		
7.	Admixture	Absent		IS 4333(Part 1)		

8.*	Uric Acid, mg/Kg, on mass basis, not more than	100.0			
9.*	Yeast and Mould Count (cfu/g)	1×10^2		-	
10.*	Aerobic Plate Count (cfu/g)	1×10^4		-	
11.	Length (in mm)	-			
12.	Breadth (in mm)	-			
13.	Thousand kernel weight	-			
14.	True density	-			
15.	Prepared from (Raw/Parboiled) Rice	-			

*** The reference range is as per the limits mentioned by FSSAI

Remarks: Best before _____

(Authorized Signature)