

Organoleptische Untersuchung der Dosengerichte einiger Fleischspezialitäten

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Traditionelle griechische Sitten begünstigen die Entwicklung und Konsumierung Dosenfleischgerichte. Diese Fleischspezialitäten erscheinen auf dem griechischen und internationalen Markt in folgender Zubereitung hauptsächlich gekochtes Fleisch mit verschiedenen Gemüsesorten wie junge Erbsen, Bohnen, grüne Bohnen, Kartoffeln, Spinat, Zwiebeln mit Tomatensauce in Öl. Dabei werden erst die Bewertungsfragen eines solchen komplizierten Produktes organoleptisch besprochen. Dann wird die Methode, die von dem Verfasser verfolgt wurde, ausgestellt und zum Schluss wird die Erfahrung, die aus der Untersuchung sieben verschiedener Spezialitäten von vier verschiedenen Fabrikanten gewonnen ist.

Organoleptic examination of canned ready to eat meat casserole specialities

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Hellenic traditional habits favor the development and consumption of canned ready to eat meat casserole specialities. They appear in Greek and international market prepared mainly as meat with a variety of vegetables among which are included green peas, beans, string beans, potatoes, spinach, onions with tomato in oil gravy. The problems of evaluating organoleptically such a complex product are discussed, the method applied by the author is laid out and the experience gained by examining seven different kinds of specialities of four different producers is presented.

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Examination organoleptique des conserves de viande aux légumes

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Des habitudes traditionnelles grecques favorisent le développement et la consommation des conserves de mets préparés de viande aux légumes. Ceux-ci apparaissent au marché grec et international préparés surtout avec une variété de légumes parmi lesquels se comprennent les petits pois, les haricots, les haricots secs, les pommes de terre, l'épignard, les oignons, avec une sauce de tomate à l'huile. On discute les problèmes de l'estimation organoleptique d'un produit si compliqué, on cite la méthode qui a été appliquée par l'écrivain et on présente l'expérience qui en a été profitée en examinant sept spécialités diverses de quatre différents producteurs.

Органолептический осмотр консервированных готовых мясных блюд

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Греческие традиционные обычаи благоприятствуют развитию и потреблению консервированных готовых мясных блюд. На греческом и на международном рынке такие блюда продаются главным образом в виде мяса с разнообразными овощами, как на пример свежий горох, фасоль, свежая фасоль, шпинат, лук с томатным соусом в оливковом масле. Обсуждаются вопросы органолептической оценки такого сложного продукта, излагается метод которого автор применил в данном случае а также и опыт накопленный путём исследования семи разных блюд четырёх различных изготовителей.

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Introduction

A large quantity of meat is consumed in Greece as casserole preparations with a variety of vegetables, ranging from potatoes to lettuces and beans. On the other hand, a disproportionately high number of Greeks travelling or living temporarily or permanently abroad, produce a demand for these traditional dishes in a foreign environment. A large amount of this kind of demand is met by canned ready to eat casserole specialities. A certain demand, also, exists within the borders of the country.

A steady increase in production (both in quantities and number of specialities) appeared in recent years, increasing respectively the importance of quality control for the consumer. In this respect, there appear to be certain difficulties in sensory evaluation, due to the complexity of the product. In the following, the experience that was gained and the method that was used for the organoleptic evaluation of such products is presented.

Experimental

The examination was carried out in 30 products of four different producers and seven different kinds of specialities, as can be seen in Table 1. Each examination is concerned with a sample taken from different production lots.

Table 1
Cases of Specialities Examined

Producer	I	II	III	IV	Total
Beans	7	3			10
Rice	4	7			11
Potatoes		2			2
String Beans		1			1
Green Peas	1	2	1		4
Spinach				1	1
Onions (stifado)		1			1
Total	12	16	1	1	30

Each product was tasted, after it had been warmed up according to manufacturer's instructions, by a panel of 10 persons. The panelists completed a questionnaire which included 21 questions concerning general acceptability before eating, the impression gained during consumption of the different constituents of the product separately, and also when they were consumed simultaneously. Finally, the product was graded for general acceptability after consumption.

Results and Discussion

A traditional meat casserole preparation is composed of three main constituents. These are: meat, vegetables and sauce. While some of the parameters concerning organoleptic examination can be evaluated in each constituent of the product separately, others have to be assessed in the product as a whole. It follows that in a sensory evaluation, the organoleptic examination is concerned with firstly each one of the constituents separately and, secondly, the product as a whole, either for parameters which cannot be otherwise assessed, or for combinations of parameters of different constituents consumed at the same time.

Tenderness, juiciness and color are the principal organoleptic characteristics of meat which can be evaluated separately. Vegetables can be evaluated for uniformity and intensity of color, tenderness, juiciness, uniformity in particle size, cooking and perhaps color in section. Also, degree of cooking. The amount of sauce can be evaluated between meat and vegetables, and also the proportion of tomato and oil.

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Parameters such as flavor, aroma and general appearance in the plate are practically impossible to be evaluated separately for each of the constituents of the product. They have to be considered simultaneously for the whole product. The same applies for saltiness and seasoning, which influence decisively the organoleptic standard of the product.

General acceptability is an impression which is gained at the end of the meal, according to individual habits of the consumer. This is because although most people consume meat, vegetables and sauce (with bread) at the same time, others eat most of the vegetables separately from the meat, with or without sauce, and in extreme cases some people leave the sauce for finishing at the end of the meal. This means that the organoleptic characteristics of a particular constituent, which is consumed at the end, influences disproportionately the impression of general acceptability.

The above mentioned aspects were determined by means of a questionnaire with an appropriate structure. Such a questionnaire should include questions concerning organoleptic evaluation before, during and after the consumption. Also, the evaluation before and during the consumption must include appropriate questions for separate assessment of the different constituents and the product as a whole. In order to avoid further difficulties, which some times can arise by using a large range of scale, a maximum five point scale was accepted for most of the parameters which were examined. In accordance with these remarks, the members of the panel were first asked to inspect the preparation and assess the general appearance, the aroma and color of meat and vegetables on a five point scale. Also, on a five point scale, the amount of sauce was assessed as a whole and the amount of oil and tomato in it. In addition, special questions allowed the panelists to be more precise when a product was characterized as unacceptable because of the ingredients involved. Moreover, the uniformity of vegetables in particle size, color and cooking (for potatoes, also, color when sectioned) was evaluated on a five point scale. Tenderness and juiciness for meat and vegetables were evaluated separately by five point scale during consumption. Also, flavor, aroma, level of spicing and greasiness were evaluated at the same time. Special questions allowed for description of off flavors and imbalances in seasoning. Finally, after tasting, the general acceptability of the product was graded in three different scales of two, three and five points, and also, residual flavor 10 minutes after tasting, on a three point scale.

We have to agree with the argument that this is a very complex questionnaire. However, we think it is a reflection of the complexity of a product, which has to be evaluated as a whole and also each of its constituents separately. Assessing, for example, tenderness of meat is not enough. It has to be considered, for general acceptability, with the condition of vegetables and sauce. In other words, while a tough piece of meat in the tin may make the tin unacceptable, a tender one does not make it necessarily acceptable. Thus, the main problem for this evaluation remains, how the various pieces of information gathered by the taste panel results could be composed in a comprehensive manner and be expressed in an appropriate scale allowing for different standard levels. It seems that at least two stages must be followed before reaching a final decision on levels of acceptability. For this, standards of acceptability must be put for each constituent separately and then for the product as a whole. The structure of the proposed questionnaire serves this end, provided that a uniform quality of raw materials has been used. These standards can be set absolutely as a minimum grade of acceptability for critical parameters, namely tenderness and juiciness of meat and vegetables and a minimum grade of overall acceptability. Alternatively, the questionnaire could be used in a difference test against a prototype upon which agreement has been reached, by means of a preference test, to serve the purpose. Although the advantages of the second method were appreciated, only the first has been used so far. It is thought that the grade of unacceptability of a product must not exceed level 2 for all the parameters assessed, except for tenderness and general acceptability for which it should be at least 3 on a five point scale.

References

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