



MD PRODUCTS

AGRI-FOOD SOLUTIONS

2019/20



TAIYO KAGAKU INDIA PVT. LTD.
Imagine. Desire and Create





Taiyo is a pioneer in the basic research and manufacturing of functional ingredients for the food, beverages, medical food and pharmaceutical industries. Taiyo focuses on the development of innovative ingredients, derived from natural sources, to further develop the body's ability to protect and manage individual health. Taiyo delivers clinically proven nutritional benefits of green tea antioxidants, stress reducing amino acids, soluble dietary fiber, vitamin and mineral delivery system and other natural ingredients. Taiyo is the world largest producer of green tea extracts with an annual capacity of 2,000 tons and offers Japanese high-quality green tea extracts at reasonable prices for the food and beverage industry, the dietary supplement and the pharmaceutical industry



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MD PRODUCTS: TURNING JUICE INTO CRUNCHINESS:

MD products are dried and expanded crisps, flakes and cubes. The products can be flavored, colored and sweetened as needed and the composition can be highly customized. MD products can be made of many materials such as starch, protein dietary fiber and can be combined with nutrients such as minerals, trace-elements, amino acids or other health ingredients. The mixture are dried and expanded by microwave, granulated under dry conditions and a fiber shape product. Volume, crispiness and the speed of re-absorption of water by the products can be adjusted by varying these drying conditions.

ADVANTAGES OF MICROWAVE DRYING:

- ✓ Short heating time maintains the flavor and the color of raw materials
- ✓ Heating power can be easily adjusted by microwave intensity (watt power)
 - High energy drying: fast evaporation but short time needed, higher temperature
 - Low energy drying: slow evaporation but more time needed, lower temperature
- ✓ Microwave drying speed also determines the release of water steam and hot air bubbles from the food
 - The size and the speed of steam and air bubble release during the evaporation can be adjusted
 - This determines the texture, the specific product density and the speed of water absorption
- ✓ Microwaves are able to drying the food at the same time from both sides: inside and the outside
- ✓ Highly homogenous and stable quality product

Microwave Processing allows to produce various shapes of materials

Microwave drying guarantees a wide variety of raw materials with desired shapes that fit into the customer's applications and requirements:



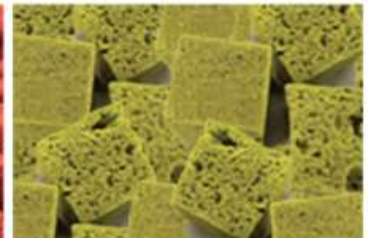
SCRAMBLE
for ex. scrambled egg
shrimp, meat balls



FLAKES
for ex. egg flakes
(Kakitama Flakes)

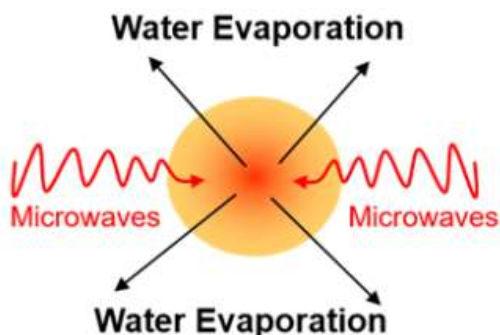


GRANULES
for ex. dried fruit, egg,
or Matcha

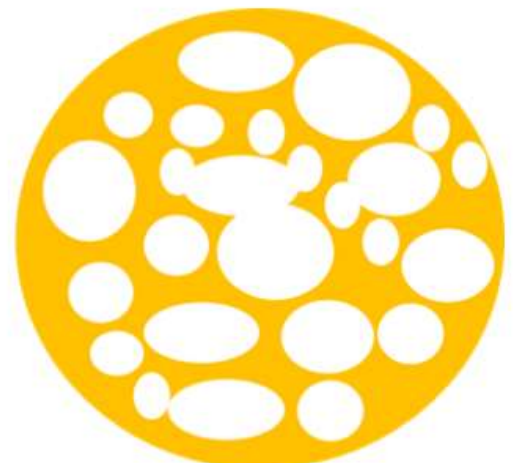


SHEET OR CUBE
for ex. meat, sweet potato
or Matcha

Microwave Processing allows to adjust crispiness and crunchiness of materials



**Drying +
Expansion**
(10 times the volume)



MD PRODUCTS LIST:

Category	Product	Type	Shape	Size (>90%)	Application
Egg	MD Scrambled Egg V	Egg	Ball	4-10 mm	INM
Egg	MD Egg Flake RK	Egg	Flake	2-12 mm	INM
Meat	MD Protein Textured FKB	Beef	Square flake	4-12 mm	INM
Meat	MD Protein Textured FKC	Chicken	Square flake	4-12 mm	INM
Meat	MD Protein Textured Chicken Flavor CF	Chicken	Ball	4-12 mm	INM
Meat	MD Protein Textured FKP	Pork (Pork free)	Square flake	4-12 mm	INM
Meat	MD Protein Textured TZ	Pork (Pork free)	Ball	4-12 mm	INM
Meat	MD Protein Textured XZ	Pork (Pork free)	Ball	4-10 mm	INM
Seafood	MD Protein Textured Shrimp Flavor SV	Shrimp	Ball	4-10 mm	INM
Seafood	MD Protein Textured Crab Flavor CB	Crab	Ball	3-10 mm	INM
Fruits	MD Strawberry FS	Strawberry	Granule	0.5 – 11 mm	C & G, C& B, FD
Fruits	MD Lemon FL	Lemon	Granule	0.5 – 11 mm	C & G, C& B, FD
Fruits	MD Blueberry	Blueberry	Granule	0.5 – 11 mm	C & G, C& B, FD
Fruits	MD Orange	Orange	Granule	0.5 – 11 mm	C & G, C& B, FD
Fruits	MD Mango	Mango	Granule	0.5 – 11 mm	C & G, C& B, FD
Sweets	MD Coffee	Coffee	Granule	0.5 – 11 mm	C & G, C& B, FD
Sweets	MD Sweet potato	Potato	Granule	0.5 – 11 mm	C & G, C& B, FD
Sweets	MD Matcha FM	Matcha	Granule	2-11 mm	C & G, C& B, FD
Imitates	MD Protein Textured D	Egg	Ball	4-10 mm	INM
Imitates	MD Protein Textured IC	Cheese	Flake	2 -10 mm	INM
Protein	MD Soy Protein	Soy protein	Flake	1-8 mm	C & G, C& B, FD
Protein	MD Pea Protein	Pea Protein	Under Development		C & G, C& B, FD
Oil	MD Protein Textured F	Oil	Flake	1 – 8 mm	INM, C & G, C& B
Oil	MD Sesame	Sesame	Under Development		INM, C & G, C& B
Fiber	MD Fiber	Fiber	Under Development		INM, C & G, C& B, FD

INM = Instant noodle meals, instant meals, C&G = Cereal and Granola products, C&B = Confectionary and bakery, bars, etc., FD = Frozen desserts, powdered ice cream, protein shakes, powder blends, chocolate

CUSTOMIZED MD PRODUCTS

MD products can be customized and almost every formula, every plant extract or juice can be used to transformed into a crunchy MD product of different shapes. In case of interest for other MD products than on the list please contact us directly. The minimum production scale for customized MD products is 500Kg.

INTERFACE SOLUTIONS

Taiyo Kagaku has a long history in the production of emulsifiers. The name Taiyo means Sun in English and Kagaku means science or chemistry. Taiyo Kagaku is always looking for new raw materials to produce in dedicated factories in Japan. Taiyo Kagaku is a science driven chemical company and around 200 dedicated scientists work in the R&D Center in our parent company at Taiyo Kagaku Co., Yokkaichi, Japan.



The Interface Solutions Division of our parent company Taiyo Kagaku Co.,Ltd (TKC) develops new ways to produce new raw materials as well as blends in several application labs R&D scientists are working on formulations to test the Taiyo's products in all kinds of product applications.

Taiyo's Product range includes more than 2000 different products such as:

- ✓ Food emulsifiers
- ✓ Antifoaming agents
- ✓ Fat stabilizers
- ✓ Emulsified products, blends and formulation
- ✓ Formulations for foods and beverages
- ✓ Emulsified stabilizers
- ✓ Emulsified flavors
- ✓ Emulsifiers and stabilizers for cosmetics
- ✓ Toiletries
- ✓ Industrial ingredients

INTERFACE SOLUTIONS PRODUCT LIST:

Product	Specification	Application
TS-Series (Antioxidant)		Photo antioxidant for food and beverages. Prevents oxidation by light exposure during storage and retail display in dairy beverages, yogurt, cheese, ice cream.
Awabreak (Bubble Control)	Liquid gel: maltitol syrup(E965) Mono-and diglycerides of fatty acids (E471). Polyglycerol ester of fatty acids (E475)	Silicon free anti-foaming agent. Reduction and prevention of foam during processing and production of dairy beverages, yogurts, canned coffee, juice extraction, gelatin etc.
Sunsoft Plus (Mouth Feel)	Pale Yellow liquid paste Polyglycerol ester of fatty acids(E475)	Rapid phase reversal to release water- soluble compounds. Gives "fresh" taste and improves aftertaste by reducing unpleasant oily taste and textures of W/O emulsions. For use creams, margarine, chocolate, curries, pasta etc
Taiset 50K (Oil Setting)	Off-white flakes Mono-and diglycerides (E471) Polyglycerol esters of fatty acids (E475)	Trans fat free oil setting agent. Sets various oils at desired melt point. Prevent oil migration without addition of trans fatty acids in shortenings, condiments, seasonings, chocolates and other oil based products.

TAIYO GLOBAL STRUCTURE

Taiyo International
Sales Office America



Taiyo GmbH Germany
Sales Office EMEA



Taiyo Kagaku Co., Ltd. (Japan)
Ingredient factory cluster



Taiyo Green Power Co., Ltd. (China)
Exclusive for green tea extracts



Taiyo Kagaku India Pvt. Ltd. (India)
Exclusive for Sunfiber



Kaifeng Jinming Food Co., Ltd. (China)
Exclusive for Microwave products

PROFILE TAIYO KAGAKU

- Japan based
- Founded: 1946
- Supplier of high quality ingredients for food, pharma and cosmetic industries
- R&D-oriented
- Global presence
- Capital: USD 96.7 million
- Net sales: USD 421 million (March 31, 2011)

DIVISIONS



Nutrition

Green tea products
L-theanine
Dietary fibers
Vitamins and minerals
PUFAs



Interface Solutions

Food emulsifiers
Emulsified products
Emulsified stabilizers
Cosmetics, Toiletries,
Industrial ingredients, etc.



Agri-foods

Ingredients for instant foods
Dried foods
Processed- eggs
Processed- fruits
Protein ingredients
Processed-food agents

Contact Us

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