

Milk Protein Concentrates (MPC)

Currently, there is no standard of identity for MPC in the United States. Although ultrafiltration is the preferred method for extracting MPC, it also can be produced by precipitating the proteins out of milk or by dry-blending the milk proteins with other milk components. Depending on how MPC is produced, costs may vary and, more important, functionality may differ.

Commercially, MPCs are available in a range of protein levels, from 42% to 85%. Typical MPCs offered are MPC42, MPC70, MPC75, MPC80 and MPC85. As the protein content of MPCs increases, the lactose levels decrease. For example, MPC42 is 42% protein and 46% lactose. MPC80 contains 80% protein and 4.1% lactose. For comparison, skim milk powder contains about 35% protein and 52% lactose.

MPCs are white to light-cream-colored dry powders. They are best used within one year of receipt. Recommended storage is below 77°F and 65% relative humidity in a cool, odor-free, dry environment. If the product has been opened and resealed, it should be used within one month of opening.

Typical Composition of Milk Protein Concentrate (%)

Ingredient	Moisture	Fat	Protein	Lactose	Ash
MPC42	3.5	1.0	42.0	46.0	7.5
MPC70	4.2	1.4	70.0	16.2	8.2
MPC75	5.0	1.5	75.0	10.9	7.6
MPC80	3.9	1.8	80.0	4.1	7.4
MPC85	4.9	1.6	85.0	1.0	7.1

Nutritional information

MPC is used for its nutritional and functional properties. It is high in protein content (casein and whey protein) and contributes about 360 Kcal/100 g. Higher protein-containing MPCs can be low in carbohydrate content, containing minimal amounts of lactose. This high-protein, low-lactose ratio makes MPC an excellent ingredient for protein-fortified beverages and foods and low-carbohydrate foods. MPCs also retain a fair portion of calcium because it is bound to the casein.

The information contained herein is, to the best of our knowledge, correct. No warranties, expressed or implied, are made. This information is offered solely for your investigation, verification, and consideration. It is suggested that you evaluate the product prior to use in production.