



How to ensure separation enhances value in whey production

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Attention to detail in separation is vital when producing products like whey powder and whey protein concentrate (WPC). What steps should you take to ensure your separation process enhances the value of your whey products?

Quality is king in whey production. Whey, a by-product of cheese making, is used to add nutritional value and function to food products. Whey products are widely used in everything from infant formula and baked goods to sports beverages and pharmaceuticals.

Producing these different varieties requires effective processing with centrifugal clarifiers and separators.

The first steps in whey processing involve extracting the remaining cheese fines and then removing as much fat as possible from the whey. Cheese fines are removed by centrifugal clarification and fat content is reduced by separation.

High efficiency in these processes is essential to producing premium whey products like lactose powder (used in medical pill, capsule manufacture and infant formula), whey protein concentrate (used for sports nutrition and infant formula products) and whey protein isolate (used for sports and dietary products).

Non-removal of remaining cheese fines in the whey may have negative effects on downstream processing post-separation. In particular, cheese fines can clog production filters, especially membrane filtration plants, dramatically increasing cost of production and maintenance.

Efficient separation is also critical. Separators used in whey production need to be able to remove as much as possible of the fat from a product that typically contains only 0.2-0.4% fat, compared to 3-4% fat in milk. Minimizing fat content is crucial to enable customers to meet the end product specifications for their ingredients.

Inadequate separation that leaves excess fat in the whey causes problems when the whey skim is processed further, explains Ulrika Rehn, application specialist at Tetra Pak. "If skimmed whey fat content is too high it will limit your end-product specifications."

Installing hermetic separators in your pre-treatment allows flexibility in respect of flow rates, Rehn adds. "This is of great value to customers that have variable whey volumes from their whey producing process, as is often the case for cheese manufacturers." If you need support in meeting your specific challenges in separation, please feel free to contact us.

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