

GUIDANCE

FOR TESTING DUAL QUALITY IN FOOD PRODUCTS





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PROJECT PRESENTATION

The “Empowering Consumer Organisations: towards a harmonised approach tackling dual quality in food products” (ECO) project is a European project funded by the Consumer Programme of the DG Justice of the European Commission. The one-year project aims at limiting dual quality practices in food products and strengthening consumer organisations in the EU.

PROJECT GOALS

- To develop a sound and harmonised guidance to enable consumer organisations across Europe to test and compare products in terms of the issues of dual quality and identify potentially misleading branding strategies or information on food packaging.
- To develop a common online platform for consumer organisations to gather and disseminate test results, report potential unfair business practices and share good practices for mutual learnings. The platform also allows consumers to view the data uploaded and suggest products for testing. This platform will be based on the project website.
- To empower consumer organisations by providing them with training materials on testing products for possible practices of dual food quality. The training material will be provided to as many consumer organisations as possible in the EU . There is probably at least one consumer organisation in each EU Member State with general and specific interest in food products. Each organisation will then be able to carry out tests on food products and publish the results on the platform.
- To strengthen the advocacy capacity of consumer organisations and foster within- and cross-border cooperation in Europe through a large conference with participants including consumer organisations, relevant public and private stakeholders, media, etc.
- To create a certification system with the registration of companies willing to show their commitment against dual food quality practices after having their products accordingly tested.

PROJECT PARTNERS



- ADOC is an Italian association of consumers recognized by the Ministry of Economic Development, member of Consumers and Users National Council (CNCU) since 1999. ADOC is present in all 20 Italian regions with bureaus which give the public information and support. With particular reference to the food sector, ADOC - with the support of local Institutions and the academic world - have developed projects on consumers information concerning the quality of products and on food security and counterfeiting. The common goal is to direct consumers towards a more responsible and sustainable consumption.



- SAFE Food Advocacy Europe is a European NGO, whose objective is to ensure that consumers' health and concerns remain at the core of the EU's food legislation. SAFE is currently funded by the LIFE NGO program of the EC and is also the coordinator of two Erasmus+ projects, one on permaculture and one on adolescent obesity. SAFE therefore has expertise on managing projects on the EU level.



- InfoCons is a Romanian consumer organisation founded in 2003 in the aim of protecting the rights of consumers and raising awareness among consumers. As partner in EU projects InfoCons actively participates in the development of non-formal educational materials and thus has experience in the development of such materials. Moreover, InfoCons has already conducted studies on dual food quality in Romania and addressed this issue at the European Consumer Consultative Group.

WHAT IS DUAL FOOD QUALITY?

Consumers from a number of EU countries have complained that the composition of certain products is different in their home country when compared to products sold under the same brand and with same or very similar packaging in other Member States. Thus far, a common definition of what Dual Food Quality entails has not yet been established. Nevertheless, we could define it as “a practice in which companies use different recipes, formulations or standards for items sold under the same brand name and with very similar looking packaging without legitimate and objective factors” for the purposes of this guidance. We can also examine how this phenomenon is collocated in the European perspective.

Under EU law and Single Market principles, traders are free to differentiate their products for different markets. However, consumers cannot be misled by different products being presented to them as identical in the absence of legitimate and objective reasons. The new provision on dual quality under the New Deal for Consumers clarifies that misleading consumers in respect to product composition may, following a case-by-case assessment by the competent authorities, be considered as an unfair commercial practice that is prohibited by EU law. At the same time, the new provision recognizes that traders can adapt goods of the same brand for different geographical markets due to legitimate and objective factors. Therefore, the process to clearly establish the cases of Dual Quality is still a work in progress.

A SHORT HISTORY

Former European Commission president, Jean-Claude Juncker stated in 2017, that it is not acceptable “that in some parts of Europe, in Central and Eastern Europe, people are sold food of lower quality than in other countries, despite the packaging and branding being identical. Slovaks do not deserve less fish in their fish fingers. Hungarians less meat in their meals. Czechs less cocoa in their chocolate. EU law outlaws such practices already. And we must now equip national authorities with stronger powers to cut out these illegal practices wherever they exist”.

In light of this, in September 2017, the Commission issued guidelines on the application of EU food and consumer laws to dual quality products to help national authorities to determine whether a company is breaking EU laws when selling seemingly identical products with a different composition in different countries. The national consumer and food authorities are responsible for ensuring that companies comply with EU laws. However, the European Commission is committed to helping them through this guidance and through different work strands.

In 2018 the Joint Research Centre (JRC) of the European Commission developed a harmonized procedure to evaluate perceived differences in the quality of products in an objective way. In fact, the new provision on dual quality under the New Deal for Consumers - the Directive (EU) 2019/216 - clarifies that misleading consumers in relation to product composition may be considered as an unfair commercial practice that is prohibited by EU law.

At the same time, the new provision recognizes that traders can adapt goods of the same brand for different geographical markets due to legitimate and objective factors:

- National legislation;
- Availability or seasonality of raw materials;
- Voluntary strategies to improve access to healthy and nutritious food.

JRC HARMONIZED METHODOLOGY (2018)

The Joint Research Centre (JRC) is the European Commission's science and knowledge service which employs scientists to carry out research in order to provide independent scientific advice and support to EU policy.

Among the initiatives taken by the European Commission to address this problem, the Joint Research Centre (JRC) developed in 2018 a harmonised testing methodology for assessing quality related characteristics of food, aiming at improving food product comparative tests so that Member States can discuss this issue on a sound and shared scientific basis that is the same for all. This methodology was subsequently used to collect information on the composition of a wide variety of branded and private label food products. The nutrition declaration, ingredients list and quantitative ingredient declaration as printed on the product labels and the front-of-pack appearance were used for categorising products according to their similarity.

All EU Member States were invited by the JRC to participate in an EU wide campaign to collect information regarding the composition of selected food products offered on their markets. Nineteen EU Member States submitted information provided on the product labels and the front-of-pack appearance of 113 branded and 15 private label products.

The Member States that participated in the survey were: Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, Spain and The Netherlands. In total, information for 1380 products formed the basis of the data comparison.

Products were grouped into nine categories using as criteria whether product composition and the front-of-pack were 'identical', 'similar' or 'different'. The composition of 33 % of the evaluated products was identical but not all of them had an identical front-of-pack appearance; differences in composition on products with identical or similar front-of-pack were found for 9 % and 22 %, respectively, and 27 % had a different composition and also a different front-of-pack appearance. The rest of the products (9 %) had similar compositional characteristics. For those products where national variants of a branded product were differentiated, clusters were formed by grouping products together as having the same composition. This clustering did not reveal any consistent pattern of product differentiation for particular geographical regions. The findings described in this report relate to the observed differences in the composition, i.e. variations in the content of nutrients and/or ingredients, of the food products included in the survey.

It has to be understood that such compositional differences cannot be translated into different levels of food quality. As one aspect of food quality is related to sensorial properties (e.g. taste, structure, appearance) of the concerned products, a subset of the products included in this study will undergo sensory testing by expert panels in the next months. This may clarify if a different composition of a given food product will have a noticeable impact on its sensory properties. The results of this study relate to the samples of products which were included in the survey at the time of collecting them (November to December 2019). It needs to be stressed that it is inappropriate to conclude by inference that the findings are also valid for the whole variety of branded and private label foods on the EU market

INTRODUCTION OF GENERAL FOOD LEGISLATION PRINCIPLES

The issue of dual quality practices in food is connected to several pieces of EU Law. This section will present an overview of the central EU legislation in relation to food and food labelling as well as unfair commercial practices.

THE GENERAL FOOD LAW (GFL)

In 2002, the European Parliament and the Council adopted **Regulation (EC) No 178/2002** laying down the general principles and requirements of food law (**General Food Law Regulation**). This Regulation establishes a framework for the development of food and feed law at both EU and national level. To this end, it lays down general principles, requirements and procedures underlying food and feed safety decision-making, covering all stages of production and distribution of food and feed.

It establishes:

- Common definitions such as the definition of "food", "feed" (or "feeding stuff") and "food law"
- General objectives (e.g., the guarantee of the protection of consumers' interests)
- General principles to underpin national and EU food law such as the risk analysis principle (Article 6), the precautionary principle (Article 7) and the protection of consumers' interests (Article 8)
- General requirements mainly addressed to food and feed business operators relating to own controls to check compliance with EU and national food law, food and feed safety, traceability and withdrawals/recalls of unsafe food and feed.

The Regulation establishes in its article 22 and 23 the European Food Safety Authority (EFSA), as an independent agency to provide scientific advice and support. This authority is competent to analyse the principle of risk in relation to food and feed.

Finally, it provides for the mechanisms necessary to increase consumer confidence in food law (Article 9 and 10):

- Effective public consultations during the preparation, evaluation and revision of food and feed law
- Obligation of public authorities to inform the general public, where there are reasonable grounds to suspect that a food or feed may present a risk for human or animal health.

FOR MORE INFORMATION

- https://ec.europa.eu/food/safety/general_food_law/general_requirements_en
- <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?>
- https://ec.europa.eu/food/sites/food/files/gfl_fitc_infographic_2018_en.pdf

FOOD INFORMATION TO CONSUMERS - FIC (LABELLING)

The general principles, requirements and responsibilities governing food information and in particular food labelling were established by Regulation (EU) No. 1169/2011. This regulation provided the rules for better food labelling for products sold in the EU. It establishes what types of information are mandatory on food packaging. This includes:

- The name of the food
- The list of ingredients
- Any ingredients that could cause allergies or intolerances need to be separately specified
- The quantity of certain ingredients or in some cases categories of ingredients
- The net amount of food contained in the package
- Relevant date markings, either best before or use by, depending on the type of product
- Should the product require special handling or storage conditions, these need to be specified
- The name and the address of the food business operator must figure on the packaging
- In some cases the country of origin or the place of provenance should be mentioned
- If a consumer runs the risk of misusing the product without instructions, clear preparation instructions must be provided
- Any product containing more than 1.2% alcohol must specify its alcoholic strength on the label
- A nutrition declaration

The mandatory information needs to be presented in a language that the population of the region where the product is sold easily understands. Member States have the power to determine the exact languages to be used on products sold in said country. Moreover, this information should be in a prominent place, where it is both easily visible and clearly legible and ideally indelible. The nutrition declaration should be clear and whenever possible in a tabular form.

Furthermore, the Regulation states that food labels may contain voluntary information aside from the mandatory ones listed above. However, any voluntary information provided may not mislead consumers, nor may it present an ambiguous or confusing character. Voluntary information may only be presented if the label still has space once all the mandatory information has been included.

The Regulation further sets out rules for fair information practices in food labelling. The core idea is that consumers should have easy access to the information, which needs to be accurate, clear and easy to understand. As mentioned above regarding the voluntary information, no information provided on the packaging may mislead consumers into thinking a product has certain characteristics it does not in reality (in regards to its nature, composition, durability, origin etc..). Furthermore, food producers may not sell a product as having properties or effects it does not possess nor may they hint that a food has special characteristics that all similar foods in fact have. Images on food packaging of normally present ingredients giving the impression that the product contains these components while they have been substituted by other ingredients are also considered to be misleading for the consumer.

FOR MORE INFORMATION

- <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02011R1169-20180101&from=EN>
- https://ec.europa.eu/food/safety/labelling_nutrition/labelling_legislation_en

UNFAIR COMMERCIAL PRACTICES DIRECTIVE AND THE NEW DEAL FOR CONSUMERS

The Unfair Commercial Practices Directive (Directive 2005/29/EC) was created to help small and medium sized businesses trade across the European borders on one hand and to boost consumer confidence on the other hand. It defines Unfair Commercial practices as being either misleading or aggressive (Art 6-9).

Misleading actions are here characterized as influencing consumers into making transactions they might not have made had they been fully informed in an honest way about the service or product. The New Deal For Consumers was adopted in 2018 and aimed at further strengthening the EU Consumer Law and its various aspects. While several pieces of EU law were modified, the relevant change that occurred for the Unfair Commercial Practices Directive in relation to the issue of Dual Food Quality is that art 6 on Misleading actions saw its paragraph 2 completed as follows:

(c) any marketing of a good, in one Member State, as being identical to a good marketed in other Member States, while that good has significantly different composition or characteristics, unless justified by legitimate and objective factors

This effectively outlawed any dual food quality practices but still left leeway in determining what legitimate and objective factors are. The European Commission is expected to publish a guidance on the interpretation of this legal clause.

FOR MORE INFORMATION

- https://ec.europa.eu/info/law/law-topic/consumers/unfair-commercial-practices-law/unfair-commercial-practices-directive_en
- https://ec.europa.eu/info/sites/info/files/factsheet_new_deal_consumer_benefits_2019.pdf
- https://ec.europa.eu/info/law/law-topic/consumers/review-eu-consumer-law-new-deal-consumers_en

METHODOLOGY OF TESTING

This part of the guidance will present the proper methodology of conducting tests on food products to verify whether any potential issues of dual food quality exist. It will be based on the Harmonized Methodology by the European Commission.

DEFINITION OF A PRODUCT OF REFERENCE

A product of reference is a product that should be tested. Any product of reference should fulfil certain criteria: the product in question should be sold and marketed under the same packaging and branding and this in many EU Member States (minimum three but the more the better). Furthermore, in the majority of these Member States, the product should be sold with a certain composition. Finally, the composition and marketing of the product in the majority of the Member states should be how consumers perceive the product generally in the EU. Therefore, any product perceived in a certain way by consumers but which in fact is different than in another country, could present potential practices of dual food quality as the consumer could have been misled into thinking the product was identical to those sold in other countries.

Studies have shown that brands play a significant role in the minds of consumers as guarantees for buying and consuming products of constant quality no matter where nor when the product was purchased. Furthermore, the EU Single Market with its free movement of goods makes it reasonable for consumers to be able to expect finding identically branded products of equal quality in all parts of the Single Market. Brand owners can therefore be expected to clearly communicate on any possible differences that their branded products sold in several countries present. Failing to do so, could be considered as misleading the consumers into thinking the products are identical no matter where or when they are bought.

A product is generally significantly different if, when comparing it to the product of reference, there are substantial differences in one or several key ingredients (or their percentage) and had the consumer been aware of these differences, it could have changed their purchasing decision. This last point on consumer behaviour is crucial in determining whether it could be a potential case of dual quality.

THE DEGREE OF SIMILARITY OF PRODUCTS

The JRC has elaborated a scheme and colour code to evaluate the degree of similarity of products. It divides products into three categories, identical, similar or different based on two criteria, the composition and the front of pack.

- **Identical:** The Nutritional values and the ingredients are identical. The Front of Pack presents the same design when it comes to motifs, colours, fonts, shape, logos, layout and pictures.
- **Similar:** The product has a similar front of pack (certain characteristics may be identical while some may be different) and contains similar ingredients.
- **Different:** The Front of Pack and the nutritional values and ingredients present significant differences.

The products where a possible case of dual food quality exists should have an **identical** or very **similar** front of pack with a **different** composition (in some cases similar products may be concerned by dual food quality practices, this needs to be examined on a case by case basis).

SIX KEY PRINCIPLES FOR TESTING PRODUCTS

The European Commission, in its Harmonized Methodology, has defined 6 principles that should be respected when conducting tests. The purpose of these principles is to ensure that the interests of all stakeholders in the food chain are adequately taken into consideration.

1) Transparency

The whole testing procedure should be transparent. This both ensures that all parties operate in an open way and reduces the potential for disputes, as any potential differences can easily be addressed through effective communication.

2) The components of an assessment procedure

Each assessment procedure involves four crucial parts which all need to be clearly mapped out before starting a testing campaign. First, the selection of products has to be determined. This involves deciding who will determine the list of products to be tested and on the basis of which criteria said products will be included on the list. A campaign could either focus on testing a specific product category such as canned foods or try to obtain an overview of the situation more generally. For this reason the type of products the campaign will test also needs to be defined.

At this stage, the number of products that the campaign aims to test is also to be determined. The higher the number of tested products, the more representative the results can be. Due consideration should also be given to any possible restrictions of how the product samples need to be handled (for example to avoid breaking the cold chain) and to the practical feasibility of sensory and laboratory testing. To ensure transparency and inclusiveness, contacting brand owners about the availability and equivalence on different markets can also prove to be useful.

3) Comparability

When performing tests it is crucial to make sure both the products and the obtained results are comparable all along the procedure (both during the selection, sampling and testing phases). Indeed, every stage of the testing procedure needs to respect the same conditions for all the tested products to ensure that no external factors interfere with the comparability of the results.

Furthermore, the product selection needs to be done very carefully. The selection may only include products that have indeed represent the same product as comparing non-identical products (i.e. different flavours of a product) would not give correct results and could even wrongly bring about accusations of dual quality practices and thus damage the reputation of a company.

Another important point to take into account is the correct translation of food labels and ingredient lists. Any inconsistencies could make the data flawed as comparability could no longer be ensured. A transparent and appropriately designed process helps in avoiding making these types of mistakes.

4) Appropriate Selection, sampling and testing procedures

Each procedure and phase should respect certain predefined criteria. These include ensuring that the process is scientifically based, practical and cost-effective. As not all products can be tested and studied in the same manner, each procedure should be fit for the product in question and must be applied in a consistent fashion. Finally, in cases where laboratory testing is required, the laboratory and the methods should be accredited. Should accreditation not be possible for a valid and verifiable reason, the used methods should at the very least be studied and validated.

5) Inclusiveness

During the whole process, all relevant parties should be invited to take part and bring their input (this includes the food industry, competent authorities, consumer representatives and sometimes consumers directly as well). These parties should be treated in a fair and equal manner and consensus should be sought.

6) Fairness

To ensure fairness towards all actors, the product selection process should give due consideration to the market shares that the brands occupy in each member state (food industries involved in several categories should not be put at disadvantage). Furthermore, any relevant legally required confidentiality requirements must be respected during the whole process.

EXCEPTIONS

Differences in similar products sold in various EU countries do not automatically mean that a product presents a case of dual quality. Product manufacturers are allowed under Single Market principles to locally differentiate the products they sell on different markets. However, misleading consumers is not allowed under EU law.

- **National legislation:** In some cases, the national legislation may vary regarding the required minimum amount that products need to contain of a certain ingredient. This is the case for products containing orange juice for example, where the necessary threshold varies in different EU countries. The legislation surrounding the beer sector also presents significant differences in the different Member States. These are but a couple of examples of points that need to be considered when planning a testing campaign. Indeed, product differences stemming from local legislative requirements cannot be considered dual food quality practices.
- **Availability or seasonality of raw materials:** Food manufacturers often try to use locally sourced ingredients whenever possible. However, in some cases this puts constraints on the similarity of the product sold in different Member States as different climatic conditions may cause shortages in certain raw materials. Some brand owners might also slightly adapt the content of a product according to the seasonality of the raw materials.
- **Voluntary strategies to improve the access to healthy and nutritious food:** Brand owners are allowed to differentiate products for different markets if this is done so as to improve the access to healthy and nutritious food. Often campaigns for better nutrition are backed by the national authorities, but not enforced with legal instruments and open to voluntary pledges by the companies.
- **National preferences:** In the case where the food manufacturer can prove through verifiable market research that certain market segments have strong local preferences for certain ingredients, product manufacturers may also use this to create different products that match the local consumer preferences. However, these criteria are not clearly defined.

TESTING FOOD PRODUCTS FOR DUAL QUALITY : THE PRACTICALITIES

Now that the basic principles of conducting tests have been outlined, we will get into the practicalities of testing dual quality on food products.

SELECTION AND SAMPLING OF PRODUCTS

Both the selection and the sampling of products need to follow the criteria defined by the JRC in the Harmonized Methodology. A testing campaign may only include products marketed under the same branding and packaging in several Member States. Differences in packaging size or in the language used on the products do not provide criteria of exclusion from a testing campaign. If any doubts arise, it is useful to contact the brand managers to obtain confirmation of the similarity of two products.

Product selection shall be done through the composing of a market basket based on branded and private label products. Furthermore, any former complaints made by consumers or consumer organisations, or possible results from previous testing campaigns may serve as basis in compiling a list of products that need further investigation either due to noted differences or because explanations provided by the brands were not satisfying. Subsequently, this list will be completed by other products in the same categories that have yet to be tested, taking into account market shares on the different markets.

Any selected products need to be available in at least three Member States and all testing campaigns should aim for a balanced geographical representation as far as possible and practicable. By the principle of inclusion, the brand owners of the products included on testing lists should be consulted and given the opportunity to clarify any relevant information on nutrition values and sensory properties of the products.

Before the products are sampled, the organizing party needs to develop a sampling protocol so as to ensure the proper handling of product samples at all stages and ensure proper traceability. All product samples will be collected at retailers, where a sufficient amount of samples needs to be collected for all the foreseen testing activities (sensory analysis, laboratory testing). It should be kept in mind that improper handling of the samples in earlier stages by the retailers could affect the quality of the product. Therefore, if products that present no differences in ingredients have significantly different results during sensory analysis, further samples of the same products should be collected at a different retailer. Should the results remain different, the brand owner may provide samples from an earlier stage in the supply chain.

Furthermore, the durability (best before/use by dates) of the samples should be within a reasonable 20% margin to guarantee the comparability of the testing results. The actual testing should also be performed at the same point in time of a product's durability.

Finally, some further points to consider. Firstly, conducting testing on several product lots is a recommended way to obtain more complete results. However, any testing campaign organizers should keep in mind that replicating efforts represents a significant increase in both the time and the resources necessary for said campaign. Highly perishable products require special precautions for all stages of handling the product samples. This needs to be taken into consideration when planning the product selection and developing the sampling protocol. While it would be interesting to obtain a full picture of the situation of dual food quality related practices in the EU, all testing campaigns need to respect strict protocols and ensure feasibility from the start.

STUDYING THE FOOD PACKAGING

The first step in any testing procedure is verifying to what degree the front of packs of the compared products are identical. For a potential dual food quality case (and legally speaking a potential breach of the UCPD), the food products need to have practically identical front of packs and marketing strategies, broadly speaking. For objective and verifiable results, expert panels can be hired to determine to which extent the packaging of the different products is identical.

If the packaging of the chosen products is indeed identical or nearly identical, the next step that should be taken is the comparison of the nutritional values and the lists of ingredients, as declared on the label. For a product to possibly present a dual quality issue, the differences in the ingredients and nutritional values need to be significant and should alter the quality of the product in question.

SENSORY ANALYSIS

Sensory analysis is used to verify if a difference in products exists, what kind of a difference it is and how big the difference is. For sensory analysis, there are several standardised methods suitable for the purpose of testing dual quality. These include sensory profiling, the triangle test, the duo-trio test, ranking or the paired comparison test. Each of these testing methods are standardized by ISO and should be conducted by specifically trained panellists. The costs and efficiencies of the different methods should be taken into account when planning an extensive testing campaign and choosing which method to use for sensory analysis.

To obtain an accurate vision of a multilateral comparison of a product, the analysis should be performed by one single panel. For the testing of different product categories however, different panels may be used. For multilateral comparisons, sensory profiling is a very adapted technique. It will provide information on which products present differences and what they are and in the best cases even identify the extent of the differences by rating the products.

LABORATORY TESTING

If two product samples present significant differences after sensory testing has been conducted and it has been determined that the products are branded identically or almost identically, laboratory tests are recommended to study whether the products are of different quality. Laboratory tests need to be performed by laboratories accredited to ISO 17025. Ideally, all the methods used should also be accredited. Should this not be possible, the methods need to at least be scientifically verifiable. A sufficient budget for laboratory testing needs to be foreseen for any testing campaign as laboratory testing tends to be costly. Furthermore, when designing a testing campaign, all relevant methods should be considered.

For conducting laboratory tests, the exact methodology will be defined based on the results previously obtained both by comparing labels and during sensory testing. Indeed, no single test exists which would be valid for all dual food quality concerns. The chosen testing methodologies will depend on the found inconsistencies and which ingredients or characteristics need to be particularly tested. There are several possible methods for laboratory testing.

- Firstly, all accredited laboratories can perform **nutritional analysis tests**, which verify the nutrients contained in a product. These can be particularly useful when the nutritional values declared on two or more products present significant differences although the ingredient lists are identical. These tests will prove if the products are significantly different and if they respect EU regulations on the matter.
- Secondly, **colourants and additives** are also rather easy to test. However, for these tests, you need to know what substances you are looking for, which means that a suspicion of a certain colourant or additive is required for this method to be relevant during a campaign. Thirdly, **flavouring profiles** could also be used in case there is a suspicion of the product containing both a real ingredient and an artificial imitation of the same ingredient (which has not been declared).

This could for example be the case with products using vanilla such as ice creams, where both real vanilla and vanilla flavouring may often be used together. It has to be reminded that if such substances are undeclared intentionally for an economic or financial advantage, the cases might be classified as well as food fraud and challenged by the national competent authorities and judicial systems.

More complicated methods such as **gas chromatography** can be of interest in certain cases. This method designs a fingerprint of the product and its molecules and therefore gives a complete picture with both quantitative and qualitative data on the tested products. It is however an expensive method and the interpretation of the results requires expertise in the matter.

Finally, **isotope analysis** could also be considered as a method, as it gives information on the origins of a food product and its ingredients and whether the ingredients are of a certain species or not. Once all data has been collected, and the conclusion for a certain product is that it presents significant differences while being marketed under identical packaging, the brand owner should be given the opportunity to clarify the matter, in accordance with the principle on transparency and inclusivity.

Should this consultation not provide satisfactory results, the organizer of the testing campaign should alert the competent authorities who may decide on a case-to case basis to examine possible unfair commercial practices in place and if necessary take measures against the commercial actor infringing on the EU regulations.

CASE STUDIES

This section will focus on four interesting case studies from the Joint Research Centre's report to help determine whether or not there are cases of double quality in food products. The case studies are based on the appendix of the 2019 JRC report and on tests performed by project partner InfoCons in Romania. This document summarizes the analysis of the data collected in the tests, namely nutritional values, quantitative ingredient declaration, ingredient listing and front of package labelling. It will be important to understand why this may be a case of dual food quality, what the brand owner is saying and why this case may be of interest for future testing.

COCA-COLA COMPANY – REGULAR COKE

- **Why could it be a case of dual quality?** The JRC tested the Coca-Cola company's « Coca-Cola Original Taste » product in 18 different countries and found that, in Europe, there are two different recipes.
 - **Nutritional values:** there is one recipe with 10.6 kJ/100g of sugar (mostly in Western countries such as Denmark, France, Germany etc.) and one with 11.2 kJ/100g of sugar (mostly in Eastern countries such as Bulgaria, Hungary or Slovakia).
 - **QUID values:** the first ingredients are either water, sparkling water or carbonated water, but it has no real impact on nutritional values. The second one, the type of sugar: it is either sugar or fructose-glucose syrup, which is another type of refined sugar. Some versions of the product contain colorants, phosphoric acids and flavourings, but this does not change the nutritional values.
 - **List of ingredients:** the main difference lies in the type of sugar because the recipes with fructose-glucose syrup contain more sugar in their nutritional values than the recipes with regular sugar.
- **Front-of-pack labelling:** The FOP is harmonised with red labelling, except for Malta and Spain which have black labelling. This can be explained because the Coca-Cola Company sells more Coca-Cola Zero products than regular Coca-Cola products and therefore adopts black labelling as a marketing strategy in these countries (see the image below).



- **Brand owner comments**

The Coca-Cola company justified the difference by saying that « the local sweetener we use was primarily historically selected due to local considerations such as the regional availability of ingredients. Sourcing our ingredients locally ensures we can both support local supply-chains and economies and maintain the affordability and taste of our beverages » and that « we transparently include information on all our ingredients and their nutritional content on our label. To ensure the same taste, sweeteners derived from corn are used in slightly higher quantities than sugar, which explains the nutritionally insignificant differences identified by the JRC evaluation. »

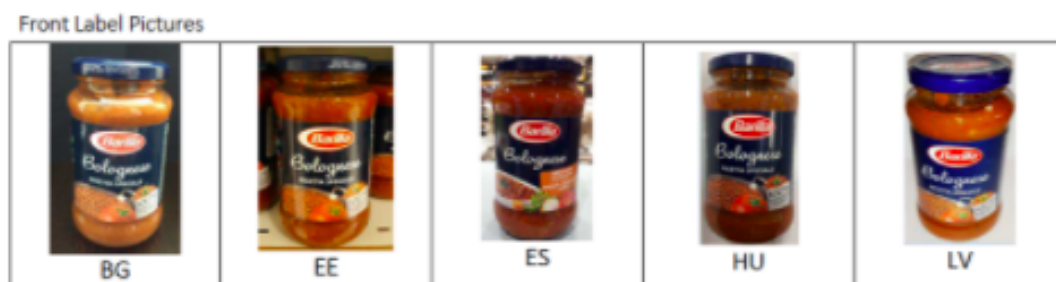
- **Why is the case interesting?**

This case is interesting because there is a relatively clear geographical division between the two versions of Coke while the front of the package is the same. In this case, this can be explained by the fact that some countries favour certain markets for their economic interests, but this would require additional justification. The Coca-Cola Company's justification remains weak since it claims to use fructose-glucose in a different percentage with sugar but in the ingredients, fructose-glucose is only mentioned for the higher energy versions of the product.

Further research is needed on certain aspects. If fructose-glucose syrup is cheaper, it would be interesting to have another indicator to assess whether or not it is a malicious practice, because even though it is allowed by European legislation, it is considered less healthy than regular sugar. However, the data collected in the JRC tests are not sufficient to call into question the dual quality, as the nutritional values are not very different, but with a more in-depth study of the price, the geographical distribution of the recipe and the potential negative effect of fructose-glucose as a whole, it could be possible to build a case.

BARILLA – BOLOGNESE SAUCE

- **Why could it be a case of dual quality?** The product « Bolognese Sauce » from Barilla has been tested by the JRC in 5 countries: Hungary, Spain, Estonia, Bulgaria and Latvia. In this case, there are two completely different recipes with different energy values.
 - **Nutritional Values:** In Hungary, Spain and Estonia, the recipe contains more carbohydrates and sugar and less proteins than the one in Latvia and Bulgaria.
- - **List of ingredients:** The JRC noticed that there are more or less the same ingredients even if some products contain tomato paste while others have crushed tomatoes with concentrated tomato puree. But this difference does not change the nutritional value since tomato paste or crushed tomatoes with concentrated tomato puree are used together in most of the cases.
 - **QUID values:** The quantity of meat is however bigger in Bulgaria and Latvia which explains why there are more proteins in this recipe.
- **Front-of-pack:** The FOP labelling is very similar (see image below)



- **Brand owner comment**

Barilla replied to the JRC that « the different information in Latvia and Bulgaria is due to a clerical error in the application of the stickers in the local language, which was quickly corrected. »

- **Why is this case interesting?**

For this product, there are doubts because there is a clear geographic distinction but it is hard to determine whether the company wants to discriminate some countries to others. As there are two different recipes, it could be a case of dual quality with no specific targeted country. More investigation and analysis would be needed to know if some countries are penalised and to know if it is really a mistake from the company.

ACTIVIA – STRAWBERRY FLAVOUR YOGHURT

- **Why could it be a case of dual food quality?** Activia is a dairy product tested in 14 countries. The JRC results show that the recipe is very different from one country to another and that there are five totally different recipes.
 - **Nutritional values:** Nutritional values are indeed very different in terms of energy values, fat, sugar, carbohydrates, salt, etc.
 - **QUID:** The QUID values are also not homogeneous, although data is missing because not all quantitative declarations are available for each country.
 - **List of ingredients:** The difference is mainly related to calcium and can be explained by the choice of dairy ingredients, whether milk, cream or skimmed milk for example. On the contrary, the quantity of strawberries is constant outside of Germany. The sugar quantity also varies from one country to another: in France and the Netherlands, there is more sugar but it provides more calories in the Dutch recipe than in the French recipe. Finally, the Greek recipe is much fattier than the others.
- **Front-of-pack:** The labelling of the FOP is very similar (see image below).



Brand owner comment

ACTIVIA replied that the yoghurts with strawberry flavour « are crafted in eight production plants located in different countries throughout Europe, slight unavoidable variances in nutritional values result mainly from the raw milk characteristics – which by nature can vary in function of the seasonality and from one country to another in terms of fat and protein content and from non-significant differences in production lines. » Furthermore, « marginal differences in labelling of ingredients may result from particular national requirements (for instance no harmonized yoghurt denomination across Europe) and local market practices ».

Why is this case interesting?

This case is interesting because according to the results of the JRC, there are many kinds of recipes in Europe. It is hard to say which recipe is the least healthy one and not easy to see a clear pattern even. The least healthy version is the Greek one, as it contains more fat than the others. The Greek recipe is most likely made to resemble as much as possible Greek yoghurt, which tends to be richer than regular yoghurt. The brand owner indeed insists on the local practices and the national requirements. But it is hard to say if it is a case of dual quality since some countries have the same recipe such as in Hungary and Italy or in Czech Republic and Slovakia. Further research and more data would be needed to build a case of dual food quality.

BEN & JERRY'S - CHOCOLATE ICE CREAM

- **Why could it be a case of dual food quality?** The product has been tested by the JRC in 13 EU countries.
 - **Nutritional values:** the results are quite homogeneous. The JRC noticed that there is a different recipe for the product in Croatia, which is a little different from other products.
 - **QUID values:** The QUID values are the same, although there are a few decimal places of difference in the nutritional values of the product in Croatia (it contains more calories and salt) and the list of ingredients is also standardised.
 - **List of ingredients:** The Croatian product contains more barley flour and salt than leavening agents and stabilizers, but these ingredients are still less than 2% of the amount of the product.
- **Front-of-pack labelling:** The FOP labelling of the product on the front of the package is absolutely identical in all countries. (see image below)



BRAND OWNER COMMENT

The company explains the difference in Croatia by saying that: "There is one set of artworks for the EU which has an ingredients declaration of 13% for the chocolate fudge brownie pieces and we use these figures on stickers for products sold in Croatia. A number of retailers in Croatia import this product from other EU markets independently of Unilever and make their own stickers, which may account for the discrepancy in the testing. In addition to the 500ml tub, we also produce a completely different pack size, a 100ml Ben and Jerry's Chocolate Fudge Brownie tub, which has a higher proportion of brownie pieces, meaning the overall ingredient declaration is higher."

WHY IS THIS CASE INTERESTING?

At first glance, this could be considered a case of dual quality since there is a different recipe in Croatia, but in reality, it is very standardized. This case is interesting because if the difference consists of ingredients that represent less than 2% of the product, it is not relevant to say that it is a case of dual quality. In addition, products imported from third countries are generally standardized because, in most cases, these products are marketed in Europe exploiting the principle of mutual recognition, which facilitates market access between EU countries. The recipe is unique and if it is legal in one country, the non-EU food business operator could then market to the other 26 without further restrictions.. In this case, while the differences do not concern national standards, they do not look really significant. It is important to note that European companies strive to adapt to local preferences and tastes, even if they are not obliged to do so.

FURTHER CASES STUDIED BY INFOCONS IN 2017

FANTA ORANGE- FRUIT-FLAVOURED CARBONATED SOFT DRINKS

- **Why could it be a case of dual food quality?** The product labels sold in three European countries have been compared:
- The differences were noted with regard to the content of fruit juice:
 - Romania: minimum 5% concentrated orange juice.
 - United Kingdom: 3.7% orange juice and 1.7% citrus juice, concentrated (5.4%)
 - Spain: 8% concentrated orange juice

Tara	Produs	Brand	Categorie	Model	Ingrediente	Cod E-uri	Nr E-uri	Val. Energetica	Proteine (g/100g)	Grasimi (g/100g)	saturati (g/100g)	Glucide (g/100g)	(din glucide) (g/100g)	Sare (g/100g)	Gramaj (g)	recipient (l)	Observatii
Romania	Fanta de Portocale 2l	Coca Cola	Bautura racoritoare	Bautura racoritoare carbonata cu suc de portocale	Apa, zahar, sirop de fructoza-glucioza, suc de portocale din concentrat (min. 5%), dioxid de carbon, acidifiant acid citric, arome naturale de portocale cu alte arome naturale, antioxidant acid ascorbic, colorant caroten, stabilizator guma de guar.	E330, E290, E300, E160a, E412	5	183kJ / 43kcal	0	0	0	10.5	10.5	0		2	A se consuma de preferinta inainte de a se deschide (primul rand). A se bea la loc racoros, ferit de soare.
Anglia	Fanta de Portocale 2l	Coca Cola	Bautura racoritoare	Bautura racoritoare carbonata cu suc de portocale	Apa carbonata, zahar, suc concentrat de portocale 3.7%, fructe citrice concentrat 1.7%, acid citric, concentrat de fructe citrice, acidifiant, arome naturale de portocale si alte arome naturale, conservanti, substante de colorare, acid malic, regulator de aciditate, colorant caroten, acid ascorbic, acizanti, arome, stabilizatori, acid ascorbic, stabilizator guma guar, continut o sursa de fenilalanina.	E330, E202, E296, E331, E950, E951, E300, E412	8	121kJ / 29kcal	0	0	0	6.9	6.9	0		2	A se bea la loc racoros si ferit de soare.
Spania	Fanta de Portocale 2l	Coca Cola	Bautura racoritoare	Bautura racoritoare carbonata cu suc de portocale	Apa carbonata, suc concentrat de portocale 8%, zahar, sirop de fructoza si fructoza, acidifianti, acid citric, acid malic, stabilizatori, E445, E445 si E414, conservanti E202, indusitori E950 si aspartam, acid ascorbic, antioxidant, aroma naturala de portocale si alte arome naturale, colorant E160a. Continut o sursa de fenilalanina.	E330, E296, E445, E445, E414, E202, E950, E951, E300, E160a	10	145kJ / 34kcal	0	0	0	6.5	6.5	0		2	A se pastra de lumina solara si de mirosuri puternice. A se bea la loc racoros, uscat curat.

- **Why is this case interesting?**

This case is interesting because of the difference in food additives numbers, sugar, and calorie contents.

- **Food additives:**

Another difference noted is the number of food additives in Romanian products with five additives, in the United Kingdom 8 additives and, respectively, in Spain 10 additives. Specialists at The KiloStop Nutrition Clinic warn us about the additives found in these products:

"The higher the number of food additives, the more work our liver has to do to eliminate them. We note that in England and Spain we find the specification: 'contains a source of phenylalanine'. Phenylalanine is an amino acid that is found in the composition of the sweetener aspartame. There is a genetic condition called phenylketonuria which is the body's inability to metabolize phenylalanine. Phenylketonuria is a serious condition that can lead to mental retardation if not treated early. Therefore, products containing this substance must bear a warning on the packaging.'

- **Carbohydrate (sugar) and calorie content:**

"As you can see on the label, it has 0 nutrients, i.e., 0 proteins, 0 good fats, 0 good carbohydrates. The only source of carbohydrates is from simple sugars. These sugars were once complex carbohydrates, beneficial to the body, but the human hand removed from them dietary fibres, vitamins and minerals and thus remained only simple, bad sugars. Our body quickly absorbs these sugars, which are deposited very easily in the form of fat, causes sudden increases, and decreases in blood sugar, thus negatively influencing appetite.

In other words, this can increase the feeling of hunger. Sugar is nothing but a nutrient thief. It not only brings into the body only empty calories, but to be metabolized consumes from the body's vitamin and mineral reserves. So, in addition to Fanta not bringing us any nutritional benefits, she also consumes the number of vitamins and minerals we have in our bodies, completed the specialists at the KiloStop Nutrition Clinic <https://www.kilostop.ro/>"

MILKA CHOCOLATE WITH ALPINE MILK

Why could it be a case of dual food quality? The product labels sold in two European countries have been compared and the differences were noted with regard to the number of food additives. In Romania, the additive Poliglicerol (E476) was added.

The fat content is lower for the product found on the Romanian market, 29g/100g respectively, compared to 29.5g/100g found in the product in Spain. The product in Romania contains a higher quantity of saturated fats, i.e. 18g/100g, compared to 17.5g/100g for the product in Spain. A reduced content of the good fats of the product marketed in Romania, 11g/100g respectively, is observed compared to the equivalent product in Spain (12g/100g).

Differences can also be noted with regard to the glucose content (there is a higher quantity of the product marketed in Romania), and with regard to protein (the quantity is lower for the product marketed in Romania) and salt (lower for the product marketed in Romania).

Tara	Produs	Brand	Categorie	Model	Ingrediente	Cod E-uri	Nr E-uri	Val. Energetica	Proteina (g/100g)	Grasime (g/100g)	Acizi grasii saturati (g/100g)	Glucide (g/100g)	Saharuri (din glucide) (g/100g)	Sare (g/100g)	Gramaj (g)	Volum recipient (l)	Observatii
Romania	Ciocolată Milka cu lapte alpin 100g	Alpine	Ciocolata cu lapte	Ciocolata cu lapte	Zahăr, unt de cacao, lapte praf degresat, masa de cacao, zer praf, grăsimi din lapte, pasta de alune, emulsifiant-lectină de soia, E476), aromă. Substanța ușcată de cacao 30% minimum. Conține LAPTE, ALUNE, SOIA. Poate conține urme de GRAU, varietăți similare de NUIG.	E322, E476	2	2220kJ / 530kCal	6.3	29	18	59	58	0.37	100		A se păstra la loc uscat, ferit de căldură.
Spania	Ciocolată Milka cu lapte alpin 150g	Milka	Ciocolata cu lapte	Ciocolata cu lapte	Zahăr, unt de cacao, lapte praf, masă de cacao, zer praf, grăsimi din lapte, alune de padure măcinate, emulgator, lecitină de soia, aromă, cacao minim 30%. Acesta poate conține și alte fructe cu coajă lemnoasă și grâu.	E322	1	2220kJ / 530kCal	6.4	29.5	17.5	58.5	58	0.43	150		A se depozita într-un loc uscat. A se feri de căldură.

CONCLUSION

This guidance has explained what the practices of dual food quality entail and how the issue has been tackled up until now on the EU level. Furthermore, the guidance has exposed how to organize a testing campaign on food products.

Dual food quality is a practice consisting of selling products in several countries which are identically branded but contain differences in ingredients and nutritional values, where the consumer may be misled into thinking that the sold product is identical to those found in other member states. Any testing campaign needs to be carefully planned and organized and should strive to be both inclusive and transparent. The results of the campaign need to be carefully analysed and communicated to the relevant authorities if major discrepancies are found.

It should be noted though, that differences in quality may be the result of legal practices such as local preferences, local market practices and/ or national requirements. Sometimes it can also be hard to find a pattern to understand whether a company has put discriminatory practices towards specific countries or regions in place. Therefore, the issue of dual food quality still needs to be examined through extensive testing to obtain a better overview of the situation.