



CATI

Center for Advanced Technology and Innovation

Oil Extraction of Cholesterol from Milk Products

Consumer Cholesterol Concerns: Consumer research suggests a relatively high level of consumer concern about managing cholesterol levels. According to HealthFocus, a large-scale syndicated of consumer attitudes towards health, 41 percent of consumers are extremely or very concerned about high cholesterol, and 40 percent say they consider “cholesterol free” to be extremely or very important when reading food labels. This concern about cholesterol is likely to increase over the next 10 years as the population ages.

Patented Technology:

1. **US Patent No. 5,378,487**, Issued 01/03/95, “Oil Extraction of Cholesterol from Milk Products
2. **US Patent No. 5,128,162**, Issued 07/07/92, “Method for Removing Cholesterol for Edible Oils”

Technology Benefits: This technology, originally developed by Kraft Foods, Inc., claims a rapid continuous process for the reduction of cholesterol from milk. The claims involve the reduction of cholesterol by 80 percent without removing the milk fat or damaging the protein nutrients. This process also results in an improved ratio of saturated to unsaturated fats (alters the ratio from 2:1 to 1:2). This process ensures a better taste and texture consistent with regular dairy products, while having greater heart and health benefits.

This process does not require cost intensive processes such as super critical CO² or organic solvents. Extraction is done with edible oils, which in turn can be recycled within the process. This process is also available for licensing.

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Dairy Market for “Reduced/Cholesterol Free” Milk Products:

Cholesterol reduction is likely to be most valued by consumers in the following three categories:

- Cheese
- Ice Cream
- Butter

These are categories that traditionally contain high levels of fat and cholesterol. And more importantly, these products are typically “rationed” by consumers when they are attempting to deal with issues of weight management or cholesterol reduction.

Estimated Market Capture with Cholesterol extraction Technology:

Total Retail Cheese Market

Estimated at \$11.1 Billion (Source: Packaged Facts)
Regular/Full-Fat Cheese – 82 percent of the market
Reduced Fat – 16 percent
Fat-Free – 2 percent

Cholesterol Free Cheese Market Share Estimates: 3-7 percent = \$333 Million to \$777 Million

Total Retail Ice Cream Market

Estimated at \$4.8 Billion (Source: Packaged Facts)
Regular/Full-Fat Ice Cream – 87 percent of the market
Light/Reduced Fat – 11 percent
Fat-Free – 2 percent

Cholesterol Free Ice Cream Market Share Estimates: 2-5 percent - \$96 Million to \$240 Million

Total Retail Butter Market

Estimated at \$1.1 Billion (Source: Packaged Facts)
There is no Reduced Fat/Free Segment

Cholesterol Free Butter Market Share Estimates: 10-20 percent = \$110 Million to \$220 Million

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