

COMPARATIVE SENSORY ANALYSIS OF APRICOT YOGURTS MARKETED ON THE ROMANIAN MARKET

Cristina Emanuela VLADU ¹ , Daniel Valeriu ULIU ² , Marius VLADU ³

¹ Department Monitoring, Inspection and Control in Agriculture and Food Industry, Agricultural Statistics and Market Monitoring. Direction for Agriculture of Dolj County, 4 Ion Maiorescu, Craiova, Romania, Phone: +40740072881, email: cvld.isctv@yahoo.com

² University of Agronomic Sciences and Veterinary Medicine of Bucharest, 59 Marasti Blvd, 011464, Bucharest, Romania, Phone: +40766287579 , E-mail: daniel_uliu@icloud.com

³ University of Craiova, Faculty of Agronomy, Department of Agricultural and Forestry Technology, 19 "Libertății" Street, Craiova 200583, Phone: +40744870085 Dolj County, Romania, e-mail: mariusvladu@yahoo.fr

Corresponding author email: mariusvladu@yahoo.fr

Abstract

The paper presents the comparative sensory analysis of three apricot yogurt varieties sold on the Romanian market – Danone Delicios, Artesana and Danone Casa Bună – using the descriptive method and the five-level scoring scale method for evaluating the main organoleptic characteristics. The results obtained indicate the existence of significant sensory differences between the analyzed products. Artesana yogurt recorded the most favorable ratings, being characterized by an intense natural apricot flavor, jam flavor and consistency specific to artisanal products. Danone Delicios assortment presented a fine curd and a yellow-orange color determined by the use of natural dyes, obtaining a good sensory profile, although inferior to that recorded by the Artesana product. In contrast, Danone Casa Bună yogurt was distinguished by a very firm curd, excessive whey separation, white-pink color uncharacteristic of the fruit and a predominantly synthetic taste, corresponding to an addition of only 2% apricot and the presence of artificial flavors, thus being the least appreciated of the varieties. The comparative price analysis highlighted the concordance between commercial positioning and perceived sensory quality: the premium product achieved the best results, and the low-cost product recorded the lowest performance. The study highlights the role of composition, manufacturing technology and labeling in determining the sensory profile of fruit yogurts.

Key words: sensory analysis, apricot yogurt, organoleptic characteristics, comparative valuation, food quality

INTRODUCTION

Analysis sensory evaluation of products feeding is not a process hedonic , whether we like it or not, it is a pure process scientific based on rules pursuant increasingly better regulated which have as unique scope elimination uncertainty and growth objectivity . Methods of analysis are diverse, but FROM point of view scientifically can be

divided in two categories: methods analytical; methods preferential (Ozer , 2024) .

Analysis sensory represents assembly methods use for evaluation food on base perception organoleptic – appearance, color , smell, taste and consistency (Vladu and (Savescu , 2015) . In event yogurt with addition of

fruit , these characteristics influences directly acceptability consumer and collectable quality of the product . Yogurts with fruits are products large consumed , and diversity assortment are on market justify need some rigorous comparative assessments (Wulansari and Kusmayadi , 2016) . differences from they may be due manufacturing recipe , type and proportion fruit added , to use dyes , additives or aromas (Dabija et al., 2020) .

In this context , evaluation sensory comparison of different assortments becomes necessary to identify to what extent features declared match property real product and to determine differences quality Helpful between yogurts available on market . Justification THIS study drift both from diversity high yogurt with apricots marketed , as and from the need to correlate composition their with performance sensory , having in view that price differences , though significant , does not reflect ever faithfully quality perceived (Farag et al., 2022) .

At the same time, the importance of sensory analyses is accentuated by the growing interest of consumers in products with a more natural profile, without additives or artificial colors, as

MATERIALS AND METHODS

In the the study were examined three yogurt assortments with apricots, selected on base positioning differences commercial , price and membership in producers different . The choice these products tracked collection of a representations as varied as possible on the market , including

well as for products obtained through traditional technologies (Pădureț et al., 2024) . In this context, yogurts with added fruit represent a relevant segment of the food industry, as they combine the nutritional aspects of dairy products with the attractiveness of the taste conferred by fruit. However, the differences between the assortments can be significant, both in terms of fruit content and the use of flavors, colors or additives that can obviously modify the sensory profile (Panzaru et al., 2024) .

Also, the presence on the market of products in different price segments – premium, standard and low-cost – generates notable variations in perceived quality, which justifies the systematic evaluation of organoleptic characteristics (Vladu et al., 2022) . A rigorous comparative analysis thus becomes necessary to highlight how the choice of ingredients and manufacturing technology influences the taste, color, consistency and general acceptability of apricot yogurts (Bulgaru et al., 2021) . The present study contributes both to understanding the differences between products and to highlighting the importance of correlating the information on the label with the real properties of foods intended for wide consumption.

both Assortment from premium range , how much and products standard or low-cost. The samples included in analysis were : Danone – Delicious with apricots , a product industrial qualifies in segment average price ; Artesana – Yogurt with apricots , product artisanal merchantability in

segment premium; Danone – Casa Buna , yogurt with apricot flavor , assortment economic belonging low-cost range .

For evaluation comparison of those three yogurt assortments with apricots were use two methods sensory complementary , recognized in specialized literature for assessment dairy products : (1) method descriptive which aimed at the detailed and objective characterization of each organoleptic characteristic (the coagulum and its structure, the degree of homogeneity, the intensity and

uniformity of the color, the presence or absence of fruit particles, the type of taste - natural, artificial, synthetic, specific to the prepared fruit, the characteristics of the smell - fruity, artificial, neutral, etc.; and (2) method scoring scale - the characteristics analyzed based on this method were: appearance per section, consistency, color, taste and smell . And for quantifying differences sensory , each characteristic was assessed on a scale of 1 to 5 (1 = very poor and 5 = very good).

RESULTS AND DISCUSSIONS

Yogurts of the same type/with the same added fruit, but obtained by different producers under different brands, were also purchased, in order to carry out a comparative evaluation of them. In order to have a basis for comparison of sensory perception after sensory

analysis, the evaluation results were correlated with the ingredients inserted in the labeling system of yogurts of the same type, but coming from different suppliers who expose considerable quantities of yogurt of several types for sale.

Table 1.The situation of apricot yogurts subjected to sensory analysis

Product name	MANUFACTURER	Country	Product brand
The good house apricots	DANONE PDPA SRL	Romania	The good house
Artisan apricots	Klaus SRL	Romania	Artisan
Delicious Apricots	Danone PDPA SRL	Romania	physicist

The sensory verification of the yogurts was carried out using two methods, the method of quality assessment by scoring scales and the descriptive method. The yogurts with fruit were sensory analyzed depending on the fruit(s) added. The method of quality assessment by scoring or the scoring scale method was based on a 5-point score that was awarded for each organoleptic characteristic analyzed, with the specification that

when establishing the score awarded, the weight of each characteristic in the overall assessment of the product was taken into account.

From the category of apricot yogurts, 3 types of yogurt were analyzed, namely: DANONE Delicios cu aise, Artesana iaurt cu aise, which is marketed with the slogan "That's how apricot yogurt is", and DANONE - Casa Bună gust de aise which has the phrase "gust de", inserted in small font

compared to the word aise which is written in the largest font in the labeling system (Figure 1).



Fig. 1. Images with yogurt samples with strawberries EXAMINED sensory

Table 2.Features sensory properties of yogurts with apricots

Type of yogurt analyzed	Sectional layout	Consistency	Color	Taste and smell
Delicious Yogurt with APRICOT DANONE	Very fine curd	Consistency good , easy soft , specific fruit yogurts . With fruit clear in clot .	Yellow with reflections orange	Intense , specific peach flavor assortment
Apricot yogurt Artisan	Slightly cheesy curd	Grainy consistency	Yellow with reflections yellowish	Intense jam flavor, apricot jam/puree flavor, natural flavor, specific to the prepared fruit
Apricot flavored yogurt DANONE	Very firm curd, but with massive whey removal	Very firm curd	White- pink	Synthetic flavor, chemical flavor

Regarding **the appearance and consistency** of the three apricot yogurts, three different consistencies were noted, namely a good, slightly soft consistency, specific to fruit yogurts, in the Delicios cu apise yogurt produced by Danone, a slightly cheesy curd and a grainy consistency in the Aretesana apricot yogurt. In the apricot yogurt sold under the DANONE - Casa bună brand, a very firm curd was noted, more specific to natural yogurts with a higher

fat content or fruit yogurts with a high addition of starch, gelatin, etc., although the labeling system in the ingredients category does not identify additives that correct the consistency of the curd. Also in the apricot yogurt sold by DANONE in the Casa Bună category, a low cost category, a high content of whey collected on the surface of the packaging was noted.

The color of the three yogurts is also different, ranging from yellow with

orange or yellowish reflections to a pinkish white color (in Danone "Casa Bună" yogurt) which is not related to the specific color of apricot yogurts, but which is consistent with the added dyes. The pink color noted in Danone "Casa Bună" apricot-flavored yogurt comes from the addition of anthocyanins, and the yellow color with orange reflections found in DANONE Delicious with Apricot yogurt is the result of the addition of red pepper extract, beta-carotene and concentrated black carrot juice .

Concentrated black carrot juice, rich in anthocyanins, with different shades depending on the pH of the food products, is used to correct the color of yogurts because it has been scientifically proven that anthocyanins have lower coloring intensities compared to anthocyanins extracted from other fruits or vegetables and thus the color palette oscillates from red to

purple or blue (depending on the pH units recorded by the food product to which it is added).

In terms of taste, the most appreciated yogurt was the Artesana apricot yogurt, which presented a natural taste. specific fruit prepared , intense jam, apricot jam / puree flavor . On the yogurt with Danone apricot flavor - Casa Bună stood out taste and flavor addition and lack of the fruit , with specifying that the taste apricot flavor comes from the added flavor and not from apricots added in percentage of 2%, so with is specified in labeling system . No apricot yogurt assortment obtained a specific unsatisfactory product score at the end of the sensory analysis with penalty points, but the lack of fruit, added flavor and slightly chemical taste classified the strawberry-flavored yogurt "Casa Bună", marketed under the DANONE brand, as a satisfactory product .

Table 3.Differentiation of apricot yogurts sold according to price

Product name	Selling price (ron/ piece)
Delicious Yogurt with APRICOT, DANONE	2.35
Apricot yogurt, Artesana	6.75
Apricot flavored yogurt, DANONE	1.4

From a sensory point of view, apricot-flavored yogurt was the least appreciated by those who considered it a yogurt that falls under low-cost food

products, the selling price being well below the selling price of other apricot yogurts.

CONCLUSIONS

The comparative sensory analysis of the three apricot yogurt varieties sold on the Romanian market – Danone Delicios, Artesana and Danone Casa Bună – highlights clear differences in quality, determined by the composition, manufacturing technology and

commercial positioning of the products. Among them, Artesana yogurt stood out for the best sensory profile, having an intense natural taste of prepared apricots, a jam aroma and a consistency specific to artisanal products, aspects that indicate the use

of a high fruit content and minimal ingredients, without artificial flavorings.

The Danone Delicios range has good sensory characteristics, with a fine curd, a yellow-orange color obtained through natural dyes and the presence of visible pieces of fruit. However, the intensity of the fruit flavor is less than in the premium product, and the consistency is softer, typical of industrial yogurts with added fruit.

In contrast, Danone Casa Bună yogurt achieved the weakest sensory results. The very firm curd, the pronounced separation of the whey, the white-pink color obtained from anthocyanins and the predominantly synthetic taste reflect the modest composition, with only 2% apricots and added aromatics. This variety was

assessed as only satisfactory, the lack of natural characteristics of the fruit being evident.

Correlating the sensory results with the selling prices, a direct correlation is found between the perceived quality and the economic segment of the products: the premium yogurt (Artesana) presents the best sensory performance, the average price product (Danone Delicios) obtains good results, and the low-cost product (Danone Casa Bună) is at the lowest level. The study confirms the importance of the composition and ingredients declared on the label in determining the sensory quality of fruit yogurts and emphasizes the need for correct and transparent information for consumers.

REFERENCES

- Bulgaru, Viorica, Tatiana Cușmenco, Elizaveta Sandulachi, Artur Macari, and Rodica Sturza. 2021. "Evolution of Physico -Chemical Indices and Functional Properties of Fruit Yogurt during Storage". <http://cris.utm.md/handle/5014/1108> (December 1, 2025).
- Dabija, Adriana, Mircea Oroian, Georgiana Gabriela Codină, and Lăcrămioara Rusu. 2020. "Assessment of the Influence of the Main Technological Factors on Yogurt Quality". *Scientific Study & Research. Chemistry & Chemical Engineering, Biotechnology, Food Industry* 21(1): 83-94.
- Farag, Mohamed A., Haidy A. Saleh, Sherwet El Ahmady, and Moamen M. Elmassry . 2022. "Dissecting Yogurt: the Impact of Milk Types, Probiotics, and Selected Additives on Yogurt Quality." *Food Reviews International* 38(sup1): 634-50. doi:10.1080/87559129.2021.1877301.
- Özer, Elif. 2024. "Characteristics of Apricot Yogurt Fermented with Different Culture Strains and Stevia ". *Italian Journal of Food Science: IJFS* 36(3): 151-63. doi:10.15586/ ijfs.v36i3.2584.
- Pădureț , Sergiu, Cristina Ghinea, Ancuta Elena Prisacaru, and Ana Leahu. 2024. "Physicochemical, Textural, and Antioxidant Attributes of Yogurts Supplemented with Black Chokeberry: Fruit, Juice, and Pomace". *Foods* 13(20): 3231. doi:10.3390/foods13203231.
- PÂNZARU, Radu Lucian, Dragoș Mihai MEDELETE, and Diana Marina SORA. 2024. "FRUIT CONSUMPTION IN ROMANIA (2017-2019)." *Scientific*

Papers Series Management, Economic Engineering in Agriculture & Rural Development 24(1).

https://managementjournal.usamv.ro/pdf/vol.24_1/Art73.pdf (December 1, 2025).

Predescu, Corina, Georgeta Ștefan, and Camelia Papuc. "IMPACT OF THE ADDITION OF DIFFERENT FOREST BERRY FRUITS ON FUNCTIONAL, PHYSICOCHEMICAL AND SENSORY PROPERTIES OF YOGURT SHELF LIFE".

Vladu , Cristina Emanuela , and Petre Savescu . 2015. "STUDIES REGARDING THE FRAUDULENT PRACTICES AND OTHER NONCONFORMITIES ENCOUNTERED IN THE WINES MARKETING IN DOLJ COUNTY DURING THE PERIOD 2006-2014". *Annals of the University of Craiova-Agriculture, Montanology , Cadastre Series* 45(1): 281-88.

VLADU, Marius, Cristina- Emanuela VLADU, and Daniel Valeriu ULIU. 2022. "Studies on the management of the integration of quality schemes for agri-food products". *Annals of the University of Craiova-Agriculture Montanology Cadastre Series* 52(2): 342-46.

Wulansari, Putri Dian, and Andri Kusmayadi. 2016. "Chemical Properties and Characteristics of Cow Milk Yogurt with Different Additional Fruit and Storage Time." *ANIMAL PRODUCTION* 18(2): 113-17. doi:10.20884/1.jap .2016.18.2.543.