

## MEALS READY TO EAT (MRE RATION FOR ARMY)



The development of pack rations to service forces is very critical. Because, protecting food items from physical and chemical deterioration in storage, transport and handling, the packaging and packing of any operational ration used during logistic period, should meet three considerations of (i) operational limitations on meals patterns, (ii) operational limitations on weight and volume and (iii) availability of materials. With the due consideration to the above fact, Defence Food Research Laboratory (DFRL), Mysore has developed Meals-Ready-to-Eat (MRE) Ration technology comprises Retort pouch processed foods, Shelf stable no preservative chapatias/ Preserved & flavoured chapatias and Survival ration to meet the operational needs for the Army and Navy. The retort pouch processed foods and Shelf stable no preservative chapatias do not require any cooking since the contents are thermally processed and can be consumed readily after little warming if required. Retort pouch processed Ready to Eat (RTE) foods are processed in a specially designed bulk sterilizer. Each batch is carefully monitored for  $F_0$  at  $121^{0.1}$  C to ensure microbiological as well as chemical quality. The food products are processed in a special retort to internationally accepted food standards. The technology used is highly scientific accepted at international level. The packaging material consists of multilayer structure of 12 micron Polyester / 9 micron Aluminum foil / 70 micron Nylon/70 micron cast Polypropylene designed and manufactured to withstand high temperatures and internal pressure during heating, cooling, storage and transport.

Survival ration contains energy dense soft bar and delicious chikkis from groundnut with Jaggery/sugar to meet immediate nutritional requirements of Armed Forces during operation. The survival ration consists of Soft bar 100 g x 2 Nos, Chikki (sugar based) 50 g x 3 Nos, Chikki (Jaggery based) 50 g x 3 Nos. Rations are packed in Low Density Polyethylene (LDPE) of 125 micron thickness and hermetically sealed and vacuum packed. Chikkis are vacuum packed in laminated pouches to enhance the shelf life to more than one year without any sensory changes at ambient conditions.

The Indian MRE compares very well with well-known international rations like MRE of USA and GP-24 of UK in nutritional quality and hygienic standards. The shelf life of the ration is 12 months under ambient condition. The total calorific value of the ration is 3300 K Cal. and meets the immediate nutritional requirements during operation.