

Technical Packet



Liquid

by



ADVANCED
INGREDIENTS



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PRODUCT DESCRIPTION

FRUITRIM[®] Liquid

OVERVIEW

FRUITRIM[®] is a liquid, carbohydrate-based ingredient formed from fruit juice and dextrin. The combination of mono and disaccharides from fruit juice with select medium-chain dextrin from grain creates a very effective, sweet-tasting ingredient with natural humectancy and low-water activity.

INCREASES SHELF LIFE

FRUITRIM[®] keeps food moist and fresh-tasting longer. It has been proven to extend the shelf life of baked goods by +50% to +300% and more. Consequently, FRUITRIM[®] has reduced the cost of stales/spoils for some manufacturers as much as 80%.

BOOSTS PRODUCTION YIELDS

The superior moisture-binding ability of FRUITRIM[®] increases production yields, which has reduced total production costs on select items. Yields typically grow 3% to 5%, with some gains as high as 14%.

IMPROVES PRODUCT QUALITY

Through unprecedented moisture control, FRUITRIM[®] consistently improves the overall flavor of food, enhances its texture/softness, and very often makes food taste richer than ever before.

PROVIDES FREEZE/THAW STABILITY

FRUITRIM[®] prevents the ice crystallization that dries out frozen food and causes freezer burn.

MAKES BAKED GOODS MICROWAVABLE

FRUITRIM[®] makes many baked items microwavable without specialty packaging. FRUITRIM[®] makes it possible to deliver a warm, “fresh from the oven” eating experience while preventing the toughness, scorching and burning of food that all too often occurs when using a microwave oven.

GENERATES MORE SALES

The longer shelf life provided by FRUITRIM[®] makes broader geographic distribution possible, which can increase sales. The improvements in product quality resulting from the use of FRUITRIM[®] generate higher repeat purchase rates, which also leads to increased sales.

CONSUMER FRIENDLY

FRUITRIM[®] is a patented, all-natural ingredient that contains no artificial ingredients, additives or preservatives. It is GRAS and Non-GMO. FRUITRIM[®] is “made from real fruit juice”, gluten-free and contains no MSG or corn. It is Kosher and Pareve under supervision of the Orthodox Union.

TECHNICAL SUPPORT

Advanced Ingredients provides technical assistance in formulation development using FRUITRIM[®].

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FRUITRIM[®] Liquid – Benefits & Usage Summary

Item	Shelf Life		Yield Increase	% FRUITRIM [®] Added*
	Previous	New		
I. Bagels – Packaged				
A. U.S.	21 days	37+ days	3.6% - 4.1%	1.33%
B. U.K.	3 days	4 days	3.25%	1.25%
II. Cookies – Packaged**	2 weeks	4½ weeks	1.7%-2.2%	1.0%-1.5%
III. Bread – Packaged				
A. White bread	5-6 days	17-18 days	9.6%	1.2%
B. Hard bread	14 days	31 days	5%	1.2%
C. Black dense bread	Unknown	Unknown	4%	Unknown
D. Spice Bun bread	18-20 days	38-50 days	14%	2%
IV. Cake**				
A. Crème Cake - Packaged	4 days	35 days	7%	1.25%
B. Florentine Cake - Packaged	12-16 days	47 days	Unknown	1%
C. Pound Cake	14 days	47 days	4.3%	1%
V. Cinnamon Rolls – Packaged	8 days	21 days	Unknown	1%
VI. Danish - Packaged				
A. Project A	7 days	18 days	Unknown	1.5%
B. Project B	7 days	30 days	Unknown	2%
VII. Donuts				
A. Yeast Raised	24-28 hours	44-48 hours	10% more jump/ 50% less collapse	1.3%
B. Cake				
1. Open	1.5 days	3 days	Unknown	1.75%
2. Packaged	7 days	15-23 days	Unknown	2%
XIII. Muffins				
A. Scratch**	3 days	7 days	3.1%	1.25%
B. Mix**	5-9 days	11-23 days	Unknown	1.25%
C. Apple Cobbler & Chocolate	Unknown	Unknown	7.5%	1.33%
D. Banana Walnut	6 weeks	10 weeks	Unknown	1.25%
E. Carrot	6 weeks	8½ weeks	Unknown	1.25%
F. Pudding Muffin	14 days	32 days	7.5%	1.5%
IX. Panetone	2 weeks	10-12 weeks	Unknown	1.2%
X. Pasta				
A. Project A	Not measured	Not measured	2.5% - 3%	2%
B. Project B	Not measured	Not measured	5% - 6%	5% - 5.5%
XI. Pie				
A. Chocolate Cream – Refrigerated	Unknown	Unknown	2%	2%
B. Lemon Meringue – Frozen	1½ days after thawing	7½ days after thawing	6% - 7%	1.5%
XII. Pretzel Sticks - Frozen	60 days	105 days	Unknown	2%
XIII. Stollen	4-6 weeks	15+ weeks	Unknown	1.5%

* Based on total weight of the formulation before adding FRUITRIM[®] Liquid

** In-store bake

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**FRUITRIM® LIQUID -
PRODUCT SPECIFICATIONS**

Proximate Analysis*:

<u>Components</u>	<u>Amount</u>
Sugars	69% ± 3%
Other Carbohydrates	9% ± 2%
Fiber	- -
Total Carbohydrates	78% ± 2%
Protein	1.0% ± 0.25%
Ash	0.7% ± 0.1%
Fat	0.3% ± 0.05%
Unsaturated	0.3%
Saturated	0.0%
Trans Fat	<u>0.0%</u>
Total Solids	<u>80% ± 2%</u>
Moisture	<u>20% ± 2%</u>
Total	100%

*These values are dependent upon natural ingredients and therefore may vary slightly.

Specific Gravity: Minimum 11.4 lbs./gallon

Viscosity: 10,000 - 16,000 cps at 70° F/21° C

Color: Amber

<u>Microbial:</u>				
Total Plate Count	<500/gram	Total Coliform	<0.3/gram	
Yeast	<10/gram	Salmonella (in 100 gram)	negative	
Mold	<10/gram	E. Coli (in 100 gram)	negative	
Staph aureus	negative	Listeria monocytogenes	negative	

Shelf Life, Storage and Shipping: Unopened product is stable for one year. Due to the natural constituents of the product, darkening may occur over time without affecting quality. Product storage and shipping temperature should not drop below 55° F (13° C). Shipping and storage above 90° F (32° C) will accelerate the darkening of the product. Do not refrigerate during shipping or storage. After opening, use the remainder within two weeks.

Pack Size and Pallet Stacking:

<u>UPC</u>	<u>ITEM</u>	<u>NET WEIGHT</u>	<u>GROSS WEIGHT</u>	<u>PALLET PATTERN</u>
23977	FRUITRIM® - 5 gal. poly pails	55 lbs	58 lbs	12x2=24**
22863	FRUITRIM® - 55 gal. poly drums	640 lbs	660 lbs	4/Pallet**
22877	FRUITRIM® - Totes	3,000 lbs	3,100 lbs	
23959	FRUITRIM® - Bulk tanker trucks	Available upon request		

** All products must be shrinkwrapped to pallet. Do not double stack pallets or top stack with other products.

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FRUITRIM® LIQUID -
TECHNICAL DATA SHEET

<u>Assay*</u>	<u>Analysis</u>	<u>Units</u>
Protein (N X 6.25)	1.0	g/100g
Moisture	22.0	g/100g
Fat	<0.3	g/100g
Ash	0.7	g/100g
Carbohydrates	76.0	g/100g
Calories	308	calories/100g
Fiber	<0.1	g/100g
Vitamin A	<20	I.U./100g
Thiamine (B ₁)	0.02	mg/100g
Riboflavin (B ₂)	0.02	mg/100g
Vitamin C	5.3	mg/100g
Niacin	1.06	mg/100g
Calcium	26.8	mg/100g
Iron	0.71	mg/100g
Phosphorous	39.5	mg/100g
Potassium	238	mg/100g
Sodium	39	mg/100g

* The above assay is typical analysis and should not be construed as specifications. Since FRUITRIM® is not a refined product, variations in the natural raw materials (fruit juice and dextrin) will cause slight changes in the above assay.

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**FRUITRIM® LIQUID -
LABELING**

Nutrition Facts	
Serving Size (100g) Servings Per Container	
Amount Per Serving	
Calories 310	
Calories from Fat 0	
Calories from Saturated Fat --	
% Daily Value*	
Total Fat 0g	0%
Saturated Fat --g	--%
Trans Fat 0g	
Stearic Acid --g	
Polyunsaturated Fat --g	
Monounsaturated Fat --g	
Cholesterol --mg	--%
Sodium 40mg	2%
Potassium 240mg	7%
Total Carbohydrate 78g	26%
Dietary Fiber 0g	0%
Soluble Fiber 0g	
Insoluble Fiber 0g	
Sugars 69g	
Sugar Alcohol --g	
Other Carbohydrates 9g	
Protein 1g	
Vitamin A 0%	• Vitamin C 8%
Calcium 2%	• Iron 4%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Potassium	3,500mg 3,500mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

Ingredients

FRUITRIM® Liquid – fruit juice, natural grain dextrin

Certification

FRUITRIM® is Kosher and Pareve under the supervision of the Orthodox Union.

Therefore, this ingredient may be labeled with the symbol



Other

FRUITRIM® is an all-natural, unrefined product that is Non-GMO, gluten-free, corn-free and contains no MSG. It is GRAS (Generally Recognized As Safe) under U.S. food standards.

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FOOD ALLERGEN INFORMATION

FRUITRIM® Liquid

ALLERGENS	FREE FROM	ALLERGENS	FREE FROM
ADDITIVES – NATURAL AND ARTIFICIAL	√	GELATIN	√
ANIMAL PRODUCTS AND DERIVATIVES	√	GLUTAMATES (MSG)	√
ASPARTAME (NUTRASWEET)	√	GLUTEN FROM THE LISTED GRAINS AND GRASSES*	√
BEEF PRODUCTS AND DERIVATIVES	√	LAMB/MUTTON PRODUCTS AND DERIVATIVES	√
BENZOATES	√	MILK PRODUCTS AND DERIVATIVES	√
BHA/BHT	√	NUT PRODUCTS AND DERIVATIVES **	√
BIO-SOLIDS	√	PORK PRODUCTS AND DERIVATIVES	√
CITRUS PRODUCTS AND DERIVATIVES	√	POULTRY PRODUCTS AND DERIVATIVES	√
COLORS AND DYES – NATURAL AND ARTIFICIAL	√	PRESERVATIVES – NATURAL AND ARTIFICIAL	√
EGG PRODUCTS AND DERIVATIVES	√	SEED PRODUCTS AND DERIVATIVES	√
FISH PRODUCTS AND DERIVATIVES	√	SOY PRODUCTS AND DERIVATIVES	√
FLAVORS – NATURAL AND ARTIFICIAL	√	SULFATES, SULFIDES, SULFUR DIOXIDE, SULFUR AND SULFUR DERIVATIVES	√
GARLIC	√	YEAST PRODUCTS AND DERIVATIVES	√

* Amaranth, Barley, Buckwheat, Corn, Kamut, Millet, Oats, Quinoa, Rye, Spelt, Triticale, and Wheat

** FREE FROM NUTS DECLARATION - means absolute absence of all nut & nut products, including oils & sources of vegetable protein containing derivatives of nuts in the product or any of its ingredients. Nuts are: Almonds, Brazil nuts, Beechnuts, Betal nuts, Breadnuts, Butternuts, Cashew nuts, Chestnuts, Cobnuts, Coconut, Chilean wild nuts, Chinquapins, Cola nuts, Ginkgo nuts, Hazelnuts, Heart nuts, Hickory nuts, Jacknuts, Jojoba nuts, Macadamia nuts, Oyster nuts, Peanuts, Pecans, Pistachio, Paradise, Persian walnuts, Pili nuts, Quandang nuts, Squari nuts, Tahiti chestnuts, Tallow nuts, Tiger nuts, Tropical Almonds, Walnuts, Sesame seeds. Note palm kernel oil is not deemed to be a nut oil.

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FRUITRIM® LIQUID –
MATERIAL SAFETY DATA SHEET

DISCLAIMER - FRUITRIM® is produced according to appropriate food regulations, and it is not a hazardous chemical. The following information is being supplied as a convenience for customers.

SECTION I - PRODUCT IDENTIFICATION

Product Name: FRUITRIM®
Food/Chemical Name: Fruit juice, dextrin
Chemical Family: Carbohydrate

SECTION II - HAZARDOUS INGREDIENTS

Material: None

SECTION III - PHYSICAL DATA

Boiling Point: 220° F (104° C)
Melting Point: N/A
Specific Gravity: Minimum 11.4 lbs./gallon
Vapor Pressure: N/A
Vapor Density: N/A
Water Solubility: Completely soluble, slightly cloudy solution
Appearance, Odor, Taste: Amber to dark brown liquid, no odor, bland taste

SECTION IV - FIRE PHYSICAL HAZARD DATA

Flash Point: N/A
Flammable Limits: N/A
Fire Extinguishing Media: Water
Hazardous Decomposition Products: None
Hazardous Polymerization: Will Not Occur
Conditions to Avoid: Fire and Flame
Unusual Fire/Explosion Hazard: None
Incompatibility: Powerful oxidizing agents such as perchloric acid

SECTION V - HEALTH HAZARD

Effects of Overexposure: Inhalation - None known
Ingestion - No health hazard, can be used as human food
Signs and Symptoms of Overexposure: Unknown
Primary Route(s) of Entry: Ingestion
Exposure Limits: None known

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FRUITRIM® LIQUID –
MATERIAL SAFETY DATA SHEET (cont.)

SECTION VI - LISTING AS A CARCINOGEN

National Toxicology Program Annual Report on Carcinogens: Not Listed

International Agency for Research on Cancer Monographs: Not Listed

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Hygienic Practices: Normal housekeeping measures, water cleanup

Protective Measures During Repair/Maintenance: None required

Waste Disposal Method: Landfill - Material is biodegradable and not harmful

Special Fire Fighting Procedures: None

Extinguishing Media: Water or CO₂

SECTION VIII - CONTROL MEASURES

Engineering Controls:	None
Ventilation:	Usual GMP ventilation should be adequate
Work Practices:	No smoking in work area
Respiratory Protection:	Not required
Eye Protection:	Not required
Other Protective Equipment:	Not needed

SECTION IX - EMERGENCY AND FIRST AID PROCEDURES

None

SECTION X - PRODUCT STORAGE

Storage: 55° F (13° C) - 90° F (32° C). Product storage and shipping temperature should not drop below 55° F. Shipping and storage above 90° F will accelerate the darkening of the product. Do not refrigerate during either shipping or storage.

In Use: Partial containers should be resealed. After opening, use the remaining contents within two weeks.

Stability: Unopened product is stable for 12 months.

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ESTABLISHED APPLICATIONS

Advanced Ingredients provides technical assistance in formulation development using FRUITRIM®. Some of the established FRUITRIM® applications are:

Bars	Jelly Rolls
Breads	Muffins
Breakfast Cereals	Pancakes
Brownies	Pastries & Torts
Butter	Peanut Butter
Cakes & Pies	Pies
Caramels	Puddings
Caramel Corn	Rolls
Cinnamon Rolls	Salad Dressings
Cookies	Scones
Crackers	Sherberts
Custard	Sorbets
Danish	Sweet Dough
Flan	Toffees
Frostings	Torts
Frozen Desserts	Variegates
Frozen Vegetables	Waffles
Ice Cream	Weight Loss Liquids, Powders & Bars
Ices	Yogurts
Icings	

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