

## **Nutraceutical enriched products developed/ in the pipeline from CSIR-CFTRI**

<b>Sl.No</b>	<b>Product</b>	<b>Description</b>
1	Nutra chikki with added spirulina	Chikki is a ready to eat traditional sweet snack consumed by all sections of population in India. The Nutra Chikki with added Spirulina developed by CSIR-CFTRI could therefore be a powerful weapon for combating malnutrition.
2	Nutraceutical enriched Indian traditional Chikki	Chikki or peanut brittle, a traditional sweet snack was chosen as vehicle for enrichment with added natural nutraceuticals through herbs. The formulation and process for preparation of chikki with added herbs like ashwagandha, tulasi, ajwain.
3	Debitterd Deodorized Turmeric Powder (Colorant)	Debitterd Deodorized Turmeric Powder is the natural colorant and can be directly used to impart yellow colour to food products prepared in powder or semi liquid form. This colorant can replace the present synthetic colors like Tartrazine and Kesari.
4	Dehydrated green pepper without using chemicals	Dehydrated pepper with its natural green colour satisfies this need and has been accepted well as garnishing spice in preference to the traditional black pepper in western countries.
5	Green Pepper in Brine	Green Pepper in brine is mainly used as a spice in culinary preparations for imparting characteristic fresh pepper flavour. It is a ready to use preparation that can find applications in homes, restaurants, institutional catering.
6	Superior quality white pepper	Ground white pepper is used in the production of mayonnaise and salad dressings. Recently, an enzyme assisted process has been developed at the CFTRI, Mysore for the preparation of white pepper from fresh green pepper.
7	Dehydrated ginger	Technology relates to its skin is peeled partially by mechanical peeling using an abrasive peeler such as one used for potatoes,beetroot,carrots. Resulting in a loss of about 10-12%. The quality corresponds closely with the fully hand scrapped ginger.

8	Ginger paste	Ginger paste is a viscous retaining the strong aroma and flavour of the raw material namely fresh ginger. The volatile oil content in the product is influenced by factors such as variety, raw material storage, handling and processing conditions.
9	Ginger cocktail	Ginger cocktail is a drink with excellent taste and flavour. In a hot country like India, the use of refreshing and thirst quenching beverages, mostly falling under the category of aerated waters, has come to stay.
10	Ginger tea	Ginger tea has free flowing powder, refreshing and sweet pleasant exotic ginger aroma.
11	Cashew apple candy	A fruit candy used as a confectionery item and it is a supplement to dry fruits for use in culinary preparations. It has a nutraceutical value such as Vitamin C, calcium and phosphorus. Cashew apple can add flavour and enhance particular flavours.
12	Beverage dry mix	The technology provides a cashew apple beverage dry mix which is unique over other dry mixes, since they are prepared from synthetic flavours. It contains 3.5% moisture and total soluble solids of 14-15% when reconstituted to an aqueous beverage.
13	Mouth Freshener	The ingredients present in mouth freshener, generate a pleasant taste and fresh feeling, but stimulate the saliva glands. This naturally flushes and cleans the mouth. Coffee active components would be safer, potential, reliable and exploitable.
14	Process of cocoa beans to cocoa mass,butter & powder	Cocoa mass is used as main ingredients in manufacture of chocolate, chocolate coating, cocoa beverages, bakery goods and drinking chocolate. Cocoa butter is generally used for the enhancement of organoleptic qualities of the chocolate.
15	Compounded Asafoetida	Hing( <i>Ferula alliacea</i> ) and Hingra ( <i>Ferul foetida</i> ) are the two varieties of asafoetida known and recognized in India. With hing, a further distinction is made according to the country of origin, Irani hing from Iran and Pathani Hing from Afghanistan.

16	Enriched spice oleoresins and natural colourants	Colour of foods is an important quality attribute, in judging their quality and acceptability. Turmeric and chilli, the two major spices, are also major spices, are also major sources of natural pigments.
17	Natural Food Colourants	Natural colourants are extracted from natural herbs, plant parts, like kokum, beetroot, safflower, purple grapes and a very large source. The natural colourants could be a good substitute for the synthetic food colours.
18	Spice oil	Spice oils in generally are the steam distilled Volatile oils obtained from the individual spices, rich in characteristic aroma constituents. Ginger oil is used largely as a flavouring material in various alcoholic and non-alcoholic beverages
19	Tamarind Concentrate	Tamarind is one of the common and most important trees of India. Although tamarind is grown for a long time, it has attained commercial significance only recently. Fruit is most useful.
20	Fenugreek	Fenugreek seed is known to have several pharmacological attributes such as hypoglycaemic, hypocholesterolaemic, gast-protective, laxative, chemo-preventive , antioxidant, anti-inflammatory and appetite stimulant.
21	Nanoencapsulated Curcumin	The development of nutraceutical food for addressing chronic diseases has been initiated. Curcumin has been selected as a bioactive material to be nano encapsulated and finally to be incorporated in the convenience food.
22	Potato Peel	Potato peel, a waste by product of potato processing, is found to be a good source of both dietary fiber and polyphenols. Potato peel powder supplementation in diet was found to effectively attenuate diabetic alterations in rats.
23	Carotenoids rich pulp	Dietary carotenoids are the main sources of provitamin A carotenoids. Red banana is one of the richest sources of pure alpha and beta carotenes. Red banana provides up to 120mg of carotenoids per 100g Fresh Pulp

24	Soya Protein Hydrolysate	The product is a concentrated free flowing creamy powder with good digestibility and solubility. It can be used for geriatric foods and athletic foods in addition to being used as a source of protein ingredient.
25	Enzymatically modified Rice Bran	The product can have a great potential as a functional ingredient or health food. It can also be used as a source of dietary fiber with prebiotic activity
26	Karanjin molecule	The karanjin from karanja seed possess hypoglycemic, anti-ulcerogenic, anti-inflammatory and analgesic properties. The crystals were purified by either washings. The purified karanjin crystals were analyzed by NMR for structural integrity.
27	Snack Bar	A soft textured bar based on cereals, fruits and vegetables as major ingredient. Snack bar can be used as meal replacers. The products were fortified with iron and folic acid to provide 1/3rd RDA per serving.
28	Savory snack, Sev with added leafy vegetables	Sev was prepared incorporating leafy vegetables such as pudina (mint), betel, curry leaves and coriander, which are known to have health benefits due to presence of nutraceuticals.
29	Hard boiled candy	Confectionery products are considered to be good vehicles to transfer nutraceuticals, the sweetness inherits to these products masks the bitterness naturally present in these nutraceuticals.
30	Bombay halwa	A nutra rich confectionery jelly was prepared using extracts of coleus aromaticus which is a source of natural colour, antioxidants for added nutra property. Fructo oligosaccharides(FOS) a low energy bulk sweetener were used to replace sugar.
31	Anti-obesity Garcinia based wine	
32	Probiotic yeast enriched product	
33	Fermented millet food formulation	

34	Probiotic enriched soya based product	
35	Phyto nutrient enriched probiotic formulation	
36	Fructo-oligosaccharides	
37	FOS based Gulab Jamun	
38	FOS based Spread	
39	FOS based Beverages	
40	Lactobacillus plantarum	
41	Pediococcus acidilactici	
42	Synbiotic yoghurt	
43	Synbiotic chocolate bar	
44	Synbiotic ice cream	
45	Omega-3 and Omege-6 rich microbial oils	
46	Njavara rice	
47	Garden cress oil	
48	Eugenol	
49	Husk from green gram	

50	Germinated green gram exudates	
51	Pomegranate peel	
52	Seed oil based products	
53	Luetin	
54	Glycolipid	
55	Eye protective carotenoid formulations	
56	2-Hydroxy-4-methoxy benzaldehyde	
57	Omega-3 fatty acids	
58	Sesamol	
59	Soy protein isolate	Over consumption of lipids has led us to develop reduced fat products of lower calorific value using isolated soy proteins having good physicochemical and functional properties with high functionality, in controlling the cholesterol levels
60	Rice bran lecithin	
61	Oryzanol concentrate	
62	Coconut oil blends	
63	Health oils	
64	Coconut water concentrate	
65	Coconut testa phenolics concentrate	

66	Health foods based on coconut by products	
67	Phytosterols from rice bran oil DOD	
68	Phytosterol ester of ALA	
69	Squalene	
70	Superior quality rice bran oil	
71	Phytosterol ester enriched chocolate/spread	
72	Palm oil based nutraceutical product	
73	Palm oil Nutrient based fat spread	
74	Nigerseed oil bioactive concentrate	