



# Nutrition & Color

## A Color and Nutrition Boost for your Dairy Products Altratene® Apocarotenal

Founded in 2001, Allied Biotech is one of the major carotenoid suppliers in the world. We have always been known for our flexibility and responsiveness to our customers' needs. Allied offers various vegetarian, Palm-Oil free and allergen free formulations for food, dietary supplement, pet food and feed industries. We strive for product innovation and take great care of the environment and human health.

### About Products

Apocarotenal ( $\beta$ -Apo-8'-carotenal) can be found in fruits and vegetables like oranges and spinach. It is the only carotenoid besides Beta-carotene that plays a significant role as a precursor of Vitamin A. Apocarotenal has a nice reddish color shade after formulations. It is a well-known alternative to artificial colors like Allura Red or Ponceau 4R by itself or in combination with Beta-carotene.








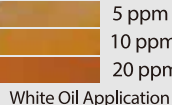

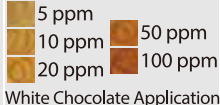
**Headquarters Allied Biotech Corporation**  
13th Floor, No. 71, Sec 2, Tun Hua S. Road 10682,  
Taipei City, Taiwan.  
**Tel** + 886-2-2703-0209 **Fax** + 886-2-2703-0289  
allied@altratene.com

**Allied Biotech Europe GmbH**  
Ludwig-Erhard-Allee 10, 76131 Karlsruhe,  
Germany.  
**Tel** +49-721-5099-8742 **Fax** +49-721-5099-8701  
emea@altratene.com



## About Products

Product	Altratene® Apocarotenal			
	5% WSC/CC	5% WSC	10% WSC/B	5% FT/PF
Formulation	Transparent Water Soluble Fine Powder	Water Soluble Fine Powder	Water Soluble Fine Granule	Water Soluble Emulsion
β-Apo-8'-carotenal Content	Minimum 5%	Minimum 5%	Minimum 10%	Minimum 5%
Palm Oil-Free Status	✓	✓	✓	✓
Shelf Life	48 months Ambient temperature	48 months Ambient temperature	48 months Ambient temperature	12 months in a cool place (Below 15°C)
Applicable for	Kosher, Halal and Vegetarian Foods	Kosher, Halal and Vegetarian Foods	Kosher, Halal and Vegetarian Foods	Kosher, Halal and Vegetarian Foods
Color Shades in Water at Different Dosages*	 5 ppm 10 ppm 20 ppm	 5 ppm 10 ppm 20 ppm	 5 ppm 10 ppm 20 ppm	 5 ppm 10 ppm 20 ppm

Product	Altratene® Apocarotenal				Product	β-Apo-8'-Carotenal Crystalline
	2% SOLUTION	70/30	20% OS	20% MCT		
Formulation	Oil Solution	Oil Solution	Oil Suspension	Oil Suspension	Appearance	Deep Violet Crystals
β-Apo-8'-carotenal Content	Minimum 2%	Minimum APO 1.4% Beta-Carotene 0.6%	Minimum 20%	Minimum 20%	β-Apo-8'-carotenal Content	Minimum 96%
Palm Oil-Free Status	-	-	✓	✓	Shelf Life	12 months in a cool place (Below 15°C)
Shelf Life	24 months Between 5°C -25°C	24 months Between 5°C -25°C	48 months Ambient temperature	48 months Ambient temperature	Applicable for	Kosher, Halal and Vegetarian Foods
Applicable for	Kosher, Halal and Vegetarian Foods	Kosher, Halal and Vegetarian Foods	Kosher, Halal and Vegetarian Foods	Kosher, Halal and Vegetarian Foods	Application at Different Dosages*	Kosher, Halal and Vegetarian Foods
Application at Different Dosages*	 5 ppm 10 ppm 20 ppm White Oil Application	 5 ppm 10 ppm 20 ppm White Oil Application	 5 ppm 10 ppm 20 ppm White Oil Application	 5 ppm 10 ppm 20 ppm 50 ppm 100 ppm White Chocolate Application		

\*Please contact our sales team for more details in different applications.

Application	Altratene® Apocarotenal			
	Powder	Suspensions	Oil Solution	Emulsions
Bakery and Pasta	✓	✓	✓	✓
Carbonated Drink	✓			✓
Cheese	✓	✓	✓	✓
Confectionery	✓			✓
Edible Oil and Dressing	✓	✓	✓	
Flavored Milk and Yoghurt	✓			✓
Fruit / Multivitamin Juice	✓			✓
Ice Cream	✓	✓	✓	✓
Margarine	✓	✓	✓	✓
Processed Meats	✓	✓	✓	✓
Soup	✓	✓	✓	✓

*We support a wide range of applications!*

### Altratene® Apocarotenal Powder

Allied has 3 powder formulations: 1%, 5% and 10%. These can be used in beverages or other food applications to replace artificial colors like Allura Red or Ponceau 4R.

### Altratene® Apocarotenal Suspension

The 20% oil-based formulation is the most concentrated form on the market. It can be used in dressings, soups and sauces to achieve reddish color shade.

### Altratene® Apocarotenal Solution

Altratene® Apocarotenal 2% Solution is a solution of Apocarotenal in vegetable oil. This formulation imparts shades of red colours in oil or fat based food products like processed cheeses, dressings, soups etc.

Altratene® Apocarotenal 70/30 is a solution of Apocarotenal and Beta-carotene in vegetable oil. This product can be used in processed cheeses, or any oil or fat based food products to achieve a reddish or deep orange color shade.

### Altratene® Apocarotenal Emulsion

The Fluid Type (FT) formulation is an oil-in-water emulsion of Apocarotenal. It imparts shades of red colors in beverages and other water-based food products.

