

ANALYSE OF COMMODITY FOR SOME FRESH MILK ASSORTMENTS SOLD ON IAȘI CITY MARKET

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Abstract

The current paper try to realise an analyses of commodity for some fresh milk assortments sold on Iasi city market. We intended to present to the consumer all the characteristics marked on the label such as: fat content, data which must appear on the label (nutritive value, shelf life, storage temperature, ingredients, producer, distributor, bar code, stamp of the veterinary-sanitary authority, etc.) and the design. To determinate the fat content marked on the box (1.5%) we used to methods: acid-butyrometric method and colorimetric one (with the help of an Ekomilk device) and for the rest we applied the observation method regarding the design and box labelling. We studied five different assortments of fresh milk. By applying the acid butyrometric method the mean values of fat percent varied between limits of 1.33% (Delisio milk, producer S.C. Promilch S.R.L) and 1.42% (Napolact milk, producer S.C. Napolact S.A). At using the colorimetric method, mean values of fat content were placed between 1.340% (Delisio milk, producer S.C. Promilch S.R.L) and 1.4268% (Napolact milk, producer S.C. Napolact S.A). Fat content marked on the label (1.5%) of "fresh milk" assortment had close value to the one written on the package. The analysed product (fresh milk) was in according with the legislation according labelling. It could be found useful information for consumers such as: fat content, nutritive value of the product, shelf life, used ingredients, dates about producer and distributor, certification of a veterinary-sanitary authority, bar code, storage temperature, etc.

Key words: analyse, fat percent, fresh milk, label design, consumer

INTRODUCTION

Milk market in Romania is around 1.5 billions litres and offers three big types of products: ultra-pasteurized milk (UHT); pasteurized milk and milk without any industrial processing. UHT milk together with the pasteurized one have a share of 10% from the milk quantity sold in Romania and the rest of 90% is represented by the industrial unprocessed milk [4, 5].

A very important characteristic is offered by the fact that milk components digestibility is 100%.

Energetic value of milk offered to human organism is 670 – 680 kcal/kg [3] or 650 – 720 kcal/kg [6]

Consumer is placed in the central level in a strategy regarding food-stuff quality, being the "engine" of trade and implicit of production. In

the modern economy, orientation to customer is one of the fundamental principles of food-stuff quality management [1, 4, 5].

Food-stuff quality is one of the basic elements regarding efficiency and competitiveness, and a real advantage competition source for the firms [1, 5].

Having in view the above mentioned things we aimed to realise a commodity study of some assortments of fresh milk sold on Iași City market.

MATERIAL AND METHODS

Study was realised for fresh milk with 1.5 % fat percent. Fat content was analysed to view if are any differences between the value presented on the label to the consumer and the real content in fat of the analysed product. Tests were carried out in the Laboratory of "Milk and milk products processing" discipline, Faculty of Animal Sciences, University of Agricultural Sciences and Veterinary Medicine from Iași.

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Were studied a number of five milk processing firms which sell their products on Iași City market. So first we buy a number of five samples from each studied firm. To make a sober analyse the samples were bought from five different locations.

Analysse of fat content was realised through two methods, as follows: acid-butyrometric method [2, 7] and colorimetric method (using an Ekomilk device) [7].

The studied assortments of fresh milk were:

- Covalact de țară, produced by S.C. Covalact S.A Sfântu Gheorghe, Covasna County (figure 1);
- Zuzu, produced by S.C. Albalact S.A Oiejdea, Alba County (figure 2);
- Delisio, produced by S.C. Promilch S.R.L Podu-Iloaiei, Iași County (figure 3);



Figure 1 Covalact de țară, produced by S.C. Covalact S.A Sfântu Gheorghe, Covasna County, packed in 1 litre Tetrapak box



Figure 2 Zuzu, produced by S.C. Albalact S.A Oiejdea, Alba County, packed in 1 litre Tetrapak box



Figure 3 Delisio, produced by S.C. Promilch S.R.L Podu-Iloaiei, Iași County, packed in 1 litre plastic bag

- Oké!, produced by S.C. FrieslandCampina Romania S.A Satu-Mare, Satu-Mare County (figure 4);
 - Napolact, produced by S.C. Napolact S.A Cluj-Napoca, Cluj County (figure 5).



Figure 4 Oké!, produced by S.C. FrieslandCampina Romania S.A Satu-Mare, Satu-Mare County, packed in 1 litre Tetrapak box



Figure 5 Napolact, produced by S.C. Napolact S.A Cluj-Napoca, Cluj County, packed in 1 litre Tetrapak box

RESULTS AND DISCUSSIONS

In figure 6 are presented the obtained results after the determination of fat percentage through acid-butyrometric method for the five studied assortments of fresh milk. Fat percentage which we will take in study (control percentage) is 1.5% the one which appear on all the labels of the analysed “fresh milk” product. So could be observed that the mean of the five analysed samples for each assortment of fresh milk with 1.5% fat were close to the percentage marked on the label. Mean values of fat percent varied between limits of 1.33% (Delisio milk,

producer S.C. Promilch S.R.L) and 1.42% (Napolact milk, producer S.C. Napolact S.A).

Could be appreciated the fact that fat percent were very close to the values presented by each producer.

To be sure on the obtained results for fat content through acid-butyrometric method and to eliminate the human errors, on the same milk samples we check the fat percent through colorimetric method using an Ekomilk device.

In figure 7 are presented the obtained results through the above mentioned method.

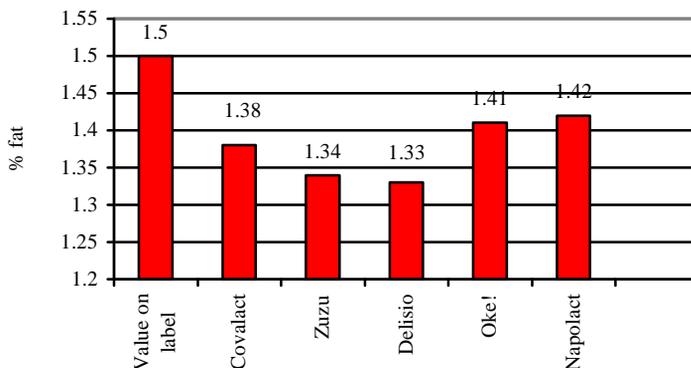


Figure 6 Fat percentage of the analysed milk (acid-butyrometric method)

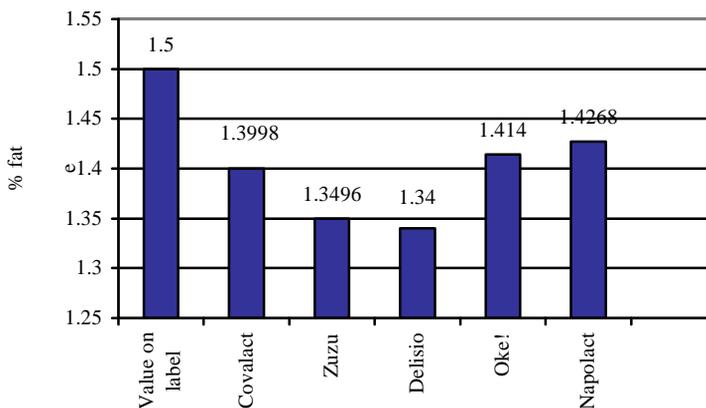


Figure 7 Fat percentage of the analysed milk (Ekomilk device)

Also at the fat percent analyse using Ekomilk device we obtained close values to the one marked on the label (1.5%). Mean values of fat content were placed between 1.340% (Delisio milk, producer S.C. Promilch S.R.L) and 1.4268% (Napolact milk, producer S.C. Napolact S.A). Comparing the data regarding the obtained fat percent, through both method (acid-butyrometric and colorimetric) could be observed that the values were very close fact that show us that the determinations were made in a correct way and in according with working methodology.

Making a classification of those five assortments of fresh milk taking in account the real fat content this will show as follows:

1. Napolact; 2. Oké!; 3. Covalact; 4. Zuzu; 5. Delisio.

The differences weren't high face to the fat percentage of 1.5% marked on the label.

In the second part of commodity analyse of fresh milk we appreciate the label for each product. The main criteria of the label is to present to the consumer the needed information do this one to be able to choose the product which is the best suitable for him regarding his needs and his financial possibilities.

Labelling of milk products suppose the existence of a message rich and varied in useful information both for economic agents and also for consumer, and important role having the information regarding nutritional value.

Covalact de țară fresh milk presents information regarding fat content (1.5%), gives dates on mean nutritive value on 100 millilitres of product. Shelf life is marked at the bottom part of the box. We could find the bar code and the storage temperature. Are provided information regarding distributor, but aren't mentioned any information about producer and about the used ingredients. On the box could be found a stamp of a veterinary-sanitary authority from Hungary, fact that makes us to believe that the milk is imported from this country. Are given information regarding the way in which milk is obtained (homogenized, pasteurized at high temperature). The design of the box is attractive being a combination between white and blue, having also the brands' logo and also a stylized rural landscape.

Zuzu – fresh milk presents information regarding fat content (1.5%), gives dates on mean nutritive value on 100 millilitres of product. We could find the bar code and the storage temperature. Shelf life is marked at the bottom part of the box. On the label could be found information about producer and distributor. Also are presented information regarding the way in which milk was obtained (homogenized, pasteurized at high temperature) and also about the used ingredients (cow milk). The box design is a very nice one in basic colours of white with blue, with a balance a green, violet and blue nuances. It could be also found the firm logo and an advertising motto which encourage the consumption of **Zuzu** fresh milk.

Fresh milk **Delisio** is packed in polyethylene bags with a capacity of 1 litre. Are provided information regarding: storage temperature, fat content, nutritional value for 100 millilitres product, ingredients (cow milk), obtaining mode, producer and distributor. On the label are marked bar code and the stamp of veterinary-sanitary authority of Iași and also the information that the product did not contain preservatives. The design of the plastic bag is very simple, the fund colour is white-grey and the words are written with blue.

Fresh milk **Oké!** present information about fat percent (1.5%), offers dates regarding nutritional value per 100 millilitres of product. Shelf life time is marked on the bottom side of the box. The bar code is

properly marked and on the label is written the temperature at which the product will be stored. Are given information regarding distributor but are not mentioned information about producer and the used ingredients. On the box appears the stamp of a veterinary-sanitary authority from Romania. Are also provided information about the way in which milk is obtained (homogenized, pasteurized at high temperature), and is written the information that boiling is not needed. The design of the box is simple being a combination of white and blue, having also the firm logo. We consider that the design is not a very attractive one.

Napolact offers information regarding fat content (1.5%), mean nutritive value per 100 millilitres product. Like at the others analysed fresh milk assortments the shelf life time is marked at the bottom of the box. Consumers could find marked the bar code and the storage temperature of the product. Are provided information regarding producer. On the box is visible marked the stamp of the Romanian veterinary-sanitary authority. Are also provided some information about the way in which milk is obtained (homogenized, pasteurized at high temperatures), but are not given information regarding the used ingredients. As used logo the firm put on the box the words „*Lapte din inima Ardealului = Milk from the heart of Ardeal*” which is the firms' secret, as it is shown on the motto found on the box. The design of the box is very attractive, the basic colour being cream-yellow, and the writing is with blue and red. On the box could be found the brands' logo and at the lower base of it exist a stylised mountain landscape and a stripe with indigenous design.

From our point of view regarding the package design the analysed products are classified in the following order: 1. Napolact; 2. Zuzu; 3. Covalact de țară; 4. Oké!; 5. Delisio.

CONCLUSIONS

At the end of the current study regarding the commodity analyses for fresh milk sold on Iași city market could be drawn the following conclusions.

1. The milk products market is very diversified both on the number of sold assortments and also from the point of the existed firms on the market.

2. Fat content marked on the label (1.5%) of “fresh milk” assortment had close value to the one written on the package.

3. The analysed product (fresh milk) was in according with the legislation according labelling. It could be found useful information for consumers such as: fat content, nutritive value of the product, shelf life, used ingredients, dates about producer and distributor, certification of a veterinary-sanitary authority, bar code, storage temperature, etc.

4. Firms of which products were analysed provide additional information regarding: the used technology, firms’ motto and logo, and its brand.

5. From the point of view of attractiveness of label design, in our opinion, the classification is as follows: 1. Napolact; 2. Zuzu; 3. Covalact de țară; 4. Oké!; 5. Delisio;

On the basis of the current study we can propose a series of recommendations for improving the labelling design of the boxes so those ones to be more attractive for the consumers and also to eliminate some drawbacks as regarding the right labelling of the products.

For *Covalact de țară* fresh milk must be provided also information regarding the producer of if the milk is imported from another country.

Speaking about *Delisio* fresh milk will be indicated to try to diversify the chromatic presentation which is, at the time, very poor and tedious.

The label of *Oké!* fresh milk must be redesign because at the moment is not very attractive.

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