

Fruitose[®]
Crystalline Fructose

In Baked Goods



Fruitose[®] has many advantages over regular sugar (sucrose) in baking. It is one of the few sugar alternatives that can be used in home cooking and baking. The humectant's properties of Fruitose[®] help cakes retain moisture to stay fresher longer. Chewy cookies baked with Fruitose[®] have a pleasant brown color and a moist chewiness that cannot be obtained with sucrose.

Galam's Recipes

Fruitose® In Baked Goods

Of all the natural sugars, Fruitose® has the most pronounced browning effect. It provides the well-done brown color associated with home-baking. In addition, the amount of cocoa in chocolate cakes can be reduced without any difference in the color chocolaty flavor of the cake.

Fruitose® improves the appearance of muffins over those that are baked using only sugar. The crust is browner with a fresher appearance. The flavour of the muffin with Fruitose® also is much fresher, and the chocolate pieces have a richer, fuller flavour.

For low-calorie baked goods:

Fruitose® overcomes the difficulties of replacing the fat in low-fat cakes. Low-fat cakes, which contain Fruitose®, have an increased cake volume, improved crumb grain, are more tender and moist and have a very good flavor with reduced emulsifier levels as compared to all-sucrose cakes. Cheesecake baked with Fruitose®, and containing little or no flour, is especially suited for diabetics.

Baked goods containing fruit have a more natural and prominent fruit flavor when sweetened with Fruitose®. It also enhances the fruit flavor of yeast cakes, Danish pastries and other baked products filled with fruit concentrate or preserves. The increased osmotic pressure of Fruitose® causes moisture to be retained in the fillings while protecting them from microbiological spoilage, giving the final pastries a fresh appearance and higher taste quality with a longer shelf life.

What role does sugar play in baking?

Sugar is a tenderizer in baked goods. Besides sweetness, sugar provides additional fermentable substrate in yeast raised goods. Yeast cannot ferment regular sugar (sucrose) directly, but hydrolyzes it first into glucose and fructose. Fermentation of these releases carbon dioxide which

leaven the baked goods. Sugar also has moisture retaining properties in baked goods. In this respect, Fruitose® is superior and can be used alone or together with sucrose. Sugars impart the golden brown color desired in the baked product, with Fruitose® being the best browning agent.



What are the advantages of baking with Fruitose®?

- Cheese cakes, containing little or no flour, are suitable for reduced-calorie dietetic cakes when sugar is replaced with Fruitose®.
- Recipes for tasty, reduced-calorie cakes in general can be formulated with Fruitose®. Since Fruitose® is much sweeter than regular sugar, about a third less can be used to obtain comparable sweetness. In order to further reduce calories, a fat replacer could be included.
- All types of cakes made with Fruitose® stay fresh, moist and resist spoilage for longer periods. The natural flavor of fruit in fruit cakes and pies is enhanced by Fruitose®. The potency of artificial flavors is also increased by the sweetness of Fruitose®. The surface crust of cakes has an appetizing golden brown color. Cookies and brownies made with Fruitose® are softer and chewier.

Biscuits Sweetened with Fruitose®

| Ingredients: | % |
|---------------------|--------|
| Wheat flour | 45.50 |
| Butter | 21.50 |
| Fruitose® | 9.70 |
| Maltitol syrup | 9.70 |
| Skimmed milk powder | 3.90 |
| Vanilla flavour | 0.20 |
| Sodium bicarbonate | 0.40 |
| Salt | 0.10 |
| Water | 9.00 |
| Total | 100.00 |

Method of Preparation

1. Mix all the dry ingredients.
2. Add the water and the butter gradually and knead for 5 min.
3. Bake 10 min at 180°C.



Chocolate Cake (20% fat)

Sweetened with sugar and Fruitose®

| Ingredients: | % |
|---------------------------|--------|
| Sugar | 12.00 |
| Whole egg | 20.00 |
| Wheat flour | 17.00 |
| Vegetable oil | 17.00 |
| Water | 14.40 |
| Fruitose® | 7.50 |
| Cocoa powder (10-12% fat) | 3.40 |
| Corn starch | 3.50 |
| Inulin | 2.50 |
| Instant starch | 1.00 |
| Sodium acid pyrophosphate | 0.44 |
| Sodium bicarbonate | 0.36 |
| Salt | 0.30 |
| Xanthan gum | 0.10 |
| Flavor | 0.10 |
| Monodiglyceride | 0.40 |
| Total | 100.00 |

Method of Preparation

1. Mix at medium speed eggs, water and vegetable oil.
2. Blend all the dry ingredients together.
3. Add liquid ingredients to the dry mixture.
4. Bake at 160°C for 35 min.

Galam's Recipes

Fruitose® In Baked Goods

English Cake (20% fat)

Sweetened with sugar and Fruitose®

| Ingredients: | % |
|-----------------------------|--------|
| Sugar | 17.00 |
| Whole egg | 20.00 |
| Wheat flour | 20.00 |
| Vegetable oil | 17.00 |
| Water | 8.00 |
| Sliced fruits | 6.30 |
| Fruitose® | 5.00 |
| Glucose syrup 80 Brix DE 42 | 2.00 |
| Maltodextrin DE 2-3 | 2.00 |
| Instant starch | 1.00 |
| Sodium acid pyrophosphate | 0.40 |
| Sodium bicarbonate | 0.35 |
| Salt | 0.20 |
| Flavor | 0.05 |
| Cellulose fiber | 0.20 |
| Monodiglyceride | 0.40 |
| Xanthan gum | 0.10 |
| Total | 100.00 |



Method of Preparation

1. Mix at medium speed eggs, glucose syrup, water and vegetable oil.
2. Mix all the dry ingredients together.
3. Add the liquid ingredients to the dry mixture.
4. Bake at 160°C for 35 min.



These recipes illustrate a process which is believed to be satisfactory for general use. Each recipe is offered for your consideration and authorization. For consulting- please advice Food Applications: Tel +972-46375021 or by email: mamanj@galam.co.il

Galam Group
Refining Nature's Raw Materials
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In Energy and Fruit Bars



Fruitose® has an important function in Energy Bars, improving the texture and providing a natural, sweet taste.

Galam's Recipes

Fruitose® In Energy and Fruit Bars

Fruitose®:

- *Provides better consistency and smoothness.*
- *Gives the product a natural sweetness.*
- *Enhances the fruity taste of Fruit Bars.*
- *Improves the nutritional value of the bar.*



Healthy Snack Bar

| Ingredients: | % |
|----------------------------|---------------|
| Oat flakes | 52.00 |
| Fruitose® | 8.00 |
| Glucose Syrup DE 38 | 18.00 |
| Sugar | 12.00 |
| Instant starch | 1.00 |
| Hydrogenated Vegetable Oil | 7.00 |
| Water | 2.00 |
| Total | 100.00 |

* Nuts, Almonds and dried fruits can be added

Method of Preparation

- 1. Mix all the dry ingredients.*
- 2. Add the dry ingredients to the glucose syrup and water.*
- 3. Stir while adding the oil.*
- 4. Bake at 120°C for 20 minutes.*



These recipes illustrate a process which is believed to be satisfactory for general use. Each recipe is offered for your consideration and authorization. For consulting- please advice Food Applications: Tel +972-46375021 or by email: mamanj@galam.co.il

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