

The world market for whey and lactose products 2006 to

A new global report on whey and lactose products from 3A Business Consulting, named “The World Market for Whey and Lactose Products 2006 to 2010 – From commodities to value added ingredients”, reveals how various dairy ingredients are developing towards additional application opportunities and continue to show positive growth rates.

Various end user segments are incorporating whey and lactose products into a range of products for the food industry, but also within the dietary supplements/sports nutrition industry and the nutraceutical industry, whey and lactose products have a great customer following. The report is global in scope with a regional distinction and focuses on whey and lactose products market sizes providing specific quantifications broken down on major regional areas and major applications with regard to both volume and value for a range of products – commodity type products as well as more specialised derivatives.

The areas covered in this respect are:

- Market size (volume and value) and expected growth
- Current applications and trends
- Applications and breakdown of end user segments
- Producer profiling including product quantification
- Major world trade flows
- 2006 to 2010 outlook
- Global survey of product launches containing whey and lactose
- Industry characterization and strategic alliances

Specifically, the report covers the following product types:

- Whey powder, DWP, WPC35, WPC80, WPH, WPI, whey protein fractions, lactose and lactose derivatives

positive annual growth rates in the review period.

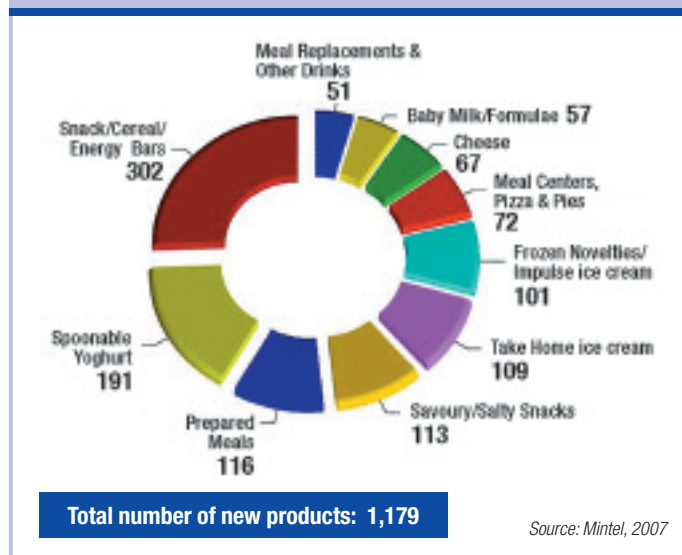
The market for industrially utilised whey ingredients has clearly moved to a food and health care orientation leading to an increasing focus on the more value-added whey and lactose products. High-end whey protein concentrate, whey protein hydrolysates and whey protein isolates are experiencing significant growth rates on the basis of increasing demand from the nutritional segments. In volume terms the EU is the biggest market for WPC35, however the US is the biggest market for WPC80 and WPI. In comparison RoW is rather insignificant. The expected future market development of WPC, WPI and WPH is forecasted to a nine per cent growth rate annually. Given a higher focus on functional/technological properties WPC, WPI and WPH are expected to broaden their fields of application.

Global whey and lactose products market outlook

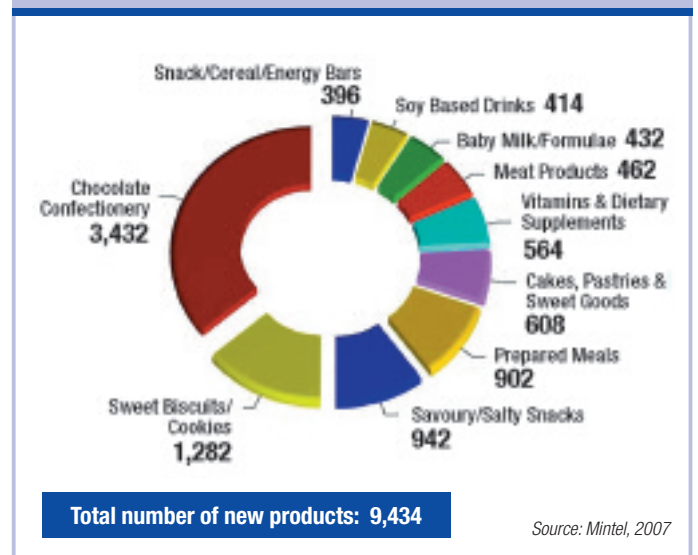
The global cheese production will continue to grow and so will the output of whey. The increasing amount of whey will be converted into all the different well-known whey products including WPC35, WPC80, WPI and the more specialised whey protein fractions as well as lactose and lactose derivatives.

The growth rates of the various products vary considerably, however an increasing trend is identified and it is expected that all the various products will exhibit

WPC – number of new products by sub-category 2004 – 2006



Lactose – number of new products by sub-category 2004 – 2006



2010

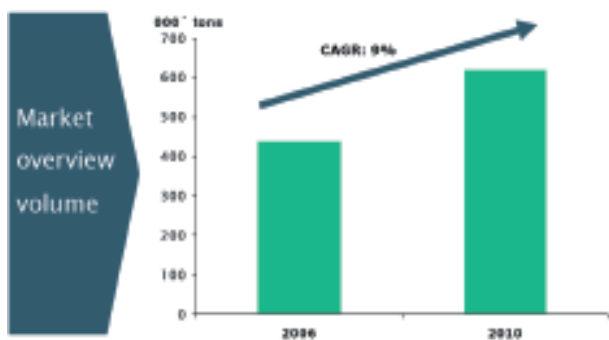
Regarding production of lactose, the report estimates global 2006 volumes of 850,000 MT with Europe taking the lead (400,000 MT) followed by the US (317,000 MT). Lactose is mainly used in different food formulations, e. g. to control and enhance crust colour in bakery products, however it also has a significant position in pharmaceutical applications, e. g. as filler product for tableting. Accordingly, a significant part of the supply of lactose (approximately 80 per cent) goes into food applications such as infant

formula, meat products, confectionery and bakery products, and with the residual volume primarily going into different pharmaceutical products. Whey protein fractions such as lactoferrin, α -lactalbumin and colostrum/IgG alongside galactooligosaccharides (GOS) and lactitol from the lactose proportion are also showing interesting new application opportunities and significant annual growth rates. For instance GOS is growing annually by an impressive 15 per cent compared to e. g. lactulose increasing a mere one to four per cent annually.

Whey and lactose in a broad range of consumer products

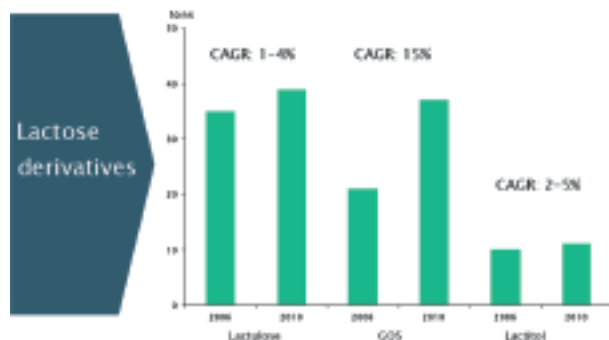
In recent years, more and more consumer products have been

Estimated 2010 WPC, WPI and WPH production



Note: In the report breakdowns are provided on WPC35, WPC80, WPH and WPI markets
Source: 3A Business Consulting

Estimated 2010 lactulose, GOS and lactitol production



Source: 3A Business Consulting

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launched containing whey and lactose ingredients. Taking WPC as an example the number of consumer products launched has increased from a total of 740 for the period 2001 to 2003 to 1,179 for the period 2004 to 2006. As can be seen in the figure, WPC is penetrating a very broad range of applications.

In the case of lactose the same trend can be found. Consumer products launches containing lactose has almost doubled from 2001 to 2003 to 2004 to 2006. The illustration "Lactose-number of new products by sub-category-2004 to 2006" does not include pharmaceutical applications.

Whey proteins and lactose derivatives – development characteristics

Whereas whey proteins and lactose are clearly mainstream ingredients, many of the whey protein fractions and lactose derivatives are still at a very early market development stage, and even though actions are taken to address important issues, some

NEWS

New Website for Delvotest

DSM Food Specialities launched www.delvotest.com, a new website dedicated to its antibiotic residue testing kit, Delvotest. Designed and developed for farmers using Delvotest, the easy-to-use website features "The Delvotest ten-point plan", which provides valuable guidance on how to avoid contamination on the farm and ensure cost efficiencies.

Users will also benefit from online access to DSM's highly experienced technical support team, their scientific knowledge and international applications experience.

A window to DSM's specialist knowledge and expertise, the Delvotest website offers key recommendations for disease prevention, identifying treated animals and evaluating associated risks. □

Wheyvolution



International Whey Conference 2008

European Whey Producers Association EWPA will organise the 5th International Whey Conference from 7th to 9th September in Paris. The event will be a meeting place for product developers, research scientists and innovators, purchasers, nutritionists, operations and process technologists, sales and marketing who have interests in whey and whey products. General topics that will be discussed are health, marketing, innovation, perspectives and technologies. More information is available at: www.iwc-2008.org □

years will be needed to fully exploit the potential. These important issues include disseminating information about ingredient properties and further development of science-based research providing consumer education and product promotion. In Europe company efforts to pass novel foods procedures will also be of great importance.

Additionally, it should be kept in mind that new products and new ingredients need a period of consumer acceptance preferably

supported by some new successful applications and introductions, before sales really take off.

Broadly speaking, whey protein fractions, and to some degree lactose derivatives, initially seem to make their market entry in Asia, notably Japan, with penetration first targeting sports nutrition and dietary supplements, followed by infant formula and foods. Later on, market adoption can be seen in the US followed by Europe also with ingredients initially targeting sports nutri-

tion and dietary supplements. Accordingly, the food industry in Europe is usually last to incorporate new whey protein fractions and lactose derivatives.

Obviously, the report is based on projections reflecting the current development pattern and anticipated market characteristics. However, it is necessary to realise that different scenarios could occur as a consequence of changes in the market, new processing technologies, new scientific findings, or new regulations.

In relation to the individual whey and lactose products, a number of selected application areas seem particularly promising. Should a final breakthrough become evident within one of these segments, the market could change completely – both in terms of application segments and total market value. One example in this respect could be lactoferrin.

This product is not believed to have reached its market potential given its many promising health properties.

In short, all whey and lactose products are expected to continue to present positive growth rates in the years to come, and with the renewed strong interest in generating value from whey, the global whey industry is set for an exciting future. □

Whey protein fractions and lactose derivatives adoption curve (and to some degree)

