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Vurdering av Initial Report D-Tagatose

Vi viser til notat datert 16.05.07 fra Svanhild Vaskinn med forespørsel om forenklet risikovurdering av D-Tagatose, og med spørsmål om det kan foreligge spesielle farer knyttet til inntak av tagatose i Norge, og hvilken risiko eventuelle farer vil utgjøre?

Faggruppe 7 støtter konklusjonen i Initial Report D-Tagatose fra Advisory Committee on Novel Foods and Processes, UK. Imidlertid er tagatose mer aktiv i Maillard-reaksjoner enn for eksempel sukrose, laktose, og andre monosakkarider. Dette vil kunne bety at reaksjonsprodukter (hvorav noen er kreftfremkallende) lettere vil kunne dannes, og kanskje også i større mengder. Tilgjengelighet på aminosyrer i prosessen vil imidlertid være en begrensende faktor. Dette vil være avhengig av matmatriksen. Reaksjonsprodukter fra Maillard med tagatose bør studeres nærmere.

Nedenfor følger en kort oppsummering av den britiske rapporten på engelsk fra Faggruppe 7:

Oppsummering av Initial Opinion: D-tagatose fra Food Standard Agency, UK

Tagatose is targeted as a Novel Food ingredient to be added as a sucrose replacement. This sugar is sweet (75-92% of sucrose), but has a low GI, low energy value, and is assumed to be prebiotic and non-cariogenic. It is to be used in cereal bars and snacks, diet soft candies, chocolate products and other sweet foods in general.

The average daily intake is estimated as 4.6g (9.8g, 90th percentile) with the highest consumption/body weight being for children. It is noted that this estimate can be higher if tagatose is included in more products or if the concentration in products is increased.

Tagatose is manufactured from lactose, which is itself isolated from whey. It is >98% pure, with galactose being the only impurity. Lead is <1 ppm and ash > 0.1%. All chemicals and enzymes used in the manufacture are of food grade.

Potential negative effects:

For all consumers, a large dose will result in flatulence and soft stools, as is the case with other carbohydrates that are not digested by human gut enzymes. It is therefore specified that products containing tagatose should be labelled to warn of this side effect. However, it is deemed unlikely that a consumer would ingest the amount necessary to obtain this effect at a single sitting. The effect on children is apparently poorly described, and this applies to similar products.

Toxicological studies have not shown results of concern.

Milk protein: The product is derived from whey. 2 of 3 samples of the raw material (whey-derived lactose) tested positive for milk protein, but in the final product milk protein could not be demonstrated using ELIZA techniques, indicating $<10\mu\text{g}$ protein/g product. Despite this, all products containing tagatose must carry an allergy potential warning.

HFI patients (Fructose intolerants) should also avoid tagatose, but due to its poor absorbability, tagatose-containing products is unlikely to be a risk for HFI patients.

Products containing tagatose should therefore be labelled to inform the consumer of potential side effects from high consumption regarding flatulence/soft stools and also to give information on the milk-source of this ingredient.

Vennlig hilsen

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