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Study of Food Indication Label of milk Available in Local Markets

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ABSTRACT

The study aims to determine the amount of compliance with the standards for packaged and canned food as well as the food labeling information for a few local milk products that were imported and sold in Karbala's local markets. The findings showed that the indication label for all products made in Iran included some information in Arabic or English, or both, about the product name, type, production date, and conditions for storage and components, but it omitted information regarding the country of origin, make, and weight, as well as information regarding the expiration date, a health warning, and nutritional value.

Introduction

Milk is food rich in fluids that are secreted from the mammary gland of all mammals and is the source of food for the fetus before it can digest other types of food . A rich source of protein, lipids, minerals, carbohydrates, and vitamins like calcium, riboflavin, and vitamin B12, milk is a complex combination of micro and macronutrients. 2015 (Dugum & Janssens).Milk has had a unique nutritional quality for human consumption long before recorded history. Milk is considered the "most complete" food of any, healthy and nutritious for all mammals, including humans. Milk in its natural form has a higher nutritional value than milk in its manufactured form that is sold in the market and is more protected from fraudulent methods in the food label. Milk provides more important nutrients than any other food (Neumann et al. 2002) . Through chemical and physical examinations, the characteristics of good and not-so-good milk are identified. However, the quality of milk declines due to the fraud it is exposed to in various places of sale. Milk is usually adulterated through the addition of inferior and less expensive ingredients such as brown sugar, pond water, and powdered milk (Prasad 1999). Milk adulteration was first identified by adding water automatically to increase volume and then adding other thickeners such as starch and flour (Cassoli et al., 2011). . Mixing water with milk is detrimental to the health, nutrition, structural properties and processing of milk (Donkor et al., 2007). Vendors always use water-based milk products, which are cheap, easy to homogenize, and more difficult for consumers to detect than other adulteration materials (Adam, 2009). In low- and middle-income countries with weak food safety management systems and low compliance with food safety regulations, the danger of poor milk quality and food safety is a significant concern for the dairy industry (Amenu et al., 2019; Kussaga et al., 2014). If milk is not managed properly, it is known to be an easily perishable product with a swift loss in quality. (2014) Kamana et al. Due to incorrect handling, poor hygiene, and lack of sanitation in the milk environment, milk can get contaminated (Olivier et al., 2005). Additionally, it's likely that

tainted milk contains pathogens like bacteria, viruses, parasitic organisms, and chemical residues that cause foodborne illnesses that are harmful to consumers' health and nutritional condition. 2019 (Amenu et al.). Milk adulteration through the informational indication card on the box is common, by writing a different size than what is in it or a long shelf life contrary to what is mentioned in the standard specifications. Damage to milk boxes during transportation and storage is common, but this affects the customer's desire to buy it From this aspect, sellers resort to deceiving those who are in their infancy to sell this product to them, which is not true and harms their health.

Materials and working methods

First: Sample collection

18 samples of unflavored milk sold in the local markets were collected in the following cities (Karbala, Diyala, Basra, Kirkuk, Wasit) for the period between 10/24/2021 to 3/19/2022. And checking the validity period) and the results were interpreted according to the Iraqi standard specifications. The nutritional indication card affixed to the covers of the studied models was studied, which included information on the name of the product, its type, country of origin, manufacturing company, production date, expiration date, weight, storage conditions, health warnings, components and nutritional value.

Second: Working methods

First: the informational indication examination. We usually do this examination to detect consumer fraud methods, and it is also necessary to indicate the truth of what was printed on the box by the manufacturer, where samples were taken and what is on the box (origin, ingredients, nutritional value, type of box, size) was examined. (ml) storage conditions, production and expiry date) .

Second: Examination of the validity period This examination is very important to reveal the period that was set by the company and whether it is compatible with what exists within the Iraqi specifications, where samples were taken and the period of production and expiration was written and calculated from the date of production to expiration and measuring the period and comparing it with the Iraqi political specification.

Results and Discussion

Table No. (1) Nutritional indication of unflavored milk types in the local markets

Box number	Company Name	Sample name	Origin	The components	Nutritional value	The (weight)Ml	Box type	Storage conditions	Production date and expiry date	Recycling
1	KDD	Full cream	Kuwait	Mentioned	Mentioned	250	PE lined carton	Mentioned	Mentioned	Mentioned
2	KDD	(1.2.3)	Kuwait	Mentioned	Mentioned	100	PE lined carton	Mentioned	Mentioned	Mentioned
3	KDD	Skimmed	Kuwait	Mentioned	Mentioned	250	PE lined carton	Mentioned	Mentioned	Mentioned
4	Almarai	Almarai Company	Saudi Arabia	Mentioned	Mentioned	150	PE lined carton	Mentioned	Mentioned	Mentioned
5	Al safi	safio	Saudi Arabia	Mentioned	Mentioned	200	PE lined carton	Mentioned	Mentioned	Mentioned
6	Al-Othman	Nada	Saudi Arabia	Mentioned	Mentioned	125	PE lined carton	Mentioned	Mentioned	Mentioned
7	Not mentioned	pinar	Turkey	Mentioned	Mentioned	500	PE lined carton	Mentioned	Mentioned	Mentioned
8	pegah	Not mentioned	Iran	Mentioned	Mentioned	125	PE lined carton	Mentioned	Mentioned	Mentioned
9	Kalleh	Not mentioned	Iran	Mentioned	Mentioned	125	PE lined carton	Not mentioned	Mentioned	Mentioned
10	Kalleh	Not mentioned	Iran	Mentioned	Mentioned	200	plastic	Mentioned	Mentioned	Mentioned
11	Sahar	Sahar sundairy	Iran	Mentioned	Mentioned	1 liter	PE lined carton	Mentioned	Mentioned	Mentioned

12	Kalleh	low fat milk	Iran	Mentioned	Mentioned	125	PE lined carton	Mentioned	Mentioned	Mentioned
13	Ragaui	Not mentioned	Iran	Mentioned	Mentioned	125	PE lined carton	Mentioned	Mentioned	Mentioned
14	Falat Koohrand industrial Group	Koohrand	Iran	Mentioned	Mentioned	1 liter	PE lined carton	Mentioned	Mentioned	Mentioned
15	Sahar	Damdaran	Iran	Mentioned	Mentioned	1 liter	PE lined carton	Mentioned	Mentioned	Mentioned
16	Juice time	Nan	Iraq	Mentioned	Mentioned	100	PE lined carton	Mentioned	Mentioned	Mentioned
17	yanabie almilad	al milad	Iraq	Mentioned	Mentioned	150	PE lined carton	Mentioned	Mentioned	Mentioned
18	Al Sadd Food Industries	Rival	Iraq	Mentioned	Mentioned	1 liter	PE lined carton	Mentioned	Mentioned	Mentioned

The results shown in Table No. (1) show the nutritional indication card information for some types of locally produced and imported milk that are available in the local markets. It was also found that most of the forms contain information about the manufacturer's name and country of origin is mentioned, and the weight is mentioned in the forms. Information about the expiry date and production date has been installed in the products, and storage information has been mentioned in the cards of all models and it was clear. Information about the nutritional value was recorded for all the models, and it was mentioned clearly in all the studied models.

It appears from the table that all the models of imported and manufactured milk in Iran have some information fixed on the label and clearly printed in Arabic and English, and information has been mentioned in all of them about the name of the product, the place of production, the year it was completed, and expiry, and the weight is also mentioned in the models. Information about the manufacturing company has been fixed, some of which are mentioned and others were not mentioned in some products, and storage conditions were fixed in all models except for one model, and it was mentioned clearly in all the studied models, and some of them were mentioned in the language of the producing country.

It was noticed that the Turkish model did not mention the name of the company, and information was installed on its card in Arabic and English, the name of the product, the origin, the expiration date, the date of production, and the method of storage.

As for locally made products, it was found that all trademarks contain information about their labels in Arabic and English clearly, as they include the name of the product, its type, date of production, expiry, and storage conditions.

Table No. (2) Shelf life of unflavored milk.

Sample number	Company Name	Sample name	Production Date	Expiry date	Result
1	kdd	Full cream	p.19/9/2021	E. 18/3/2022	matching
2	kdd	(1.2.3)	p. 5/9/ 2021	E. 4/3/2022	matching
3	KDD	Skimmed	p.7/9/2021	E.6/3/2022	matching
4	Almarai	Almarai Company	p. 17/8/2021	E.13/2/2022	matching
5	alsaafy	safio	p. 26/9/2021	E.25/3/2022	matching
6	Al-Othman	Nada	p.8/11/2021	E. 7/5/2022	matching
7	Not mentioned	pinar	p.7/11/2021	E. 6/5/2022	matching
8	pegah	Not mentioned	p.9 /9/2021	E. 8/3/2022	matching
9	kalleh	Not mentioned	p. 7/9/2021	E. 5/3/2022	matching
10	kalleh	Not mentioned	p.11 /10/ 2021	E. 25/11/2021	Not matching
11	Sahar	Sahar sundairy	p. 30/10/2021	E.30/4/2022	matching

12	kalleh	Low fat milk	p.11 /11/2021	E. 9/5/2022	matching
13	Ragaui	Not mentioned	p. 19/10/2021	E.19/4/2022	matching
14	Falat Koohrand industrial Group	Koohrand	p.23/11/2021	E.22/5/2022	matching
15	Sahar	Damdaran	p.20/1/2022	E. 20/7/2022	matching
16	Juice time	Nan	p.5/9/2021	E. 4/3/2022	matching
17	yanabie almilad	Al milad	p. 23/10/2021	E. 22/4/2022	matching
18	alsadu lilsinaeat alghidhayiya	Rival	p.16/11/2021	E.15/5/2022	matching

As shown in table (2) the validity period, it was found that all samples conform to the Iraqi standard specifications, except for sample No. (10), which was not included in the Iraqi standard specifications No. (1847). 2012. Shelf life of foodstuffs. This means that the consumer has been deceived into milk samples that do not conform to the Iraqi standard specifications.

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