

Quality and activity of the industrial fractionated casein

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Aim and Description:

It is estimated that there are large marketing possibilities for a more or less pure β -casein ingredient. Provided that it is profitable. There are opportunities for use in infant formulas, infant nutrition or other kinds of specialized food components. A protocol for such a fractionation is now available, as a result of a conducted Danish Dairy Research Board project and experiments performed at Arla Foods Ingredients. The current project aims at assessing the quality and bioactivity of a product produced in that way, but also to evaluate the potential for reaching higher purity in an economically feasible manner and monitoring the concomitant derived functional properties. The bioavailability of the product is surveyed by assaying the digestibility by proteolytical enzymes and judgment of the capability to penetrate a barrier of intestinal epithelial cells using a trans-well assay. At last the project aims at estimating the ability of pure or degraded β -casein to influence the appearance and maturation of intestinal cells, e.g. done by monitoring the ability to express brush border enzymes.