ERRATUM

Erratum to: Sugar alcohols—their role in the modern world of sweeteners: a review

Małgorzata Grembecka

Published online: 3 April 2015
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Erratum to: Eur Food Res Technol DOI 10.1007/s00217-015-2437-7

In the original publication of Table 2, erythritol has been assigned a wrong caloric value of 2.4 kcal/g for nutritional labeling. In the paragraph concerning erythritol metabolism and Table 3, it has been wrongly mentioned that it is a fermentable sugar alcohol.

The correct information should be as given below:

In Table 2, the caloric value of erythritol should be 0 kcal/g under European regulations [Commission Directive 2008/100/EC of 28 October 2008]. The corrected table is given here.

In Table 3, the first entry under “Metabolism” should be “Fast absorption through the small intestine, not metabolized. Well tolerated in human body even up to 80 g when consumed spread over the day [1, 18, 23, 126]”. The corrected table is given in the next page.

Further, the second sentence under “Metabolism” on page 4 should read as “Erythritol is not a fermentable sugar, and thus, laxative side effects associated with excessive polyol consumption are unlikely to observe [1, 15, 19, 20, 23]”.

Table 2 Caloric value, sweetness and glycemic index of sugar alcohols

Polyol	Sweetness ^a	Caloric value (kcal/g)		Glycemic index ^{b*}
		US data [*]	European regulations [*]	
Erythritol	0.6–0.8	0.2	0	0
Isomalt	0.45–0.65	2.0	2.4	9
Lactitol	0.3–0.4	1.9	2.4	6
Maltitol	0.9	2.1	2.4	35
Mannitol	0.5–0.7	1.6	2.4	0
Sorbitol	0.5–0.7	2.7	2.4	9
Xylitol	1.0	2.4	2.4	13

^a Sucrose = 1 [12]

^b Glucose = 100 [1, 8]

^{*} [1, 8]

The online version of the original article can be found under doi:10.1007/s00217-015-2437-7.

M. Grembecka (✉)
Department of Food Sciences, Medical University of Gdansk, Al.
Gen. J. Hallera 107, 80-416 Gdansk, Poland
e-mail: mgrembecka@gumed.edu.pl

Table 3 Metabolism of sugar alcohols

Sugar alcohol	Metabolism
Erythritol	Fast absorption through the small intestine, not metabolized. Well tolerated in human body even up to 80 g when consumed spread over the day [1, 18, 23, 126]
Isomalt	Slowly and only partly digested and absorbed in the upper gastrointestinal tract, and the unabsorbed part (~90 %) is fermented by the gut microflora in the colon [1, 40, 44]
Lactitol	Small part is absorbed (2 %) by passive diffusion, and the remainder passes undigested to the colon (the distal part of the large intestine) where is slowly fermented [45–47]
Maltitol	Partially digested in the intestines, and non-absorbed part is metabolized by colonic bacteria [1, 60, 64]
Mannitol	Passively absorbed part is digested in the intestines, and non-absorbed part is metabolized by colonic bacteria in the lower gut [75, 78]
Sorbitol	Partially absorbed in the upper gastrointestinal tract where it undergoes digestion, and non-absorbed part is metabolized by colonic bacteria [1, 68, 72, 75, 78]
Xylitol	Indirect—fermentative degradation of unabsorbed xylitol by intestine bacterial flora Direct metabolism via the glucuronic acid–pentose phosphate shunt—a portion of xylitol undergoes metabolic pathway in mammalian liver [47, 108]