Site: **Wiki of Science** at http://wikiofscience.wikidot.com Source page: **20110806 - Nutritional balance of standard soymilk - 2008** at http://wikiofscience.wikidot.com/print:nutritional-balance-standard-soymilk

20110806 - Nutritional balance of standard soymilk - 2008

[<Normal page] [PEREZGONZALEZ Jose D (2008). <u>Nutritional balance of standard soymilk.</u> Journal of Knowledge Advancement & Integration (ISSN 1177-4576), 2011, pages 77-79.]

Nutritional balance of standard soymilk

This article offers descriptive data regarding the nutritional balance of standard soymilk. These data were collected for a research on milk and milk alternatives in New Zealand between 2007 and 2008 (Perezgonzalez, 2008^{1}).

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Standard (original or regular) soymilk is made from soybeans and water, and contains around 3% fat. This article, however, analyzes the nutritional balance of standard soymilk beyond its fat content. Indeed, the average standard soymilk (in this sample) is high in fat but low in saturated fat, but also adequate in protein, low in carbohydrate but high in sugar, low in fiber, and within maximum recommended limits for sodium.

On average, standard soymilk has a nutritional balance of BNI 43.16f, being particularly unbalanced towards excess of fat.

Illustration 1: Nutrition information (standard soymilk)					
BNI	43.16f	0.00			
Food, 100ml	2008	Ideal			
Protein	3.3	3.3			
Carbohydrate	6.2	9.2			
Sugar	3.0	< 1.7			
Fat	3.2	1.9			
Saturated fat	0.5	< 0.7			
Fiber	0.7	1.0			
Sodium	0.064	< 0.067			
Kcal	66.8	66.8			
kJul	279.5	279.5			

Illustratio	Illustration 2: Nutritional profile (standard soymilk)								
	55%								
	50%								
				*					
	45%								
	40%			*					
	35%		*	*					
	30%		*	*					
	25%		*	*					
	20%	*	*	*					
	15%	*	*	*					
	10%	*	*	*					
	5%	*	*	*					
	mid	р	С	f		fb			
	max		s	sf			na		
	5%		*	*			*		
	10%		*						
	15%		*						
	20%		*						
ideal % = grey cells; actual % = asterisk (*)									

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International standards

Standard soymilk appears as somehow unbalanced according to international <u>Recommended Dietary Intakes (RDIs)</u>, although less so according to U.S. and Canada's standards, which allow for a higher content of sugars and fat.

Illustration 3: Nutritional balance across different RDIs (standard soymilk)								
Standard soymilk	average	43.16	52.22	17.35	33.37	30.16		
Product 100ml	Company	BNI	WHO	US/CAN	AUS/NZ	UK		
Get Natural calci forte	So Natural	26.05	31.92	8.66	15.59	12.33		
So Good regular	Sanitarium	42.46	54.63	27.58	32.55	29.79		
Vitasoy creamy original	Vitasoy	46.93	57.80	13.65	37.13	34.93		
Vitasoy calci-plus	Vitasoy	57.69	67.57	17.73	47.87	45.69		
(Source: Perezgonzalez, $2008^{1\over2}$)								

Correlations between indexes tend to be positive (and significant at the 0.10 cut-off point, which seems appropriate given the small sample size), except for the US/CAN index. However, the sample size is too small as for drawing much inference from it.

Illustration 4: Correlations between RDIs							
	BNI	WHO	US/CAN	AUS/NZ			
WHO	.991						
(sig.)	.009						
US/CAN	.421	.516					
(sig.)	.579	.484					
AUS/NZ	1.000	.992	.425				
(sig.)	.000	.008	.575				
UK	1.000	.992	.419	1.000			
(sig.)	.000	.008	.581	.000			

Methods

Research approach

• The original research was an exploratory study on the nutritional balance of milk and milk alternatives in New Zealand in 2007-2008.

Sample

- The initial research sample included 44 milk and alternative milk products (ie, milk, soymilk and rice milk)¹. The food products were collected in a convenient manner, looking more for a variety of brands than a random sampling of the same.
- The results in this study simply describe the 'subsample' of standard soymilk products within the original sample: ie, 4 brands of standard soymilk³.

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Materials & analysis

- Milk products were purchased from local supermarket chains in Palmerston North, New Zealand.
- Nutrition information for each milk product was retrieved from the nutritional information panel on each item, to be assessed using the <u>Balanced Nutrition Index™ (BNI™)</u> technology (see Perezgonzalez, 2011²).
- SPSS-v16 was used for variable computations, including BNI and international indexes, and statistical analysis, which included descriptives and correlations.

Generalization potential

Most of the products are made in Australia and internationally. Thus, the results of this study may be generalizable to the following populations (in order of decreasing generalization power):

- Australia.
- Internationally, if one assumes milk to be of approximately similar nutritional composition anywhere.

References

- 1. **PEREZGONZALEZ Jose D (2008).** *Milk and milk alternatives in New Zealand in 2007-2008.* The Balanced Nutrition Index (ISSN 1177-8849), 2011, issue 3.
- 2. **PEREZGONZALEZ Jose D (2011).** <u>Balanced Nutrition Index™ (BNI™).</u> Journal of Knowledge Advancement & Integration (ISSN 1177-4576), 2011, pages 20-21. Also retrievable from <u>Wiki of Science</u>.
- +++ Footnotes +++
- 3. The other categories were: $\frac{\text{standard milk}}{\text{soymilk}}$ (10 items), $\frac{\text{semi-skimmed milk}}{\text{soymilk}}$ (7 items), $\frac{\text{skimmed milk}}{\text{soymilk}}$ (9 items), $\frac{\text{low-fat soymilk}}{\text{soymilk}}$ (2 items), and $\frac{\text{rice milk}}{\text{soymilk}}$ (5 items).

Want to know more?

BNI™ database

The database offers individual nutrition analyses for foods, including the milk and alternative milk products referred to in above article.

BNI™ journal (2011, issue 3) - Milk and milk alternatives in New Zealand in 2007-2008

This issue of the Balanced Nutrition Index™ journal collates all BNI™ nutrition information for the original sample in a single book.

Wiki of Science - Balance Nutrition Index™ (BNI™)

This Wiki of Science page offers more information about the BNI™ technology.

Wiki of Science - Nutritional balance of milk and milk alternatives

These Wiki of Science pages offer more information for other milk categories: <u>standard milk</u>, <u>semi-skimmed milk</u>, <u>skimmed milk</u>, <u>low-fat soymilk</u>, <u>flavored low-fat soymilk</u>, and <u>rice milk</u>.

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