Focus on ground coffee

Report on comprehensive quality research in four European markets



This report is the result of the European Commission-funded project "The same but different – is food in Baltic region different from what consumers eat in Western Europe?". The project is implemented by a consortium coordinated by the Foundation of Consumers from Poland and including the following consumer organisations: National Consumer Confederation from Lithuania, Latvian National Association for Consumer Protection from Latvia and the Institute of Horticulture – National Research Institute from Poland. In May 2021, we conducted comprehensive laboratory and sensory testing of black tea bags and ground coffee purchased in four markets: Polish, Lithuanian, Latvian and German. We checked for the issues of dual quality between the countries in which the tested coffees and teas were purchased.

The research results are available to consumers on our websites in the form of the coffee and tea quality reports.

Please send any comments on the report to: testy@konsumenci.org,

Warsaw, Vilnius, Riga, December 2021.

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The contents of this report represent the opinions of the authors and are their sole responsibility. The European Commission accepts no responsibility or liability whatsoever with regard to the use of this report.





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Introduction

We invite you to read the report prepared by consumer organisations: Foundation of Consumers from Poland (project leader), National Consumer Confederation from Lithuania and Latvian National Association for Consumer Protection, in cooperation with National Institute of Horticultural Research from Skierniewice.

In the report, we present the test results of 19 different brands of ground coffee bought in Poland, Lithuania, Latvia and Germany.

What is their quality? Do they contain pesticide or heavy metal residues? Which coffee has more caffeine and other desirable phenolic compounds? The answers to these questions can be found in the first part of our report.

And if you want to know whether the coffee you buy in Germany is different from the one you buy in Latvia, or whether the coffee you buy in Poland is different from the one you buy in Lithuania, be sure to take a look at the second part, in which we discuss the subject of dual quality of the tested coffees.

We test food products because we want to know their quality and whether they are safe. We also want to check whether manufacturers and retailers fairly promote their products and provide us with reliable information.

By publishing the research results, we want to encourage producers to raise their standards and to make it easier for consumers to make informed choices.

1. Products Tested

Consumers in our countries most often compare the products they buy to products of the same brand available in the German market. For this reason, the products for the study were selected after checking which coffees are available in stores in Lithuania, Latvia, Poland (i.e. in the countries where our organisations operate) and Germany.

All products were purchased in stores (stationary or online) as part of typical consumer purchases, in the same quantity in each market studied. Then the secured and coded samples were sent to the laboratory.

We selected the most popular coffees as well as those sold as 'eco', 'bio' or 'organic' to check if their quality was comparable to that of popular brands.

For the study, we tested 19 different brands of ground coffee, and since most of them were available in several countries, a total of 40 products (samples) were tested.

Five of them were available in all four markets covered by the study. Some can be purchased in three, two or only one market (these are mainly 'organic' coffees).



Which products were tested

6





2. Quality Ranking

What and how did we check?

- We first checked the actual weight of all 40 products in order to verify the accuracy of the manufacturers' label declarations.
- We then carried out two types of tests in the laboratory: chemical tests and sensory tests (expert evaluation).
- Chemical tests were carried out using accredited methods in accordance with the relevant standards and guidelines of the EU Reference Laboratories. We checked whether the coffee contained residues of pesticides (one of 502 compounds, including glyphosate) or heavy metals (one of four: arsenic, lead, cadmium and mercury) that could threaten our safety.
- We also determined the content of desirable polyphenolic compounds and caffeine in coffee.
- As part of the sensory testing, the coffee was evaluated in the laboratory by a group of expert panellists, and an ISO-compliant sensory profiling method (QDA) was used for the sensory evaluation of each of the 40 ground coffees we tested.
- The results of all tests were described for each sample in a separate report with high accuracy and including data such as place and date of purchase, batch number and date of the test.

How did we assess the quality of the coffee we tested?

We evaluated the chemical and sensory test results received from the laboratory according to the following consumer criteria:



First of all, as consumers, we know that coffee must have a good aroma and taste. Therefore, the coffee was evaluated using the sensory profiling method by 24 experts on a scale from 0 to 10, and the average of their scores represents the overall sensory evaluation. Each sample (i.e. 5.5 g of ground coffee per 100 ml of water) was brewed in the same way for 8 minutes. Coded samples of coffee brew were served to the panellists in random order in porcelain cups. We believe that good taste and aroma enhance the quality of coffee.

| sensory evaluation | We rated coffee quality as 5 ($\Rightarrow \Rightarrow \Rightarrow \Rightarrow$) if its sensory evaluation was higher than 7. |
|--------------------------------------|---|
| contribution to the final score: 50% | The higher the score, the better $**** \ge 7.0$ $**** \ge 6.5$ $*** \ge 5.5$ $** \ge 4.5$ $* > 4.0$ |
| | |

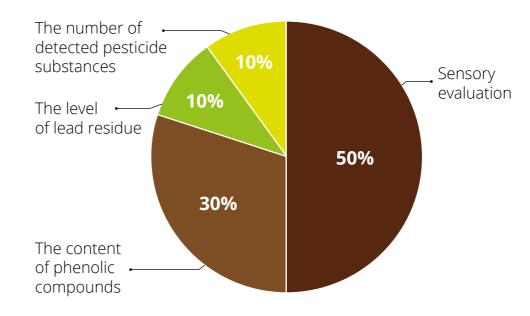
Secondly, the quality of coffee is judged primarily by the content of caffeine and other phenolic compounds, especially positive acids, such as chlorogenic acid, which has strong antioxidant properties and reduces glucose absorption, which is important, for example, for diabetics. We believe that the presence of phenolic compounds enhances the quality of coffee.

| phenolic compounds | We rated coffee quality as 5 ($\star \star \star \star \star$) if the phenolic compound content of the sample was greater than 120 mg/100 ml of coffee brew. |
|--------------------------------------|--|
| contribution to the final score: 30% | The higher the content, the higher the score ***** ≥ 120 mg/100ml |

Thirdly, we believe that the presence of heavy metal residues, including lead, reduces the quality of coffee. Although the legislation does not specify the maximum acceptable level of lead in coffee, the samples tested vary in the amount of these residues, which can be one of the selection criteria for consumers. We rated coffee quality as 5 ($\star \star \star \star \star$) if the lead residue in the lead residue sample was less than 0.1 mg/kg of coffee. The less the residue, the higher the score contribution to the **** $\leq 0.1 \text{ mg/kg}$ **** $\leq 0.2 \text{ mg/kg}$ *** $\leq 0.3 \text{ mg/kg}$ ** $\leq 0.4 \text{ mg/kg}$ final score: 10% $* \leq 0.5 \text{ mg/kg}$ **Fourthly**, we have adopted the principle that an exceeded pesticide content eliminates a product from further testing. In some of the samples tested, we found small amounts of several pesticides, and in all of them we found residues of dithiocarbamates (more on this can be found in the section discussing the test results). Pesticide residues detected in coffees did not exceed the maximum levels allowed. However, we believe that the greater the number of different pesticides in a coffee, the poorer its quality. We rated coffee quality as 5 ($\star \star \star \star \star$) if the sample contained no pesticides more than one pesticide. contribution to the

The lower the pesticide content, the higher the score ****=1 ****=2 ***=3 **=4 *=5

Contribution to the final score of coffee quality



final score: 10%

Study Conclusions

ADVANTAGES

- After weigthing three packages of each of the tested samples, it turned out that their real weight was as declared and did not differ between packages (the highest difference was 0.7%), except for BIO VILLAGE coffee purchased in Poland, for which the difference in weight between packages was approximately 1.6%.
- Positive results were obtained when examining the residues of three of the four heavy metals tested: arsenic, cadmium and mercury.

Mercury appeared in trace amounts in the coffees tested. Also the detected amounts of arsenic and cadmium can be ignored in the quality assessment. These are quantities that do not affect our health.

Testing for pesticide residues in coffee samples has generally produced good results.

On a positive note, only a few of the 502 pesticides (plant protection products that could potentially be used on crops) were detected in the tested samples. And this was in amounts not exceeding the maximum permitted level, with exceptions for dithiocarbamates, which we wrote more about in the description of the non-conclusive test results.

The quality of most coffees was rated good to very good in the sensory test.

In the sensory profiling study (QDA), the panellists rated the taste and aroma profile of the coffees on a scale of 0 to 10. As many as 15 parameters characterising the coffee were considered in the final evaluation, such as taste (e.g. intense, sour, bitter), aroma (e.g. pleasant, fruity or chocolatey) and appearance of each sample (e.g. colour). An overall sensory quality score was given

for each sample. This score was higher than 4 for almost all samples, which is considered good and very good quality in sensory testing. The highest rating (7.3) was given to KIMBO Aroma Gold from the Polish market.

According to the criteria adopted in the study, the maximum final score for coffee quality is five (5). A score equal to or greater than half of the maximum score indicates good quality of the tested coffee. Most of the coffees tested achieved a positive final score. The highest score of all tested coffees went to DALLMAYR Classic from the Latvian market (final score 4.0), and KIMBO Aroma Gold from the Polish market (4.0).

QUESTION MARKS

Small residues of dithiocarbamates, which are agents used to combat fungi and plant diseases, were detected in all the tested samples. Since they were discovered in all samples, it is likely that our tests only found the levels of these endogenous sulphur-containing substances and not the residues resulting from the actual use of dithiocarbamate fungicides. Additional studies would be required to obtain a reliable answer as to the source of the residues detected.

What's important, taking into account the maximum permissible level and the uncertainty of the test results, in an official sense, the tested samples did not exceed the permissible limits.

DISADVANTAGES

The tested coffees contained lead residues. Five samples had significantly more residual lead than the rest of the coffees. These were: DALLMAYR Classic and TCHIBO Family from the Lithuanian market, LAVAZZA Quality Oro from the Latvian market, KIMBO Aroma Gold and MOVENPICK Der Himmlische from the German market. This lowered their score (no points were awarded for lead levels). Although in the case of lead there is no indication





of safety levels being exceeded, the residual lead content may be an important criterion for coffee selection from the consumers' perspective.

- 2 In addition to the dithiocarbamate residues present in all samples, the study also detected other pesticide residues, although not exceeding the maximum permissible levels, i.e. Cyproconazole (fungicide) in Pauling Classic coffee and Cyproconazole, Flutriafol and Triadimenol (fungicides) in Tchibo Exclusive Original coffee from Latvia and Poland, which resulted in lowering their score.
- 3 Unfortunately, coffees sold as 'eco', 'bio' or 'organic' are not free of heavy metal and pesticide residues. These residues do not exceed the maximum permitted levels, but they call into question the biological purity of these products. Two of them, i.e. NATURE-LA from the Lithuanian market and ICA I LOVE ECO Elegant from the Latvian market, received the lowest quality ratings among coffees from their countries.

We considered a final score equal to or greater than half of the maximum score to be an indicator of positive coffee quality. The final score of four products is below this level. These are: NATURE-LA (final score 2.3) and PAULIG Classic (2.4) from the Lithuanian market and ICA I LOVE ECO Elegant (2.0) and PAULIG Classic (2.2) from the Latvian market.



Coffee Quality Ranking

Products from the Polish market

| | Name, manufacturer, package weight | | Packaging price in the currency of the country of purchase / price per kg of coffee in euro | ape definition of the definition of the definition of the duality profile | Phenolic compounds in total | Lead residues the tinal tate | Number of pesticides trate | Final quality rate |
|----|---|--|---|---|-----------------------------------|--|----------------------------------|--------------------|
| 1 | KIMBO Aroma Gold, KIMBO S.p.A., 250g | | 20,29 PLN / 17,45 euro | ***** | ** | **** | **** | 4,00 |
| 2 | | JACOBS Kronung, JACOBS DOUWE EGBERTS, 500g | 19,99 PLN / 8,6 euro | *** | **** | *** | **** | 3,80 |
| 3 | Dallmayr | DALLMAYR Prodomo, ALOIS DALLMAYR, 500g | 24,99 PLN / 10,74 euro | *** | **** | **** | **** | 3,70 |
| 4 | Dallmayr Classic | DALLMAYR Classic, ALOIS DALLMAYR, 500g | 19,99 PLN / 8,6 euro | *** | **** | **** | **** | 3,60 |
| 5 | MOVENPICK Der Himmlische, J.J.DARBOVEN GmbH & Co, 500g | | 24,98 PLN / 10,74 euro | *** | **** | **** | **** | 3,60 |
| 6 | | LAVAZZA Quality Oro, LUIGI LAVAZZA S.p.A., 250g | 17,89 PLN / 15,39 euro | **** | *** | * | **** | 3,50 |
| 7 | Exclusive Marcus | TCHIBO Exclusive Original, TCHIBO GmbH, 500g | 22,99 PLN / 9,89 euro | *** | *** | **** | **** | 3,30 |
| 8 | WOSEBA Gold | WOSEBA, P.P.U.H. WOSEBA Sp. z o.o., 500g | 13 PLN / 5,59 euro | *** | *** | **** | **** | 3,30 |
| 9 | B H | BIO VILLAGE, SCAMARK POLSKA Sp. z o.o., 250g | 13,99 PLN / 12,03 euro | *** | *** | **** | **** | 3,30 |
| 10 | | SATI BIO, CAFE SATI POLSKA Sp. z o.o., 250g | 16,25 PLN / 13,98 euro | *** | *** | **** | **** | 3,30 |
| 11 | IKEA PATAR Mellan Rostat Caffe, IKEA FOOD SERVICES AB, 500g | | 24,99 PLN / 10,75 euro | ** | **** | **** | **** | 3,20 |
| 12 | MK CAFE Premium, STRAUSS CAFE POLAND Sp. z o.o., 500g | | 16,66 PLN / 7,16 euro | ** | **** | **** | **** | 3,10 |
| 13 | Tanily Family | TCHIBO Family, TCHIBO GmbH, 500g | 13,99 PLN / 6,02 euro | ** | **** | *** | **** | 3,00 |

Ø



Products from the Lithuanian market

| | Name, manufacturer, package weight | | Packaging price in the currency of the country of purchase / price per kg of coffee in euro | ap in the sensory eval- apped aution of the quality profile | Phenolic Phenolic compounds in total | Lead residues Lead residues | Number of pesticides besticides | Final quality rate |
|----|--|---|---|--|---|--------------------------------------|---------------------------------|--------------------|
| 1 | JACOBS RECONSURCE | JACOBS Kronung, JACOBS DOUWE EGBERTS, 500g | 4,99 euro / 9,98 euro | *** | **** | *** | **** | 3,80 |
| 2 | Biclisive Recusive | TCHIBO Exclusive Original, TCHIBO GmbH, 500g | 4,49 euro / 8,98 euro | **** | *** | **** | **** | 3,80 |
| 3 | Notice Control of Cont | MOVENPICK Der Himmlische, J.J.DARBOVEN GmbH & Co, 500g | 4,95 euro / 9,9 euro | *** | **** | **** | **** | 3,70 |
| 4 | Dalimayr prodomo | DALLMAYR Prodomo, ALOIS DALLMAYR, 500g | 5,95 euro / 11,9 euro | *** | **** | **** | **** | 3,60 |
| 5 | Martin Martin | MERRILD, Luigi Lavazza S.p.A., 400g | 6,99 euro / 17,48 euro | *** | **** | **** | **** | 3,60 |
| 6 | KIMBO Aroma Gold, KIMBO S.p.A., 250g | | 4,75 euro / 19 euro | **** | ** | *** | **** | 3,40 |
| 7 | Dalimayr Classic | DALLMAYR Classic, ALOIS DALLMAYR, 500g | 5,99 euro / 11,98 euro | *** | **** | | **** | 3,20 |
| 8 | | LAVAZZA Quality Oro, LUIGI LAVAZZA S.p.A., 250g | 5,49 euro / 21,96 euro | *** | *** | * | **** | 3,00 |
| 9 | Tamily | TCHIBO Family, TCHIBO GmbH, 250g | 2,94 euro / 11,76 euro | ** | **** | | **** | 2,70 |
| 10 | CLASSIC | PAULIG Classic, GUSTAV PAULIG Ltd, 500g | 5,15 euro / 10,3 euro | * | **** | *** | **** | 2,40 |
| 11 | PER PER PER PER PER PER PER PER PER PER | NATURELA, UAB "FOKSAS", 500g | 8,99 euro / 17,98 euro | | **** | *** | **** | 2,30 |

| | | Name, manufacturer, package weight | Packaging price in the currency of the country of purchase / | Sensory eval- uation of the quality profile | Phenolic compounds in total | Lead residues | Number of pesticides | Final quality rate | |
|----|--|---|--|---|-----------------------------------|--------------------------------|--------------------------------|--------------------|--|
| | | | price per kg of coffee in euro | 50% of the final rate | 30% of the final rate | 10% of the final rate | 10% of the final rate | Final | |
| 1 | Dallmayr Classic | DALLMAYR Classic, ALOIS DALLMAYR, 500g | 6,19 euro / 12,38 euro | *** | **** | **** | **** | 4,00 | |
| 2 | Dallmayr | DALLMAYR Prodomo, ALOIS DALLMAYR, 500g | 6,09 euro / 12,18 euro | *** | **** | **** | **** | 3,60 | |
| 3 | | JACOBS Kronung, JACOBS DOUWE EGBERTS, 500g | 5,75 euro / 11,5 euro | *** | **** | **** | **** | 3,60 | |
| 4 | Notice of the second se | MOVENPICK Der Himmlische, J.J.DARBOVEN GmbH & Co, 500g | 7,13 euro / 14,26 euro | *** | **** | **** | **** | 3,60 | |
| 5 | | ICA I LOVE ECO Intensive, ICA AB, 450g | 6,19 euro / 13,76 euro | *** | *** | **** | **** | 3,30 | |
| 6 | LOROT . | | 10,99 euro / 21,98 euro | *** | **** | | **** | 3,20 | |
| 7 | | MERRILD IN-CUP, Luigi Lavazza S.p.A., 500g | 6,25 euro / 12,5 euro | ** | **** | **** | **** | 3,10 | |
| 8 | | TCHIBO Exclusive Original, TCHIBO GmbH, 500g | 4,59 euro / 9,18 euro | *** | *** | **** | ** | 3,00 | |
| 9 | CLASSIC | PAULIG Classic, GUSTAV PAULIG Ltd, 500g | 5,15 euro / 10,3 euro | * | *** | **** | **** | 2,20 | |
| 10 | | ICA I LOVE ECO Elegant, ICA AB, 450g | 6,19 euro / 13,76 euro | _ | **** | *** | **** | 2,00 | |

Products from the Latvian market



. . . .

Products from the German market

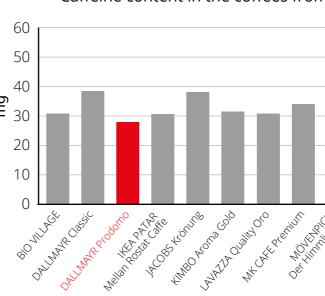
| Lp. | Name, manufacturer, package weight | Packaging price in the currency of the country of purchase / price per kg of coffee in euro | by Sensory eval- by 0, uation of the quality profile | Phenolic compounds in total | read Lead 10% of the final | Number of besticides 10% | Final quality rate |
|-----|--|---|--|-----------------------------------|--|--------------------------------|--------------------|
| | | | rate | rate | rate | rate | |
| 1 | DALLMAYR Classic, ALOIS DALLMAYR, 500g | 6,59 euro / 13,18 euro | *** | **** | **** | **** | 3,60 |
| 2 | DALLMAYR Prodomo, ALOI DALLMAYR, 500g | S 3,88 euro / 7,76 euro | *** | **** | *** | **** | 3,50 |
| 3 | JACOBS Kronung, JACOBS DOUWE EGBERTS, 250g | 6,49 euro / 25,96 euro | *** | **** | ** | **** | 3,40 |
| 4 | LAVAZZA Quality Oro, LUIG LAVAZZA S.p.A., 250g | 6l 4,99 euro / 19,96 euro | *** | *** | **** | **** | 3,30 |
| 5 | MOVENPICK Der Himmlisch J.J.DARBOVEN GmbH & Co, | | *** | **** | | **** | 3,20 |
| 6 | KIMBO Aroma Gold, KIMBO S.p.A., 250g |) 7,73 euro / 30,92 euro | **** | ** | | **** | 3,10 |

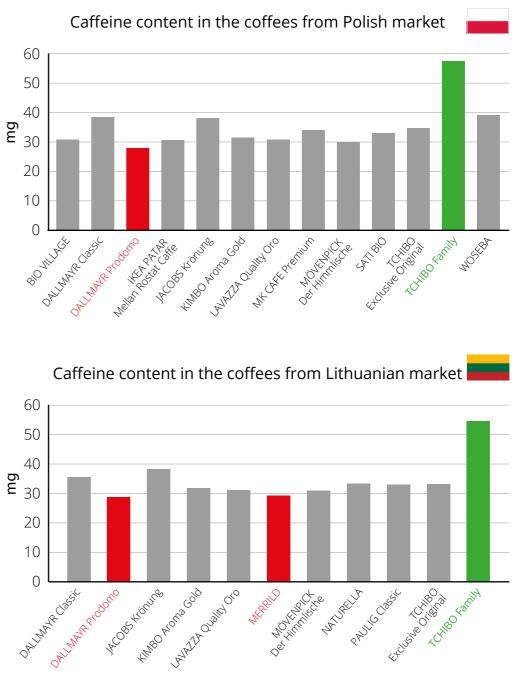


Bonus – how much caffeine is in our coffee?

We all want to know which coffee "gives the biggest kick"! Is this the one we drink?

Check the chart for the actual caffeine content in the coffees we tested.

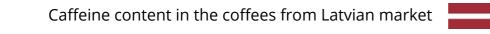


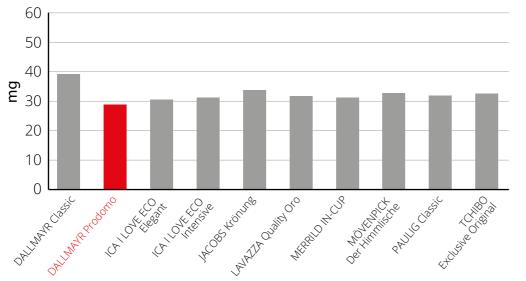


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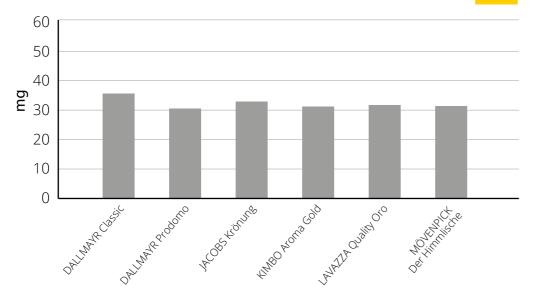
caffeine content above 50 mg per cup

caffeine content below 30 mg per cup









3. Dual Quality

Many people in the new Member States of the European Union are convinced that global corporations supply our markets with lower quality goods. To ensure that the issue of dual quality of goods in different European markets ceases to be only a topic of private conversation between us, consumers, we examined whether the dual quality issue concerns coffee.

Products tested

In the common European market, many products are sold under the same brand/name. If the name and packaging look the same, the consumer can expect to find in the packaging exactly the same product as they know from another market and make a purchase decision on that basis.

Consumers in Lithuania, Latvia and Poland most often compare the products they buy to products of the same brand available in the German market. For this reason, the products for the study were selected



after checking which coffees were most popular and available in Germany and in the countries where our consumer organisations operate.

Five of them were available in all four markets covered by the study. These are: Dallmayr Prodomo, Dallmayr Classic, Jacobs Kronung, Lavazza Quality Oro and Movenpick Der Himmlische. In addition, we included KIMBO Aroma Gold in the study, which is available in three markets, including the reference German market.

Finally, as part of the study, we tested six different brands of ground coffee for dual quality (a total of 23 samples were tested).

What and how did we check?

The quality tests described in the previous section of the report were complemented by the following tests:

- A panel of experts evaluated the packaging of the coffees tested and the way the brand was presented. The aim was to check whether coffees sold under the same name in different markets had the same packaging and label design.
- Taking part in a multiple comparison test, the experts also compared the appearance and smell of dry ground coffee of the same brand from different markets.
- We complemented the laboratory chemical tests with an analysis of differences in the detected pesticide and heavy metal content depending on the country of purchase.
- By determining the content of polyphenolic compounds in the coffee, we tested whether there were differences in the detected content of these substances depending on the country of purchase.
- The sensory results were also compared for each brand by country of coffee purchase.

Test results

Experts judged that there was no single market for which coffee packaging always differed from other markets. Despite slight differences in packaging design, from a consumer point of view, products of the same brand sold in different markets can be treated as the same product. As a consequence, consumers can expect identical contents of the tested products regardless of the country in which they are purchased.

It is therefore justified to check if the dual quality issue concerns the selected products.

Evidence of dual quality of products sold in different markets under the same brand could include:

- a significantly different/lower quality of the products bought in Lithuania, Latvia and Poland compared to those bought in the reference German market, or
- different quality of products of the same brand sold in different markets with a clear trend of lower (or higher) quality in the selected market(s) – other than the reference market.



Dry coffee appearance

In the coffees tested, there were no significant differences in the appearance and degree of grinding of dry coffee depending on the country. The appearance of dry coffee does not indicate a dual quality of the products tested.

Dry coffee aroma

In terms of dry coffee aroma, only for two brands, i.e. DALLMAYR Prodomo and MOVENPICK Der Himmlische, there were no differences in the products of the same brand from different markets. In DALLMAYR Classic, JACOBS Kronung and KIMBO AromaGold coffees, the coffee aroma from the German market was more intense than in coffees from other markets.

Lead residues

Samples of the same brand of coffee from different countries varied in lead residue content, from a few to more than ten times. We pay attention to lead because it is taken into our bodies from various sources (air, water, food), it is deposited in the body and can cause many dangerous diseases. However, the differences observed do not support the thesis that manufacturers use dual quality.

Pesticide residues

The level of dithiocarbamate residues – the only pesticide substance detected in all samples – varied depending on the country of purchase. However, we did not find any trends in these differences that would indicate a dual quality issue.

Phenolic compound content

By comparing products of the same brand purchased in different markets, we discovered that for JACOBS Kronung and LAVAZZA Qualita Oro coffee there were significant differences in phenolic content depending on the country of purchase. The differences for the other samples were small. At the same time, there are no grounds to categorise the detected differences as dual quality, as no single clear trend was observed.

Sensory quality assessment

The sensory attributes that were important in the evaluation using the method of multiple comparisons of coffee from Germany to coffee from

the Baltic markets were the intensity of coffee aroma, coffee taste (bitter and sour) and intensity of coffee taste. In general, the direction of these changes indicated a lower intensity of coffee aroma and taste, bitter and sour taste of coffee from the Baltic countries compared to coffee from the German market. However, the differences in the evaluation of the aroma and taste intensity of the coffee brew were very small (2–3 points on a 9-degree scale).

According to the experts, coffee from the German market was not of higher quality compared to coffees from the Baltic countries. It is worth noting that the highest scores within a single brand were given to two coffees from the Lithuanian market (DALLMAYR Prodomo and Classic), Latvian market (JACOBS Kronung and MOVENPICK) and Polish market (KIMBO and LAVAZZA). These results do not indicate a dual quality issue.

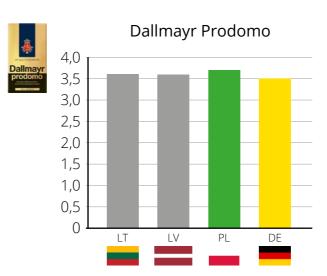


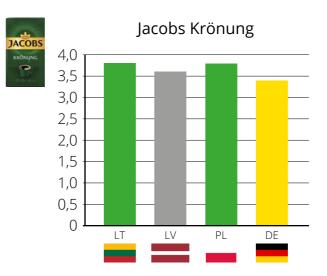
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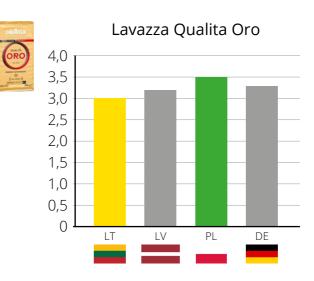
Is the same coffee different? **Final quality assessment**

The table shows the results of the final quality assessment of the six coffee brands tested for the possible use of different standards depending on the market in which the coffee is sold.

| | | | Final qua | ality rate | |
|--|--------------------------------|--|---|---------------------------------------|--|
| Produc | t brand | Products from the Lithuanian market | Products from the Latvian market | Products from the Polish market | Products from the German market |
| er e | Dallmayr Prodomo | 3,6 | 3,6 | 3,7 | 3,5 |
| Dallmayr Classic | Dallmayr Classic | 3,2 | 4,0 | 3,6 | 3,6 |
| | Jacobs Krönung | 3,8 | 3,6 | 3,8 | 3,4 |
| | Kimbo Aroma Gold | 3,4 | _ | 4,0 | 3,1 |
| LAWALLA | Lavazza Qualita Oro | 3,0 | 3,2 | 3,5 | 3,3 |
| MOVENPICK Impediate | Mövenpick Der Himmlische | 3,7 | 3,6 | 3,6 | 3,2 |



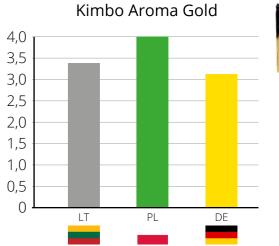


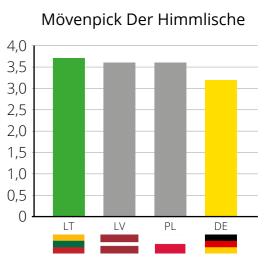


coffee with the highest quality rate within given brand

coffee with the lowest quality rate within given brand

Dallmayr Classic 4,0 3,5 3,0 2,5 2,0 1,5 1,0 0,5 0 LT LV ΡL DE











Let us summarise

Taking into account the number of products with the highest scores within one brand, the best were the coffees purchased in the Polish market, while coffees purchased in the German market were the worst - four out of six of them were rated the lowest. The final score was influenced by the level of residual lead.

Lead occurs in the environment, which humans and plants take up from soil, water and air. We do not know the level of exposure of the average consumer to all possible sources of pollution (pesticides, heavy metals), but we do know that lead, residues of which were detected in the samples, is toxic and is stored in our bodies, and that its high levels can lead to various diseases. That is why we also draw consumers' attention to lead residues in coffee.

In the European Union's current legislation on food contaminants, the maximum permissible levels of lead have been established only for a small number of product groups - coffee is not among them.

We call on the authorities to introduce a comprehensive assessment of consumer exposure to toxic contaminants and undesirable substances in food. We also advocate setting maximum levels for lead and other heavy metals for a wider range of food products than at present, including coffee. This is necessary to improve our safety.



Authors of the Report

The Foundation of Consumers is a dynamically developing non-governmental organisation that was established in 2013 and in just a few years has grown into one of the main consumer organisations in the country. We are a group of people who care about helping consumers. Our series "Consumers test", presents the results of independent product tests and aims to help consumers make informed choices of goods (you can find it at testy.konsumenci.org). The website porady.konsumenci.org allows you to find answers to problems related to the purchased goods in just a few minutes. For entrepreneurs, we have prepared a course on consumer law (szkolenia.konsumenci.org). The Foundation is the leader of the "Same or different" project.

Lithuanian National Consumer Confederation, founded in 2003, dealing with consultation and advocacy for consumer rights in various policies (electricity, heat, gas, climate change/environment protection, sustainable consumption, sustainable development, eco-label, e-commerce), consumer education and information.

Latvian National Association for Consumer Protection, founded in 1999, coordinates the network of 10 regional organizations; main activities: alternative dispute resolution, consumer education and information. LPIAA

Research Institute of Horticulture in Skierniewice, Poland is a governmental R&D organization. Several Institute's laboratories has ISO/IEC 17025 and/or GLP certificates and perform analysis (pesticide residues, heavy metals, nitrites and nitrates and mycotoxins).

is a member of BEUC and ANEC and represented in the ECCG and EESC.



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