



IS 17854 : 2022 Equipment for Manufacture of Fortified Rice — Specification

Fortified rice is regular rice enriched with essential nutrients, such as iron, vitamin B12, and folic acid, to improve its nutritional value while Fortified Rice Kernels (FRKs) are specially manufactured rice grains containing concentrated nutrients, created to be mixed with regular rice.

Blending FRK with regular rice in an appropriate ratio ensures **uniform nutrient distribution**, making it an effective strategy to **deliver essential nutrients** without altering the taste or cooking properties of regular rice. This allows easy large-scale public distribution of fortified rice to **tackle widespread micronutrient deficiencies in the country**. The **fortified rice**, enriched with essential nutrients like iron, folic acid, and vitamin B12, is distributed through government programs such as the Public Distribution System (PDS), Integrated Child Development Scheme (ICDS), and the Mid-Day Meal Scheme.

The Indian Standard IS 17854 : 2022, adopted by the Bureau of Indian Standards, provides specifications for machinery used in the production of fortified rice by **blending fortified rice kernels (FRK) with regular rice kernels**. The standard classifies blending units into five categories – screw/ribbon, drum, paddle, and octagonal blenders which may be continuous or batch type depending upon the capacity and requirement. Key components of the blender includes a **hopper, lid, agitator, and motor**, with a control system capable of **managing feed rates** and monitoring parameters via an LCD/LED/HMI screen, and optional SCADA for enhanced monitoring. The standard allows blending of FRK with non-fortified rice in the **ratios of 1 percent or 2 percent** ensuring **uniform nutrient distribution**.

This standard complements others, such as IS 17780, IS 17781, and IS 17782, which define specifications for fortified rice, premixes, and FRK, thus ensuring quality in rice fortification.