TAPIOCA

new facts about an old food
an amazing discovery
about tapioca

Tapioca, long familiar as a dessert, has recently assumed a unique significance in cookery. One of its properties—unsuspected until now—has been found to have a wide application to cooking processes. Add tapioca to beaten-egg mixtures, such as omelets and soufflés, and they do not fall; use it in meat loaf or croquettes and the ingredients do not dry out in the cooking; mix it with soft sandwich fillings and the moisture does not soak into the bread; sprinkle it over berry pie fillings before baking and the juices do not boil over.

Because of its singular physical properties, tapioca is able to hold together the particles of air and moisture and keep them inside the mixtures, whereas without tapioca, these particles are easily separated and scattered. Tapioca is capable of absorbing and holding large amounts of moisture. This explains the soft texture of croquettes, the fluffiness of omelets and soufflés, and the succulence of sandwich fillings made with tapioca.

Prolonged tests have been made with Minute Tapioca. The results are convincing—the tapioca method works with astonishing sureness. A term derived from engineering is peculiarly fitted to tapioca and introduces ....
Minute Tapioca, the precision ingredient

Precision means exactness, accuracy. A precision ingredient, therefore, is one which, when combined with other ingredients, lends accuracy to results. It is a sort of safety device which guards against failure, saves disappointment, and eliminates waste of time and materials. Minute Tapioca is a precision ingredient in many dishes, giving that perfect appearance, flavor, or texture which is otherwise so difficult to attain.

As a precision ingredient, tapioca is now known to safeguard three types of foods:

1. Omelets and soufflés. They are ideally light, fluffy, moist—and, as never before, hold their shape, if Minute Tapioca is incorporated in them.
2. Meat loaves and croquettes. They are moist, savory, and tender if Minute Tapioca is used to bind the ingredients.
3. Sandwiches and pies with soft fillings. Sandwiches are just as deliciously moist and fresh after several hours as when first made; juicy fruit pies do not boil over and burn in the oven. Minute Tapioca keeps the moisture where it belongs—in the fillings.

The discovery of Minute Tapioca as a precision ingredient is an important contribution to the principles of cookery. A more detailed explanation of the foregoing facts follows.
making
a fluffy omelet

Results Which Are Desired

Appearance
Light and fluffy.
Shape retained during serving.
Rich, even, golden-brown color.

Texture
Tender, not leathery.
Moist, not runny or dry.

Why Results Are Uncertain
(Old Method)
A beaten-egg mixture is full of air bubbles, which break easily. If they break, the omelet does not rise. Even when it does rise, the omelet often falls when served.

Why Results Are Dependable
(New Tapioca Method)
Minute Tapioca protects the air bubbles in a beaten-egg mixture; hence an omelet made with Minute Tapioca rises to its full capacity. Besides, it stays light, even while being served.

Minute Tapioca acts as a moisture-holder in an omelet, and so prevents it from drying out; at the same time the tender moistness of a perfect omelet is preserved.
Fluffy Omelet *(New Tapioca Method)*

2 TABLESPOONS MINUTE TAPIOCA
1/2 TEASPOON SALT
1/8 TEASPOON PEPPER
3/4 CUP MILK, SCALDED

1 TABLESPOON BUTTER
4 EGG YOLKS, BEATEN UNTIL
THICK AND LEMON-COLORED
4 EGG WHITES, STIFFLY BEATEN

Add Minute Tapioca, salt, and pepper to milk, and cook in double boiler 10 minutes, stirring frequently. Add butter. Combine with egg yolks, stirring constantly. Fold in egg whites. Pour into hot buttered frying pan (9 inches in diameter). Cook over low flame 17 minutes. Omelet is sufficiently cooked when a knife inserted comes out clean. Dry top of omelet in slow oven (275° F.) 5 minutes. Cut across at right angles to handle of pan, being careful not to cut all the way through. Fold carefully from handle to opposite side and serve on hot platter. Makes six servings.

*Note the economy:* Made by the new tapioca method a four-egg omelet serves six persons; by the old method only four servings could be obtained.

Light, fluffy soufflés are so delicious and fit into so many menus that everyone wants to know how to make them. Minute Tapioca answers the riddle of how to make a spongy soufflé that does not fall, for it is the precision ingredient that makes a soufflé stay light even while it is being served. At the same time the tender, moist texture and delicate flavor of the perfect soufflé are retained.

**CHEESE SOUFFLÉ (New Tapioca Method)**

3 TABLESPOONS MINUTE TAPIOCA
1 CUP MILK, SCALDED
1 CUP GRATED CHEESE

3 EGG YOLKS, BEATEN UNTIL
THICK AND LEMON-COLORED
3 EGG WHITES, STIFFLY BEATEN
WITH 1 TEASPOON SALT

Cook Minute Tapioca with milk in double boiler 15 minutes, or until tapioca is clear, stirring frequently. Add cheese and stir until melted. Cool. Add egg yolks and mix well. Fold in egg whites. Bake in greased casserole in pan of hot water in moderate oven (350° F.) 50 minutes, or 30 minutes in ramekins. Soufflé is done when it shrinks a trifle and is brown. Makes four servings.
making
a savory meat loaf

<table>
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<tr>
<th>Results Which Are Desired</th>
<th>Why Results Are Uncertain (Old Method)</th>
<th>Why Results Are Dependable (New Tapioca Method)</th>
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<tr>
<td><strong>Texture</strong></td>
<td>Correct baking is essential to a perfect meat loaf. If baked too long in a slow oven, the loaf is dry and solid, due to the loss of moisture. An oven which is too hot makes a loaf with a hard crust and a soft, crumbly interior.</td>
<td>Minute Tapioca acts as a safety device against variations of oven temperature in baking. By allowing the ingredients to retain just the right amount of moisture, it makes a meat loaf of tender texture and even consistency which slices well.</td>
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<td><strong>Flavor</strong></td>
<td>In a meat loaf, the appetizing and characteristic flavor of the meat is often disguised by that of the extender with which it is combined.</td>
<td>Minute Tapioca, because of its delicacy, is the ideal extender in a meat loaf. It does not mask the flavor of even the mildest foods.</td>
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Moist, tender loaf which holds its shape for slicing.
Savory Meat Loaf *(New Tapioca Method)*

2 THIN 2-INCH SLICES SALT PORK, DICED  
2 POUNDS ROUND BEEF, GROUND  
$\frac{1}{2}$ CUP MINUTE TAPIOCA, UNCOOKED  
$\frac{1}{2}$ SMALL ONION, FINELY CHOPPED  
1 PINT CANNED TOMATOES  
$\frac{3}{4}$ CUP MINUTE TAPIOCA, UNCOOKED  
$\frac{1}{4}$ TEASPOON PEPPER  
1 PINT CANNED TOMATOES  
$\frac{3}{4}$ TEASPOON SALT

Try out salt pork until golden brown. Add pork and drippings to other ingredients and mix thoroughly. Bake in bread pan in hot oven (450° F.) 15 minutes, then decrease heat to moderate (350° F.) 30 minutes longer. Remove loaf from pan to platter. Garnish with parsley. Serve hot or cold. Makes eight servings.

Minute Tapioca not only extends the meat, but also binds the ingredients perfectly, thus making the addition of eggs unnecessary. Milk may be substituted for tomatoes.

CROQUETTES, in order to be moist and tender, must be made of very soft mixtures. This makes it difficult to form croquettes of perfect shapes. If made by the new Minute Tapioca method, the mixture is easy to handle and does not fall apart during the frying. Croquettes made with a tapioca base have a delightful consistency which is moist without being sticky.

**SALMON CROQUETTES (New Tapioca Method)**

3 TABLESPOONS MINUTE TAPIOCA  
$\frac{3}{4}$ TEASPOON SALT  
$\frac{3}{4}$ TEASPOON PAPRIKA  
1 TABLESPOON GREEN PEPPER, CHOPPED  
1 TABLESPOON PIMENTO, CHOPPED  
1 EGG, BEATEN WITH 1 TABLESPOON WATER  
1 CUP MILK, SCALDED  
1$\frac{1}{2}$ CUPS SALMON, FLAKED  
2 TEASPOONS LEMON JUICE  
SIFTED BREAD OR CRACKER CRUMBS

Add Minute Tapioca, salt, paprika, green pepper, and pimiento to milk, and cook in double boiler 15 minutes, or until tapioca is clear, stirring frequently. Remove from fire, add salmon and lemon juice. Let mixture become cold. Shape into round balls, roll in crumbs, dip into egg, then roll again in crumbs. Fry in deep fat (390° F.) until golden brown (about 1 minute). Makes eight croquettes.

Chicken and veal croquettes, made with Minute Tapioca, are also deliciously moist.
making
a soft sandwich filling

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<th>Results Which Are Desired</th>
<th>Sandwich Difficulties</th>
<th>How To Overcome Them</th>
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<td>Savory flavor</td>
<td>Because sandwiches are often wanted, not for immediate but for later consumption, the fillings which can be used are limited. Cold sliced meats and cheese are practically the only fillings which meet the test of standing for some hours.</td>
<td>Minute Tapioca makes possible the extended use of soft sandwich fillings. By holding the moisture in the filling, tapioca prevents the filling from soaking into the bread.</td>
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<td>Succulent moistness</td>
<td>There is an infinite variety of soft fillings, but they have one undesirable characteristic—they soak into bread very quickly, making a soggy, unappetizing sandwich.</td>
<td>Sandwiches made with the new type of tapioca filling and wrapped in waxed paper are as fresh and delicious at the end of several hours as when first made. For the first time, Minute Tapioca successfully solves the problem of a wide variety of attractive, succulent sandwiches which can be made up at one’s convenience.</td>
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<td>Variety</td>
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<td>Delicious sandwiches for all purposes, such as luncheons, picnics, motor trips, afternoon teas, porch parties, and lunch boxes.</td>
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<td>Keeping quality</td>
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<td>Flavorsome, moist fillings that do not soak into the bread even after the sandwiches have been made for several hours.</td>
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Nippy Cheese Sandwich Filling  
(New Tapioca Method)

2 tablespoons Minute Tapioca  
1 pint canned tomatoes, strained and heated  
2½ cups grated cheese (½ pound)  
¾ teaspoon pepper

Add Minute Tapioca to tomato juice and cook in double boiler 15 minutes, or until tapioca is clear, stirring frequently. Add cheese gradually, and stir until it is melted. Remove from fire, add dried beef and seasonings and allow to cool before spreading on bread. Makes two and a half cups filling.

Many other savory, moist sandwich fillings may be made with tapioca, such as:

FISH SALAD SANDWICH FILLING  (New Tapioca Method)

3 tablespoons Minute Tapioca  
1 teaspoon salt  
¼ teaspoon pepper  
½ teaspoon paprika  
1 cup hot water

Add Minute Tapioca, salt, pepper, and paprika to water and vinegar. Cook in double boiler 15 minutes, or until tapioca is clear, stirring frequently. Remove from fire, add butter, and cool. Add mayonnaise, pickles, and pimiento to fish. Combine two mixtures. Spread when cold. Makes two cups filling.

Instead of fish, other delicious combinations may be made, using highly-seasoned, cooked meat, hard-cooked eggs and celery, dried fruits and nuts, or cheese and olives.
tapioca—an exceptional dessert-ingredient

In addition to the novel and practical uses of Minute Tapioca as a precision ingredient, there are all of the more familiar ways of serving it in desserts.

How many tapioca desserts can be made? Two? Three? Five? A recent investigation among homemakers brought out the fact that only 3% of them made as many as five tapioca desserts. Yet about thirty delicious, easily made, and economical Minute Tapioca desserts are possible.

Minute Tapioca is one of the most versatile dessert-ingredients. Its delicacy makes it possible to combine it successfully with both mild and pronounced flavors. Its smooth texture makes it an ideal foundation for creamy puddings and many unusual desserts. Its transparency (when cooked) adds a unique touch to every Minute Tapioca dish.

Tapioca desserts are healthful for adults and children alike. This is a great convenience for the woman who would otherwise have to prepare a special dessert for the children.

There are two types of Minute Tapioca desserts—those cooked on top of the stove, and those which are partially cooked on top of the stove and then turned into a baking dish and cooked in the oven until done.

The first step for all Minute Tapioca desserts is to cook the tapioca in scalded milk, or some other hot liquid, in a double boiler (stirring frequently) until the tapioca is clear. This takes about 15 minutes. At the end of this time, the mixture may seem too thin but it thickens to the proper consistency as it cools. From this foundation, innumerable delicious combinations can easily be made.

Remember that—

1. Minute Tapioca requires no soaking.
2. Minute Tapioca should be cooked over hot water.
3. Minute Tapioca should be cooked only until clear—not until it becomes pasty.
Method of Making Top-Stove Tapioca Desserts

APRICOT MINUTE TAPIOCA

3/4 pound dried apricots
3 cups water
1/2 cup sugar

Wash apricots thoroughly. Soak in 3 cups water one hour, and cook in same water until tender. Drain. To juice, add enough water to make 2 cups liquid. Add Minute Tapioca and salt and cook in double boiler 15 minutes, or until tapioca is clear, stirring frequently. Add sugar. Cool. Force apricots through sieve. Fold pulp (about 1 cup) into tapioca mixture. Chill and serve with whipped cream. Makes six servings.

Method of Making Baked Tapioca Desserts

APPLE MINUTE TAPIOCA

1/2 cup Minute Tapioca
1 teaspoon salt
1 quart hot water
6 tart apples, pared and sliced
1 cup sugar
1/2 teaspoon nutmeg
1 teaspoon cinnamon
2 tablespoons butter

Cook Minute Tapioca and salt in water in double boiler 15 minutes, or until tapioca is clear, stirring frequently. Place layer of apples in greased baking dish, sprinkle with sugar and spices, and dot with butter. Cover with tapioca mixture. Repeat until all ingredients are used. Bake, covered, in moderate oven (350° F) 30 minutes, or until apples are soft. Serve with cream. Makes eight servings.
# Minute Tapioca desserts

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<th>Notable Tapioca Facts</th>
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<td>Variety</td>
<td>Minute Tapioca combines ideally with milk and eggs and almost all fruits—fresh, canned, and dried. This property makes it possible to use Minute Tapioca as a main ingredient in more than thirty delicious desserts. By cooking tapioca with milk and egg yolks a creamy mixture is obtained; the addition of a stiffly-beaten egg white later makes a more foamy, spongy texture. Or, tapioca may be cooked in fruit juices to impart the flavor and color of the fruit itself.</td>
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<td>Attractive appearance</td>
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<td>Tapioca desserts range all the way from the simple and quickly-made Minute Tapioca creams to the more elaborate ones choice enough to serve the most important guests.</td>
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<td>Delicious flavor</td>
<td></td>
<td>Some of the quick and economical tapioca desserts are chocolate tapioca, fruit tapiocas, and tapioca creams. Tapioca desserts are convenient to serve because they are all-round desserts for the whole family.</td>
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<td>Pleasing texture</td>
<td></td>
<td>This makes it especially suited to the diets of children, as tapioca supplies quick energy for their active little bodies.</td>
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<td>Easily and quickly prepared</td>
<td>Minute Tapioca requires only a short cooking in the home, because it is scientifically pre-cooked. Since Minute Tapioca cooks uniformly, constant stirring is unnecessary. With frequent stirring a smooth, creamy mixture is obtained.</td>
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<td>Inexpensive</td>
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<td>Nourishing for children</td>
<td>Tapioca is one of the most easily digested forms of carbohydrate, because it has such small cells and because the tapioca granules have been partially converted into dextrin in the manufacture.</td>
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<td>Appetizing to adults</td>
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A pantry shelf, holding its neat rows of canned and packaged foodstuffs, may seem the last place in the world to look for romance. Yet adventure flourishes there. If each commonplace staple could speak, it would almost surely tell a tale of iron men, who, willing to endure incredible hardships, "got them ships, and went" out into the unknown, often to death, but always with the hope of bringing back to their countrymen new knowledge and new comforts.

Sugar and spices, and many other plant foods and beverages, came to Europe in this way and tapioca made its first journey from the new world to the old in the hold of an adventurer's ship.

Four hundred years ago the Portuguese were masters of the sea. Their fleets had been the first of any European nation to sail around the Cape of Good Hope and up the east coast of Africa; they had annexed some territory in India, and, driven by adverse winds, they had even reached South America of whose existence the Eastern Hemisphere had been in total ignorance until then.

In Brazil they found the natives grinding the roots of a strange plant into flour, and making it into a palatable, nutritious bread. The Portuguese named this plant manihot, and the flour made from its roots farinha. "Next to the potato," declares an old writer, "the greatest of the red man's gifts to his white brother is farinha."

Apparently the Portuguese treated the Indians well for they showed the strangers how to plant and cultivate the manihot and how to convert the roots into flour. And, in
the course of time, the manihot or cassava, as the Spaniards later named it, was taken back to Africa and Asia and finally to Java. Today, on this tropical island, the finest-grade cassava in the world is grown.

The cassava is a tall, slender plant, sending its woody stalks from four to ten feet into the air and adorning them with a circle of leaves shaped something like a poinsettia. All of the plant above ground is inedible and is used only in planting a new crop. It is the roots from which tapioca is obtained. These tubers look like sweet potatoes except that they are much larger, sometimes weighing as much as twenty or thirty pounds.

At harvest time the roots are dug up, put through a thorough cleaning process, and grated to obtain the tapioca. This fibrous pulp is washed and screened through fine-meshed sieves to remove all woody material, leaving the tapioca in suspension in the water. After the tapioca settles, the water is drained off leaving the fine, snow-white tapioca flour. At this point the manufacture differs according to the variety of tapioca which is to be made.

There are three varieties of tapioca—flake, pearl, and quick-cooking.

*Flake* tapioca is made by the natives, who mix the raw tapioca flour with water, pour it in thin layers on hot metal plates, scrape it off as it cooks, and then let it dry in the sun. It is then shipped to all parts of the world. Flake tapioca is irregular both in shape and size. Most quick-cooking tapiocas are made by simply grinding flake tapioca.

*Pearl* tapioca is made by mixing the tapioca flour with water, and cooking it on heated metal surfaces just enough to form the hard, outer shell of the familiar pellets of pearl tapioca. This superficial cooking leaves a center of raw flour that necessitates hours of soaking in the home, and even then results in the uncooked taste that pearl tapioca often has. The pearl tapioca, so manufactured, is shipped to the United States and elsewhere.

*Quick-cooking* tapioca is made in two ways. Some is made from the imported flake or pearl tapioca. It undergoes no preliminary processes, but is simply ground and packaged in this country.
Minute Tapioca, on the other hand, is the only tapioca manufactured in this country from raw tapioca flour. This flour is made in Java by modern, scientific methods and is then shipped to the Minute Tapioca factory at Orange, Massachusetts.

Here, under spotlessly clean conditions, the raw tapioca flour is manufactured into Minute Tapioca. First, the flour is sifted through fine silk bolting cloth. This makes a flour of even fineness and so insures the uniform cooking which is characteristic of Minute Tapioca.

After sifting, the flour is mixed with pure water, kneaded into dough, and beaten until light and fluffy. The dough is then cooked in automatic steam cookers, dried to just the right consistency in a current of heated, filtered air, and finally crushed into the small, white crystalline particles familiar to everyone as Minute Tapioca.

Every hour chemists analyze samples of Minute Tapioca, taken from every stage of the manufacture. These tests are both chemical and microscopic. Every precaution is taken to produce a tapioca under conditions of scrupulous cleanliness and scientific accuracy, and to insure a product of uniformly high quality.
EDUCATIONAL DEPARTMENT

Minute Tapioca Division

GENERAL FOODS CORPORATION

New York, N.Y.