

CAPSUL® TA 06670301

CAPSUL® TA modified food starch is derived from tapioca and is especially suited for the encapsulation of flavors, clouds, vitamins and spices. The excellent emulsification, film-forming properties and low viscosity make CAPSUL® TA modified starch an excellent replacement for expensive gums and proteins commonly used for these applications in spray-drying. This product is produced under Ingredion Incorporated's TRUETRACE® Identity Preserved Program for non-GM products.

Chemical and Physical Properties

| | Min. | Max. |
|--------------------|------|------|
| Solubility % | 90.0 | - |
| pH (3% w/w slurry) | 3.0 | - |

Physical Appearance

| | Typical |
|-------|--------------------|
| Color | White to Off-White |
| Form | Fine Powder |

Microbiological Limits

Initial testing is done on a single composite sample against a limit of m. If result is above m, the three class sampling and acceptance below is used.

| | n | c | m | M |
|---------------------|---|---|--------|--------|
| Total Plate Count/g | 5 | 3 | 10,000 | 10,000 |
| Yeast/g | 5 | 3 | 200 | 1,000 |
| Mold/g | 5 | 3 | 200 | 1,000 |
| Enterobacteriaceae | 5 | 3 | 100 | 1,000 |

Where n = # of samples tested; c = maximum allowable number of results between m and M; m = upper target limit; M = maximum acceptable value.

| | |
|-------------------|----------|
| <i>E. coli</i> | Negative |
| <i>Salmonella</i> | Negative |

Nutritional Data/100 g

| | Typical |
|-----------------------|---------|
| Calories | 381 |
| Calories from fat | 0 |
| Total Fat, g | <0.1* |
| Cholesterol, mg | 0 |
| Sodium, mg | 14 |
| Total Carbohydrate, g | 95.3 |
| Dietary Fiber, g | 0 |
| Total Sugars**, g | 0.4 |
| Added Sugars, g | 0 |
| Other Carbohydrate, g | 94.9 |
| Protein, g | <0.1* |
| Vitamin D, mcg | 0 |
| Calcium mg | 31 |
| Iron, mg | <0.2* |
| Potassium, mg | 18 |
| Ash, g | <0.1* |

* Not present at level of quantification.

** "Total Sugars" in this product may contribute to "Added Sugars" for nutrition labeling purposes in the final consumer product.

Certification

Kosher pareve
Halal

Packaging and Storage

CAPSUL® TA modified starch is packaged in multi ply kraft paper bags with a net weight of 55 lbs. CAPSUL® TA should be stored in a clean, dry area at ambient temperature and away from heavily aromatic material.

Shelf Life

The best before date for CAPSUL® TA is 24 months from the date of manufacture.

Regulatory Data

Source Tapioca

United States

Meets FCC (Food Chemical Codex) requirements.
Labeling Food Starch - Modified

Canada

CFDA Regulation B.16.100 Table XIII
Labeling Modified Tapioca Starch

Features and Benefits

A unique feature of CAPSUL® TA modified starch when compared to other encapsulating agents, such as gum arabic, is its ability to form very stable oil-in-water emulsions. The fine particle size of the emulsion results in reduced losses during spray-drying. The lower viscosity of CAPSUL® TA modified starch permits the preparation of emulsions at higher solids. These can be spray-dried at faster rates because less water has to be evaporated. This trait also results in lower energy costs.

The compatibility of CAPSUL® TA modified starch with water insoluble substances permits the preparation of spray-dried powders with a higher level of active ingredients. The excellent film-forming ability of CAPSUL® TA modified starch further reduces the loss of volatile active ingredients during spray-drying and storage. This product is produced under Ingredion Incorporated's TRUETRACE® Identity Preserved Program for non-GM products.

Effective Date: May 10, 2017

Next Review Date: May 10, 2020

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