Whey Protein Isolate (WPI) Standard

Product Definition
Whey Protein Isolate (WPI) is obtained by the removal of sufficient non-protein constituents from whey so that the finished dry product contains not less than 90% protein on a dry matter basis. It is produced by membrane filtration processes and/or ion exchange. The acidity of Whey Protein Isolate may be adjusted by the addition of safe and suitable pH adjusting ingredients. WPI for human consumption complies with all provisions of the U.S. Federal Food, Drug, and Cosmetic Act.

Composition (dry basis)

Classification	Protein	Lactose	Fat	Ash	Total Moisture
WPI	Min. 89.5% Typical: 90.0% - 92.0%	Typical: 0.5% - 1.0%	Max. 1.5% Typical: 0.5%-1.0%	Typical: 2.0%-3.0%	Max. 6.0% Typical: 4.0% - 5.0%

Other Characteristics

Scorched Particle Content	≤ 15.0 mg
Color	cream
Flavor	bland, clean

Microbiological Analysis

Standard Plate Count	≤ 30,000 cfu/g
Coliform	≤ 10 cfu/g
Salmonella	Negative
Listeria	Negative
Coagulase positive Staphylococci	< 10 cfu/g
Yeast & Mold	≤ 100 cfu/g

Methods of Analysis

Criteria	Reference Method
Protein	AOAC 991.20
Lactose	ISO 22662/IDF 198
Fat	AOAC 989.05
Ash	AOAC 942.05
Moisture	AOAC 925.45

Product Labeling
"Whey Protein Isolate" The percent of protein is declared in 2% increments **OR** as actual percentage, provided an analysis of the product is supplied.

Product Applications
General protein supplement, protein functionality for gelation (yogurts, pudding), whipping (topping and filling), water-binding (meat, sausage), and emulsification (ice cream, margarine, mayonnaise)

Storage & Shipping
Product should be stored and shipped in a cool, dry environment with temperatures below 80°F and relative humidities below 65%. Stocks should be rotated and utilized within 9 mo – 1 yr.

Packaging
Multiwall kraft bags with polyethylene inner liner or other suitable closed container – i.e., "tote bins," etc.

Hydrolyzed Definition

Hydrolyzed WPC/WPI or MPC/MPI or casein is a whey- or milk-derived ingredient obtained by cleavage of the peptide bonds by specific enzymes (or optionally through use of acid). The product shall be labeled as hydrolyzed whey protein concentrate (or isolate); hydrolyzed milk protein concentrate (or isolate); hydrolyzed casein.

The hydrolyzed protein ingredient is characterized by its molecular weight distribution and by the degree of hydrolysis (DH). The degree of hydrolysis is defined as the proportion of cleaved peptide bonds in the ingredient.

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