

MI Toolkit Products for Emergencies and Food Security Programs

Double Fortified Salt (DFS)

Content of product: DFS is a free flowing cooking and table salt containing edible salt, 50 ppm iodine through potassium iodate and 1,000 ppm iron through encapsulated ferrous fumarate. The food grade ingredients used in small quantities for the encapsulation process include soy stearine, hydroxypropyl methyl cellulose (HPMC), titanium dioxide and sodium hexametaphosphate (SHMP). The appearance of DFS is similar to iodized salt with encapsulated iron evenly distributed and (barely) visible as intermittent light grey specs.

Outline of proper use, including impact of heat/cold and storage on the product, shelf life: DFS is recommended for use in cooking and as table salt, similar to the daily usage of iodized salt. DFS has been tested and is acceptable at household level as well as in community programs and in two refugee camps. DFS is stable even in humid tropical climates and has a suggested minimum shelf-life of 12 months from the date of opening the package. Storage in airtight packages is recommended before distribution and in closed containers during usage to prevent moisture ingress.

Manufactured by: DFS is produced in India, Kenya and Nigeria by blending DFS premix with locally produced iodized salt according to accepted quality standards. DFS premix can be procured through the Micronutrient Initiative for production by other companies in other countries.

To be used: for iron deficiency anaemia and iodine deficiency disorders.

Advantages and Disadvantages: The universal consumption of salt enables DFS to reach most of the vulnerable populations even in remote parts of the world; there is no need for change of traditional diets. But the disadvantage is that in areas where very pure white salt is used, consumer education may be needed to explain the light grey specs in terms of their nutritional benefit.

Safety: Saltiness of the food will limit excess use of DFS by accident. Based on an estimated average salt consumption of 10 g per person/day, DFS is designed to provide 100 per cent of the daily requirement for iodine and 30 per cent for iron.

Phases of Emergency: DFS can be used during any phase of emergency where salt is part of the food basket or where food is prepared centrally in a camp or school feeding situation.

Estimated cost of the product per child/person (in USD): At 10 g salt consumption per day, DFS costs 20 cents per person per year, over and above the cost of normal salt.

Implementation structure needed to implement/distribute product: Salt distribution systems for iodized salt that are routinely used for commercial as well as targeted programming could be used to implement DFS.

Training of salt manufacturers on proper blending and quality control measures and ongoing monitoring is needed.



Estimated time needed from order to delivery on the ground: The MI needs four weeks notice to arrange production of up to 150 tons of DFS, and delivery to the main port of call may take another 4 weeks. Larger quantities need 3 months notice for production.



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