

Food and Feed product catalogue 2023 / 2024



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chemical-physical

organoleptic

molecular biological-
immunological

safety parameters and
adulterants

In the fields:

- Milk products / dairy products
- Fruit and vegetable products / egg products
- Beverages
- Meat and fish
- Cereal and cereal products
- Infant formula

other food stuff such as

- Chocolate
- Honey
- Edible fat
- Mustard
- Animal feed
- GMO
- Declaration nutritional values

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Deutsches Referenzbüro für Ringversuche und Referenzmaterialien GmbH (DRRR GmbH)



Proficiency testing provider

The DRRR offers laboratories from the processing industry as well as official and private laboratories all aspects of quality assurance from one single source. Our focus is on food, consumer goods, packaging, building materials, plastics (polymers) and textiles, as well as microbiological analysis in these categories.

More than 500 PT's in 2021

Accreditation ISO/IEC 17043:2010 (A2LA)

The DRRR is an accredited proficiency testing provider by A2LA according to ISO/IEC 17043:2010. The accreditation is only valid for the matrices/parameters listed on the A2LA scope of accreditation certificate [#5494.01].

Accredited PT-provider

Whether a proficiency test is covered or not covered by the scope of accreditation by A2LA can be viewed in our online portal (ODIN).



Accreditation DIN EN ISO/IEC 17043:2010 (DAkkS)

The DRRR is an accredited proficiency testing provider by DAkkS according to DIN EN ISO/IEC 17043:2010. The accreditation is valid only for the scope listed in the annex of the accreditation certificate [D-EP-17063-01-00].

Whether a proficiency test is covered or not covered by the scope of accreditation by DAkkS can be viewed in our online portal (ODIN).

Reference material producer

We offer many certified reference materials as well as advise on quality matters and quality assurance training in the laboratory and the production.

High-quality reference material

Customer support

We provide advice to our customers in all question of validation of chemical-physical, microbiological, organoleptic and physical-mechanical analysis or statistical questions.

Any time competent contact persons

A2LA-Accreditation (USA)

The DRRR has successfully completed an accreditation audit by A2LA (American Association for Laboratory Accreditation). We are an accredited proficiency testing provider by A2LA according to ISO/IEC 17043:2010. The accreditation is valid only for the scope listed in the annex of the accreditation certificate [#5494.01].

Alkaloids in foodstuff

The DRRR is continuously expanding the range of proficiency tests in the field of alkaloids. In recent years, proficiency tests on pyrrolizidine alkaloids have become established and the proficiency test "Quinolizidine alkaloids in lupine drink" was successfully conducted for the first time in 2022. This year, the proficiency tests "Tropane alkaloids in flour" and "Ergot alkaloids in flour" will be added to the program. Tropane alkaloids are plant constituents found in nightshade plants such as datura or deadly nightshade, which occur as weeds in fields. Ergot alkaloids occur in fungi, e.g. ergot. Both groups can cause acute toxic effects and enter the diet as contaminants via grain products.

Antibiotics in food

This year, the DRRR is offering a new proficiency test in milk. In the proficiency test "Inhibitors in milk", antibiotics from the substance groups sulfonamides, penicillins, cephalosporins and quinolones are queried. The DRRR is thus expanding its range of antibiotics proficiency tests. In 2022, the proficiency test "Antibiotics in liquid egg" was conducted for the first time and the proficiency test "Antibiotics in honey" has already been established for several years. In milk, antibiotics are used, for example, for udder diseases. Since antibiotics are not allowed to get into milk and other foods, these foods must be tested regularly.

THC and CBD in hemp seeds

From 2023, new maximum levels for THC in hemp seeds and other hemp seed products will apply due to the entry into force of EU Regulation 2022/1393. For hemp seeds, the permitted content of Δ^9 -THC equivalents will be 3,0 mg/kg. There is no THC and CBD in hemp seeds, but if hemp leaves enter the products as contamination during harvesting and processing, THC and CBD may be detectable. This happens regularly and therefore testing of hemp seeds or the food products made from them is important. Therefore, the DRRR is offering the proficiency test "Hemp Seed" for the first time this year and is thus expanding its range in this area. The proficiency test "Hemp oil" has already been successfully conducted twice and the proficiency test "Liquid of CBD cigarettes" was conducted for the first time in 2022.

Returning of ten result sheets

Up to nine additional result sheets can be returned for chemical-physical, microbiological and physical-mechanical proficiency testing rounds for free.

- **Check different methods**
- **Check different lab technicians**
- **Check different testing equipment**

Please note, that the free of charge service is only valid for returning result sheets by ODIN.

Simply brilliant, your proficiency testing with ODIN (Online Data Information Network).

- Fast and easy online registration / online announcement in our online catalogue
- Direct management and booking of the proficiency testing
- Overview about the registered proficiency testing schemes
- Fast and secure submission of your results via ODIN
- Online access to individual customers reports and certificates
- Supervisor rights available to overview all PTs of a multi-site company
- Saving of costs through booking and submission of your results via ODIN

Secure payment with IRIS (Internet Remuneration Information Service).

- Easy and safe payment by credit card
- Overview about all invoices
- Fast and secure online access

You can also pay your invoice via banktransfer or bank check.



Book Ringtrials Online

> Proficiency testing catalog



Enter Results Online

> Booked proficiency testings



Download Reports and Certificates

> Booked proficiency testings

- A precise planning and organisation of each proficiency testing round

- 2 weeks before we will dispatch the samples you will get an announcement with the proficiency testing details

- According to our requirements, you will receive suitable sample material for the respective proficiency testing scheme.

We reserve the right to have an external subcontractor carry out the sample purchase and any necessary testing.

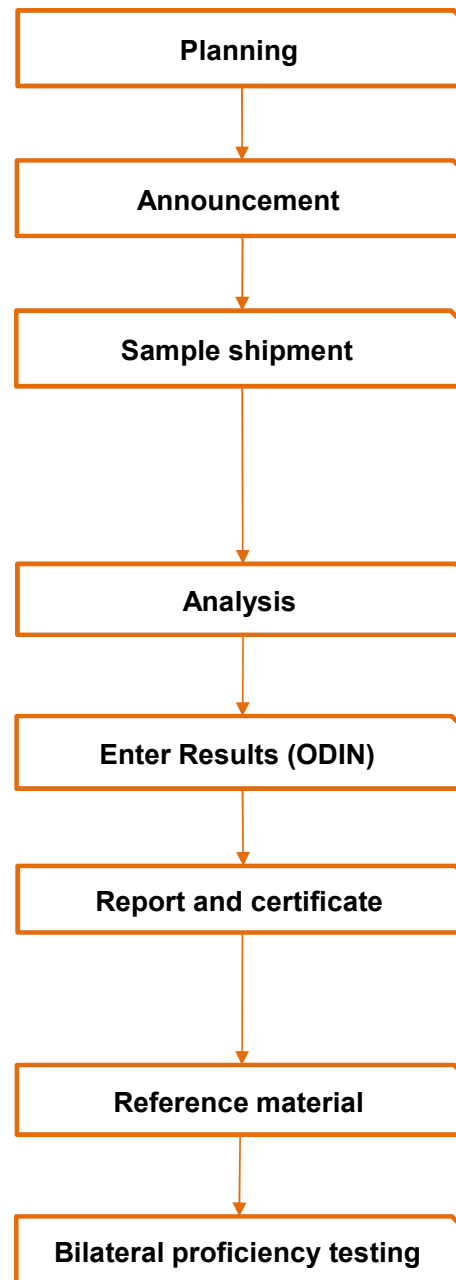
- After receiving the samples you will have a period of 4 weeks for analysing

- Mail back the results via internet by using our result sheets in an Excel file or fill out our result sheets online in ODIN

- At the latest 3 weeks after the deadline you will get the report (optional by login in ODIN, as hardcopy by regular mail or as pdf-file by e-mail) incl. participation certificate with overview of your lab performance

- After the proficiency testing we can offer you reference materials

- Possibility to perform a bilateral proficiency testing (bPT)



Why take part in proficiency testing?

- Participation in proficiency testing schemes is required by international standards or national facilities, organizations and customers
- Participants can compare, assure and improve their own performance and quality against other laboratories worldwide
- Laboratories can recognize how well they have been completed with the applied method compared to the other laboratories
- Saving on the costs of testing
- Unquestionable lab performance towards customers, authorities and certification authorities
- Saving on the costs of lab development and maintenance
- Saving on the costs of lab development and maintenance
- Saving on production costs by avoiding waste of raw material

Your benefits in DRRR proficiency testing schemes

- Objective and independent impression of your quality and your performance of your routine testing method compared to the other participating laboratories
- Saving the costs, because you have the opportunity to analyze more samples and more parameters in one proficiency testing
- External demonstration of your performance with the results of the proficiency testing
- Build up of your own external quality assurance system with our statistical tools (contains statistical control charts, MS-Excel evaluation files and reference materials). With these tools incorporated your external quality assurance rays unmatched confidence
- Detailed planning and organization of your proficiency testing and an easier, faster and better communication with us



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We work according to:

- ISO Guide 31 / 35
- DIN EN ISO 17034
- DIN EN ISO/IEC 17020 / 17025 / 17043
- ISO 13528

Homogenous and stable sample material

Laboratory performance:

by calculation of the following parameters:

- z-score
- z'-score
- CRD-Wert

Calculation of precision data acc. to ISO 5725-2 in many proficiency testing schemes

Statistical models:

Depending on the type of the distribution of the data, different statistic models are used:

- Conventional statistics (all values)
- Conventional statistics (no outliers)
- Robust statistics (Hampel estimator, Q-method)
- Robust statistics (Median, MAD/nIQR)
- Expert laboratory (expert decision)

Selection of statistical method with the chi²-fit test

Method-specific evaluation according to the reference method (if available)

Additional extended method evaluation (in case data are available)



You are not satisfied with your laboratory performance: What can you do?

Due to your showed laboratory performance you have been asked by the accreditation body, the monitoring authority or your customer to initiate measures to improve your laboratory performance.

These measures are often connected with considerable efforts in the laboratory and you only have a short time frame. In many cases the proof of a successful measure processing, by participation in a new proficiency testing round, is only possible in the following year. Until now it does not exist a possibility for a spontaneous performance review to equalize a previous unsatisfactory proficiency testing result.

New: The bilateral proficiency testing (bPT)!

You can book and perform individually and flexibly the bilateral proficiency testing during a determined time period.

You receive a proficiency testing sample for analyzing. You submit the results of the testing. After that you will get your proof of performance as a z'-score calculation in the form of a certificate within 1 - 2 weeks.

The performance evaluation refers to the previous regular proficiency testing, so that you can connect the bPT to the regular proficiency testing round. The used sample material is derived from a previous proficiency testing round and provides the possibility of a comparable performance evaluation with the regular proficiency testing.

Your terms and conditions:

Participation in a bPT is open to all laboratories. Prior participation in our regular proficiency tests is not necessary.

The report of this proficiency testing is not older than ten weeks. You register within these ten weeks for the bPT and the performance is confirmed by the DRRR. The testing period is dependent on the technical factors (parameter, matrix etc.) and will be agreed individually*. When this time is over after the sample shipment and you do not have sent us your results in this time, we can not evaluate your results and issue a certificate for you.

(* normally not longer than 1 - 2 weeks)

The bPT is not in the scope of accreditation of the DRRR. The realization of the bPT depends on the availability of the material.

Costs bPT

The costs are identical to the costs of the respective proficiency test from our standard program (see ODIN) plus shipping costs.

Alternative you can also order reference material.

Food industry

The DRRR offers in the field of the quality assurance for the chemical analysis a variety of different primary, intermediate and final products for the food and packaging industry.

The laboratories can secure their analytics with the DRRR services as well as main parameters like fat, protein and dry matter and side and trace parameters.

- Milk and milk products
- Fruit and fruit juices
- Sweets and pastries
- Food of animal origin
- Meat and egg products
- Animal feed

Safety parameters and adulterants

For the quality assurance in the field the chemical analysis of safety parameters and adulterants the DRRR offers a variety of different parameter-matrix-combinations.

- Mycotoxins
- Residues
- Allergens

Statistical evaluation

Take advantage of our statistical evaluation system. The evaluation of the proficiency testing is based on the highest scientific and statistical level. Therefore the participating laboratories have a very precise feedback on their actual performance.

Laboratory Measurement

By using our market-leading statistical evaluation, additional information such as laboratory uncertainty and various scattering of each laboratories can be presented.

Market-leading statistical evaluation

For your registration we recommend to use our online catalogue (ODIN) or the registration forms on our homepage (www.DRRR.de). You can also use the registration forms on page 35 of this catalogue.

milk and cream

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010007 | UHT milk 1 | fat, dry matter, protein, lactose, freezing point, density (3 different levels of fat content in PT round) | Apr-23 | Login or register |
| 2010366 | UHT milk 2 | fat, dry matter, protein, lactose, freezing point, lactulose, water activity (3 different levels of fat content in PT round) | Sep-23 | |
| 2010368 | UHT milk 3 | fat, dry matter, protein, lactose, freezing point, density (3 different levels of fat content in PT round) | Dec-23 | |
| 2010107 | UHT milk (lactose free) | lactose (< 0,1 %) | May-23 | |
| 2010015 | raw milk 1 | fat, dry matter, protein, lactose, freezing point, urea, pH value, casein | Jan-23 | |
| | | | Jan-24 | |
| 2010005 | raw milk 2 | fat, dry matter, protein, lactose, freezing point, pH value, urea, casein | Jun-23 | |
| 2010370 | raw milk 3 | fat, dry matter, protein, lactose, freezing point, casein, urea | Oct-23 | |
| 2010372 | goat's milk | fat, protein, freezing point | Aug-23 | |
| 2010003 | raw cream 1 | fat, dry matter, protein | Feb-23 | |
| 2010003 | raw cream 1 | | Feb-24 | |
| 2010374 | raw cream 2 | | Jul-23 | |
| 2010041 | evaporated milk | fat, dry matter, protein, ash, phosphorus | Jul-23 | |
| 2010624 | buttermilk | phosphatides, fat, dry matter, ash, pH value, acidity acc. Soxhlet-Henkel, density in heat serum | Apr-23 | |
| 2010702 | dairy drinks | fat, dry matter, protein, sucrose, glucose, lactose, fructose, total sugar (sum of glucose, fructose, sucrose) | May-23 | |
| 2010045 | milk (residues) | chloramphenicol, aldrin, dieldrin, PCB 101, trichlormethane, aflatoxin M1, streptomycine, tetracycline (minimum 4 of the parameters quantitative) | Apr-23 | |
| 2010951 | Inhibitors in milk | quant. determination of one antibiotic each from the substance groups sulfonamides, penicillins, cephalosporins, quinolones. | Aug-23 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

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cheese

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010011 | processed cheese 1 | fat, dry matter, protein, lactose, sodium chloride, pH value, nitrate, citric acid | Mar-23 | Login or register |
| | | | Mar-24 | |
| 2010378 | processed cheese 3 | fat, dry matter, protein, lactose, total phosphorus, ash, sodium chloride, nitrate, pH-value, citric acid, total lactic acid | Sep-23 | |
| 2010258 | processed cheese | natamycin, aflatoxin M1 | May-23 | |
| 2010029 | fresh cheese 1 | fat, dry matter, protein, total lactic acid | Apr-23 | |
| 2010164 | curd | fat, dry matter, protein, total lactic acid | Oct-23 | |
| 2010047 | semi hard cheese | fat, dry matter, protein, sodium chloride, nitrate | May-23 | |
| 2010031 | hard cheese | fat, dry matter, protein, sodium chloride | Feb-23 | |
| | | | Feb-24 | |
| 2010037 | soft cheese | fat, dry matter, protein, sodium chloride, pH value | May-23 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

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other milk products

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010009 | butter | solids non-fat, water content, hardness, pH value, cholesterol, fat, optional sodium chloride (depends on the condition of the butter) | Sep-23 | Login or register |
| 2010382 | butter (fatty acid profile) | fatty acid composition C4-C20 | Sep-23 | |
| 2010017 | yoghurt | fat, dry matter, protein, pH value, total lactic acid | Nov-23 | |
| 2010049 | whey | fat, dry matter, protein, NPN, lactose, ash, phosphorus, potassium, calcium | Feb-23 | |
| | | | Feb-24 | |
| 2010852 | whey concentrate | fat, dry matter, protein, lactose, ash | Jul-23 | |
| 2010087 | pudding - dessert | fat, dry matter, protein, lactose, pH value | Feb-23 | |
| | | | Feb-24 | |
| 2010091 | AMF - anhydrous milk fat | alkalinity, free fatty acids, water content, peroxide value, carotene, butyric acid methyl ester | Apr-23 | |
| 3010012 | ice-cream | quantitative parameters: fat, milkfat, colouring agent E 124 (cochenille red A), vanillin, vanillic acid, p-hydroxybenzaldehyde, p-hydroxybenzoic acid, lactose qualitative parameters ^o : colouring agent E 100 (curcumin), foreign fat, colouring agent β -carotene (E 160) <small>^o The qualitative part of this proficiency testing scheme is not in the scope of accreditation.</small> | Sep-23 | |
| 2010170 | sour cream - crème fraîche | fat, dry matter, protein, pH value | Apr-23 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

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milk powder

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010027 | whole milk powder | fat, free fat, water content, protein, lactose, ash, titratable acidity | Apr-23 | Login or register |
| 2010001 | skimmed milk powder | fat, water content, protein, lactose, ash, titratable acidity | Sep-23 | |
| 2010698 | milk powder 3 | bulk density after 100 tappings | Sep-23 | |
| 2010123 | milk powder (lactose reduced) | lactose, dry matter | Dec-23 | |
| 2010113 | milk powder nitrate - nitrite | nitrate, nitrite | Aug-23 | |
| 2010125 | milk powder (Vitamin D) | vitamin D | Apr-23 | |
| 2010105 | milk powder (Vitamin A & C) | vitamin A, vitamin C | Apr-23 | |
| 2010023 | whey powder | fat, water content, protein, lactose, ash, pH value, titratable acidity | Mar-23 | |
| | | | Mar-24 | |
| 2010099 | casein - caseinate | fat, water content, protein, lactose, ash, pH value | Mar-23 | |
| | | | Mar-24 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

For your registration we recommend to use our online catalogue (ODIN) or the registration forms on our homepage (www.DRRR.de). You can also use the registration forms on page 35 of this catalogue.

fruit and vegetables products

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010051 | sugar mix (fruit preparation) | sucrose, glucose, fructose, maltose, starch, aspartame, acesulfam K, sorbate, saccharin, total sugar (sum of glucose, fructose, sucrose) | Jul-23 | Login or register |
| 2010053 | fruit preparation | brix-value, pH value, total acid, citric acid, L-malic acid, ash, phosphorus, potassium | Sep-23 | |
| 2010384 | sauerkraut | ascorbic acid, titratable total acid, volatile acid, lactic acid, pH-value, sodium chloride, non volatile acid | Jun-23 | |
| 2010386 | dried fruits | SO ₂ (sulphur dioxide) | Jun-23 | |
| 2010388 | dry potato product | water, fat, saturated fatty acids, raw protein, ash, total carbohydrates, starch, sucrose, fibre, sodium | Aug-23 | |
| 2010390 | tomato ketchup 1 | pH-value, titratable acid, citric acid, sodium chloride, glucose, fructose, soluble dry matter, dry matter, sorbic acid, benzoic acid, sucrose (anhydrous), total sugar (sum of glucose, fructose, sucrose) | Jul-23 | |
| 2010325 | tomato ketchup 2 | lycopene | Jul-23 | |
| 2010704 | hot sauce | Capsaicin, dihydrocapsaicin, nordihydrocapsaicin, total capsaicinoids | Jun-23 | |
| 2010190 | legumes | fat, water content, fibre, nitrogen content, crude protein content | Aug-23 | |
| 2010943 | Solvent residues in food | At least 3 different solvents quantitatively, e.g. benzene, toluene, xylene | Jun-23 | |
| 2011086 | Vegetable chips | Fat, dry matter, ash, protein, acrylamide, sodium chloride | May-23 | |
| 2011088 | Pesticides in vegetables | various pesticides from the areas of herbicides, insecticides and fungicides | Sep-23 | |
| 2011089 | Pesticides in fruits | various pesticides from the areas of herbicides, insecticides and fungicides | Sep-23 | |
| 2011093 | Alternaria toxins in tomato products | Alternariol (AOH), Alternariol monomethyl ether (AME), Tenuazonic acid (TEA), Tentoxin (TEN) | Nov-23 | |
| 2011097 | Acrylamide in potato products | acrylamide | May-23 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

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alcoholic beverages

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010408 | fruit spirit | relative density 20 °C / 20 °C, alcohol, ethyl carbamate, ferment accompanying substances | Mar-23 | Login or register |
| | | | Mar-24 | |
| 2010133 | beer | apparent extract, extract, alcohol content in weight per cent and volume per cent, wort, density, bitterness units, pH value | Jul-23 | |
| 2010323 | carbonated soft drinks | carbonation (CO ₂ content), actual alcohol strength, benzoic acid, sorbic acid, phosphoric acid as PO ₄ (2 samples non-alcoholic soda and 2 samples alcoholic soda (Ready-to-Drink)) | May-23 | |
| 2010617 | carbonated soft drinks - spirits | quinine (CAS No 130-95-0) (1 sample non-alcoholic and 1 sample alcoholic) | May-23 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

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non-alcoholic beverages

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010392 | coffee | water, ash, pH-value, acidity, water soluble extract, caffeine, acrylamide | Oct-23 | Login or register |
| 2010915 | green coffee | loss in mass at 105 °C acc. to ISO 6673 | May-23 | |
| 2010394 | tea | dry matter, ash, water soluble ash, water soluble extract, caffeine, theobromine, theophylline, acid-insoluble ash | Oct-23 | |
| 2010139 | pyrrolizidine alkaloids in tea | quan. determination of three distinct pyrrolizidine alkaloids, e.g. lycopsamine, echimidine, retrorsine, senecionine, seneciphylline, senkirkine, heliotrine, monocrotaline or lasiocarpine | Oct-23 | |
| 2010396 | energy drink | pH-value, taurine, caffeine, inosit, sucrose (anhydrous), glucose (anhydrous), fructose (anhydrous), total sugar (sum of glucose, fructose, sucrose), total acid (pH 8.1) calculated as tartaric acid, relative density [20/20] | Oct-23 | |
| 2010021 | vitamin solution | thiamine (vitamin B1), riboflavine (vitamin B2), pyridoxine (vitamin B6), cobalamin (vitamin B12), L-ascorbic acid (vitamin C), α -tocopherol (vitamin E), folic acid (vitamin B11), pantothenic acid (vitamin B5), niacin (vitamin B3) | May-23 | |
| 2010398 | orange juice 1 | total carotenoid + fraction I: carotene + fraction II: cryptoxanthineEster + fraktion III: xanthophyll ester | Aug-23 | |
| 2010402 | carrot juice | relative density 20 °C / 20 °C, pH-value, titratable acid, sucrose, fructose, glucose, nitrate, β -carotene, α -carotene, total carotene, total sugar (sum of glucose, fructose, sucrose) | Oct-23 | |
| 2010600 | fruit juice concentrate 1 | brix value, ph value, titratable acidity, citric acid, D-isocitric-acid, L-malic acid, ascorbic acid, lactic acid, citric acid - isocitric acid ration, hesperidin | Mar-23 | |
| | | | Mar-24 | |
| 2010602 | fruit juice concentrate 2 | brix value, titratable acidity, glucose, fructose, sucrose, total sugar (sum of glucose, fructose, sucrose), sugar free extract, glucose-fructose ratio, % sucrose of sugar | Jun-22 | |
| 2010610 | fruit juice concentrate 3 | brix value, ph value, titratable acidity, ash, potassium, calcium, magnesium, total phosphorus, sodium, nitrate, copper, iron | Nov-23 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

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non-alcoholic beverages

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010055 | grape juice | sulfur dioxide (SO ₂) | Jun-23 | Login or register |
| 2010127 | currant juice | lead, cadmium, arsenic, copper, zinc, iron, tin, mercury, aluminium | Aug-23 | |
| 2010154 | tomato juice | ergosterol | Nov-23 | |
| 2010714 | orange juice | Carbendazim | Jun-23 | |
| 2010165 | plant drink (milk alternative) | fat, dry matter, protein, freezing point, density (2 kinds of plant drink on the basis of e.g. soy or almond) | May-23 | |
| 2010357 | trace elements in mineral water | uranium, vanadium, boron | Aug-23 | |
| 2010359 | sugar substitutes in food | isomalt, lactite, maltitol, mannitol, sorbitol, xylitol | Aug-23 | |
| 2010502 | Quinolizidine alkaloids in Lupins Drink | At least 3 different quinolizidine alkaloids quantitatively, e.g. lupanine, lupinin, spartein | May-23 | |
| 2011019 | orange juice 2 | limonin | Aug-22 | |
| 2011020 | apple juice | patulin | Jun-22 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

For your registration we recommend to use our online catalogue (ODIN) or the registration forms on our homepage (www.DRRR.de). You can also use the registration forms on page 35 of this catalogue.

egg products

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010056 | egg products | total lipids, dry matter, protein, pH-value, cholesterol, α -linolenic acid, eicosapentaenoic acid, docosahexaenoic acid, salt content (sodium chloride) | Nov-23 | Login or register |
| 2010413 | egg pasta | water, fat, raw protein, ash, chloride, cholesterol, total sterine, calculation of the egg content, fibre | Nov-23 | |
| 2010415 | mayonnaise | total acid, water, fat, phosphatid-P205, cholesterol, egg yolk content, sorbic acid, benzoic acid, salt content (sodium chloride) | Jan-23 | |
| | | | Jan-24 | |
| 2010129 | residues in liquid egg | fat, nicotine, dioxins, dioxin-like PCBs | May-23 | |
| 2010706 | antibiotics in liquid egg | quant. determination of one antibiotic each from the substance groups nitrofurans, sulfonamides, tetracycline, chloramphenicol | May-23 | |
| 2010155 | egg powder | fat, alpha-amylase, ash, pH value, water content, salt content, lactic acid, hydroxybutyric acid | Nov-23 | |
| 2010504 | Hormons in liquid egg | At least one androgen, at least one estrogen and at least one progestin quantitatively | May-23 | |

declaration nutritional values

| Art. No. | proficiency testing type ^[A] | requested parameters | period | |
|----------|--|---|--------|--|
| 2010451 | declaration nutritional values with 2 different food stuff | energy, protein, carbohydrate, sugar, fat, saturated fatty acids, fibre, sodium | Sep-23 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

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meat products

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: Login or register |
|----------|--|--|--------|---|
| 2010019 | boiled sausage 1 | fat, water content, ash, protein, collagen, sodium chloride, nitrate, nitrite, diphosphorus pentoxide (P2O5), calcium, aw-value, starch | Feb-23 | |
| | | | Feb-24 | |
| 2010417 | boiled sausage 2 (round 1) | non-protein nitrogen (NPN), collagen degradation products, L-glutamin acid, citric acid, sodium acetate, L-lactat, sodium nitrate, sodium nitrite, ascorbic acid, pH value | Feb-23 | |
| | | | Feb-24 | |
| 2010204 | boiled sausage 2 (round 2) | | Sep-23 | |
| 2010214 | raw sausage 1 | aw-value, pH-value, D- & L-lactic acid, sodium, nitrate, nitrite, sorbic acid, monounsaturated fatty acids, saturated fatty acids, fat | Jun-23 | |
| 2010419 | raw sausage 2 | fat, water content, protein, ash, sodium chloride, hydroxyproline, diphosphorus pentoxide (P2O5), sodium, starch, solubilised milk protein | Jun-23 | |
| 2010712 | vegetarian sausage substitute | fat, protein, dry matter, sodium chloride, ash, fibre | May-23 | |
| 2010169 | Detection of soy protein in meat and meat products | soy protein quantitative | Jun-23 | |
| 2010945 | Allergens in meat products | Various allergens quantitative: egg, peanut, nuts, celery, mustard | Jul-23 | |
| 2011056 | cooked sausage | Fat, protein, dry matter, ash, sodium chloride, pH value, aw value, starch, hydroxyproline, nitrate, nitrite, diphosphorus pentoxide, L-glutamic acid | Nov-23 | |

fish and seafood

| Art. No. | proficiency testing type ^[A] | requested parameters | period | |
|----------|---|--|--------|--|
| 2010421 | fish paste 1 | water, fat, raw protein, ash, sodium chloride, arsenic, iodine | Aug-23 | |
| 2010423 | fish paste 2 | fat, sorbic acid, benzoic acid, saccharin, cyclamate, citric acid | Aug-23 | |
| 2010506 | Nitrosamines in fish | At least 3 nitrosamines quantitatively, e.g. N-nitrosodimethylamine (NDMA), N-nitrososarcosine (NSAR), N-nitrosohydroxyproline (NHPRO) | Aug-23 | |

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cereal products

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010069 | pastries | fat, protein, dry matter, ash, milk fat, starch, sucrose, propionic acid | Nov-23 | Login or register |
| 2010427 | flour | moisture content, raw protein, ash, starch, wet gluten content, falling number | Nov-23 | |
| 2010429 | gluten | Gluten (prolamin contamination) in flour, e.g. oat flour and corn flour | Nov-23 | |
| 2010431 | butter biscuit | ash, dry matter, raw protein, fat, semimicro butyric acid number, free butyric acid, butyric acid methyl ester, milk fat, starch, cholesterol, sucrose, fibre | Nov-23 | |
| 2010207 | corn aflatoxin 1 | aflatoxin - low level 1.00 ppb - 30.00 ppb (3 samples) | Aug-23 | |
| 2010228 | corn aflatoxin 2 | aflatoxin - high level 15.00 ppb - 100.00 ppb (3 samples) | Aug-23 | |
| 2010230 | corn DON 1 | DON - low level 0.10 ppm - 1.25 ppm (3 samples) | Sep-23 | |
| 2010232 | corn DON 2 | DON - high level 1.00 ppm - 6.00 ppm (3 samples) | Sep-23 | |
| 2010234 | corn fumonisin 1 | fumonisin - low level 0.10 ppm - 1.25 ppm (3 samples) | Oct-23 | |
| 2010236 | corn fumonisin 2 | fumonisin - high level 1.00 ppm - 6.00 ppm (3 samples) | Oct-23 | |
| 2010238 | corn ochratoxin 1 | ochratoxin - low level 1.00 ppb - 20.00 ppb (3 samples) | Nov-23 | |
| 2010240 | corn ochratoxin 2 | ochratoxin - high level 10.00 ppb - 100.00 ppb (3 samples) | Nov-23 | |
| 2010242 | corn zearalenone | zearalenone 50.00 ppb- 1500.00 ppb (3 samples) | Nov-23 | |
| 2010208 | wheat DON 1 | DON - low level 0.10 ppm - 1.25 ppm (3 samples) | Aug-23 | |
| 2010209 | wheat DON 2 | DON - high level 1.00 ppm - 6.00 ppm (3 samples) | Aug-23 | |

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cereal products

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010244 | wheat ochratoxin 1 | ochratoxin - low level 1.00 ppb - 20.00 ppb (3 samples) | Sep-23 | Login or register |
| 2010246 | wheat ochratoxin 2 | ochratoxin - high level 10.00 ppb - 100.00 ppb (3 samples) | Sep-23 | |
| 2010248 | barley DON | DON 0.05 ppm - 3.00 ppm (3 samples) | Nov-23 | |
| 2010250 | brown rice aflatoxin | aflatoxin 1.00 ppb - 20.00 ppb (3 samples) | Nov-23 | |
| 2010218 | biscuits (soy) | soy in biscuits 3.00 ppm - 30.00 ppm | May-23 | |
| 2010716 | cereal / cereal products | glyphosat | Jul-23 | |
| 2010718 | rice | arsenic | May-23 | |
| 2010361 | determination of the sedimentation index - Zeleny test (ISO 5529) | sedimentation index (ml) - (acc. To Zeleny) | Sep-23 | |
| 2010363 | determination of alveograph properties of dough - ISO 27971 | determination of alveograph properties of dough | Sep-23 | |
| 2010367 | determination of water absorption and rheological properties using a farinograph - ISO 5530-1 | determination of water absorption and rheological properties using a farinograph | Sep-23 | |
| 2010369 | determination of rheological properties using an extensograph - ISO 5530-2 | determination of rheological properties using an extensograph | Sep-23 | |
| 2010409 | determination of water absorption and rheological properties using a valorigraph - ISO 5530-3 | determination of water absorption and rheological properties using a valorigraph | Sep-23 | |
| 2010937 | Tropane alkaloids in flour | At least 3 different tropane alkaloids quantitatively, e.g. atropine, scopolamine, hyoscyamine. | May-23 | |
| 2010939 | Ergot alkaloids in flour | At least 3 different ergot alkaloids quantitatively, e.g., ergotamine, ergometrine, ergosine, ergocristine, ergocryptine, and ergocornine. | May-23 | |
| 2010949 | amylose in rice | amylose quantitatively | Aug-23 | |
| 2011098 | Acrylamide in cereal products | acrylamide | Jul-23 | |
| 2010955 | Antioxidants in food | E 320 butylated hydroxyanisole (BHA), E 321 butylated hydroxytoluene (BHT), E 324 ethoxyquin | Sep-23 | |

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infant formula

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010435 | jar food | fat, protein, ash, moisture, vitamin C | Aug-23 | Login or register |
| 2010437 | baby porridge powder 1 | water, fat, raw protein, ash, sucrose, glucose, fructose | Apr-23 | |
| 2010439 | baby porridge powder 2 | sodium, potassium, magnesium, calcium, iron, zinc, iodine | Apr-23 | |
| 2010441 | baby porridge powder 3 | vitamin B1, vitamin B2, vitamin B6, vitamin B12, vitamin A, vitamin C, vitamin E, folic acid, pantothenic acid, biotin | Apr-23 | |
| 2010447 | milk powder IMF part 1 | fat, protein, ash, moisture, vitamin A (retinol), vitamin C | Aug-23 | |
| 2010449 | milk powder IMF part 2 | sodium, potassium, calcium, magnesium, phosphorus, iron, copper, zinc, manganese | Aug-23 | |
| 2010261 | milk powder IMF allergens | gliadin, soy, casein, lactose, β -lactoglobuline | Oct-23 | |
| 2010957 | Bisphenol A in infant food | bisphenol A | Oct-23 | |
| 2011096 | residues in infant formula | Chlorate, perchlorate, phosphonic acid | Aug-23 | |

mineral oil in food stuff

| Art. No. | proficiency testing type ^[A] | requested parameters | period | |
|----------|--|--|--------|--|
| 2010180 | mineral oil in low-fat and starch-rich foodstuff | MOSH C10-C16, MOSH C16-C20, MOSH C20-C25, MOSH C25-C35, MOSH C35-C40, MOSH C40-C50, MOAH C10-C16, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50 | May-23 | |
| 2010590 | mineral oil in cocoa butter and chocolate | MOSH C10-C16, MOSH C16-C20, MOSH C20-C25, MOSH C25-C35, MOSH C35-C40, MOSH C40-C50, MOAH C10-C16, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50 | Jul-23 | |
| 2010245 | mineral oil in cheese and milk powder | MOSH C10-C16, MOSH C16-C20, MOSH C20-C25, MOSH C25-C35, MOSH C35-C40, MOSH C40-C50, MOAH C10-C16, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50 | Jul-23 | |
| 2010320 | mineral oil in edible fat and edible oil | MOSH C10-C16, MOSH C16-C20, MOSH C20-C25, MOSH C25-C35, MOSH C35-C40, MOSH C40-C50, MOAH C10-C16, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50 | Aug-23 | |

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other food matrices

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|--|---|--------|--|
| 2010453 | protein powder | protein, riboflavine (vitamin B2), pyridoxine (vitamin B6), ascorbic acid (vitamin C) | Jun-23 | Login or register |
| 2010197 | delicatessen salad | benzoic acid, sorbic acid, PHB-ester | Mar-23 | |
| | | | Mar-24 | |
| 2010025 | chocolate | fat, water content, protein, lactose, milk fat, theobromine, sucrose, total alkaloids, caffeine | Feb-23 | |
| | | | Feb-24 | |
| 2010457 | edible fat 1 | distribution of fatty acids | Oct-23 | |
| 2010710 | edible fat 2 | iodine, acid value, peroxide, saponification, tocopherole, free fatty acids, p-anisidine value, refraction index, water content, total sterols | Oct-23 | |
| 2010459 | mustard | dry matter, total acid, sodium chloride, allyl mustard oil, SO ₂ (sulfur dioxide), fat | Jan-23 | |
| | | | Jan-24 | |
| 2010157 | PAHs in animal and vegetable fats and oils | naphthalene, anthracene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(j)fluoranthene, benzo(e)pyrene, benzo(a)pyrene, dibenz(ah)anthracene (at least 5 of the parameters quantitative) A PAH concentration in the samples of approximately 0,1-5 µg/kg per PAH is to be expected. | Oct-23 | |
| 2010161 | Determination of natural thickeners | agar, carrageenan, guar, gum arabic, locust bean gum, sodium alginate and pectin | Aug-23 | |
| 2010247 | aflatoxins in chocolate | aflatoxin B1, B2, G1, G2, total aflatoxin content | Sep-23 | |
| 2010249 | pesticides in chocolate | quant. determination of several pesticides from the fields of herbicides, insecticides and fungicides | Sep-23 | |
| 2010327 | sugar free candies | sucrose, glucose, fructose, water content (total sugar content < 0.5%, reference method for sugar: enzymatics), total sugar (sum of glucose, fructose, sucrose) | Jul-23 | |
| 2010337 | metals in cocoa and chocolate | cadmium, lead, iron, aluminum, copper, zinc, mercury, nickel and arsenic (min. 5 of the metals contained) | Oct-23 | |
| 2010339 | acrylamide in cocoa and chocolate | acrylamide | Oct-23 | |

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other food matrices

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010341 | cannabis oil | CAS 13956-29-1 Cannabidiol (CBD) | Aug-23 | Login or register |
| 2010343 | vegetarian bread spread | fat, protein, dry matter, salt, ashes, pH-value | Oct-23 | |
| 2010345 | metals in hummus | cadmium, nickel | Oct-23 | |
| 2010347 | pyrrolizidine alkaloids in spices | quan. determination of three distinct pyrrolizidine alkaloids, e.g. lycopsamine, echimidine, retrorsine, senecionine, seneciophylline, senkirkine, heliotrine, monocrotaline or lasiocarpine | Oct-23 | |
| 2010349 | nicotine replacement products | Nicotine in nicotine pouches | Aug-23 | |
| 2010498 | Metals in tobacco | cadmium, lead, iron, aluminum, copper, zinc, mercury, nickel and arsenic (min. 5 of the metals contained) | Aug-23 | |
| 2010500 | MCPD and glycidol in edible oil | 3-Monochlorpropandiol (3-MCPD), 2-Monochlorpropandiol (2-MCPD), Glycidol | Nov-23 | |
| 2010941 | Cannabinoids in hemp seeds | CAS 13956-29-1 Cannabidiol (CBD), total Delta-9-THC | Jun-23 | |
| 2010953 | nutritional components in a complete meal | Moisture, Ash, Fat, Nitrogen, Sodium, Chloride | Sep-23 | |
| 2010959 | phthalates in edible oil | CAS 28553-12-0 (DINP), CAS 117-81-7 (DEHP), CAS 117-84-0 (DNOP), CAS 26761-40-0 (DIDP), CAS 85-68-7 (BBP), CAS 84-74-2 (DBP), CAS 84-69-5 (DIBP), CAS 131-18-0 (DPP), CAS 71888-89-6 (DIHP), CAS 117-82-8 (DMEP) | Oct-23 | |
| 2011021 | rheology of edible fat | viscosity | Jun-23 | |
| 2011087 | Peanut butter | Dry matter, ash, fat, protein, pH value, sodium chloride, total sugars, total dietary fibre | Apr-23 | |
| 2011090 | Aflatoxins in nuts | B1, B2, G1, G2, total aflatoxin content | Oct-23 | |
| 2011091 | Aflatoxins in spices | B1, B2, G1, G2, total aflatoxin content | Aug-23 | |
| 2011092 | Alternaria toxins in vegetable oils | Alternariol (AOH), Alternariol monomethyl ether (AME), Tenuazonic acid (TEA), Tentoxin (TEN) | Nov-23 | |
| 2011094 | Pesticide residues in vegetable oil | various pesticides from the areas of herbicides, insecticides and fungicides | Oct-23 | |
| 2011095 | Ethylene oxide in spices | Ethylene oxid | Nov-23 | |

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honey and beeswax

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010455 | honey 1 | diastase activity, proline, HMF, conductivity, pH-value, water, glycerin, ethanol | Aug-23 | Login or register |
| 2010708 | honey 2 | glucose, fructose, maltose, saccharose, turanose, saccharase number, free acids, ash | Aug-23 | |
| 2011002 | antibiotics in honey | quan. determination of one antibiotic of each of the substance groups sulfonamides and tetracyclines as well as of chloramphenicol and streptomycin. | Jun-23 | |
| 2011004 | pesticide residues in honey | The following pesticides can be queried: DEET, cymiazole, malathion, chlorpyriphos, chlorfenvinphos, piperonyl butoxide, bromopropylate, bifenthrin, tetradifon, lambda-cyhalothrin, acrinathrin, cis-permethrin, trans-permethrin, coumaphos, boscalid, cypermethrin, total tau-fluvalinate, deltamethrin, flumethrin, M-metalaxyl, carbaryl, propargite, acetamiprid, thiamethoxam, amitraz, carbaryl, imidaclopride, metalaxyl, carbendazim, thiaclopride, 2,4-DMP-formamide, 2,4-DMP-me-formamide, glyphosate. | Jul-23 | |
| 2011006 | pyrrolizidine alkaloids in honey | quan. determination of three distinct pyrrolizidine alkaloids, e.g. lycopsamine, echimidine, retrorsine, senecionine, seneciphylline, senkirkine, heliotrine, monocrotaline or lasiocarpine | Jun-23 | |
| 2011008 | veterinary drug residues in honey | quan. determination of three distinct veterinary drugs or their components, e.g. thymol, phenol, naphthalene, cymiazol, coumaphos or amitraz | Jul-23 | |
| 2011010 | GMOs in honey | qualitative detection of different screening elements, e.g. P-35S, T-NOS and P-FMV | Jul-23 | |
| 2011012 | relative frequency of pollen in honey | relative frequency of pollen | Jun-23 | |
| 2011014 | falsification honey | Identification of rice syrup and sugar beet syrup in honey, qualitative proficiency test | Jul-23 | |
| 2011016 | residues in beeswax | quan. determination of three distinct substances out of the fields varroa veterinary drugs and plant protection agents | Aug-23 | |
| 2011018 | falsification beeswax | paraffin wax content, stearin content | Aug-23 | |

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animal feed

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010351 | metals in animal feed | cadmium, lead, iron, aluminum, copper, zinc, mercury, nickel and arsenic (min. 5 of the metals contained) | Aug-23 | Login or register |
| 2010353 | ingredients animal feed | moisture content, crude protein content, crude oil, crude ash, crude fiber, sugar, lactose, starch | Aug-23 | |
| 2010355 | animal components in animal feed | qualitative identification of animal components | Aug-23 | |
| 2010093 | animal feed mycotoxins | OTA, DON, aflatoxin | Mar-23 | |
| | | | Mar-24 | |
| 2010315 | Fluoride content in animal feed | fluoride content | Nov-23 | |
| 2010947 | phytase in feed | phytase quantitatively | Jul-22 | |

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drinking water

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|-----------------------|--------|--|
| 2010373 | pharmaceutical residues in drinking water | Diclofenac, Ibuprofen | Aug-23 | Login or register |
| 2010395 | Microplastic in water | particle number | Aug-23 | |

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determination of animal species

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010263 | beef, pork, horse | qualitative detection of the animal species beef, pork and horse (participation with protein and DNA based methods possible) and quantitative detection of the relative amount of animal species (only DNA-based methods possible) | Dec-23 | Login or register |
| 2010588 | porcine and beef DNA in gelatine | Qualitative detection of low amounts of porcine (<i>sus scrofa</i>) and beef (<i>bos taurus</i>) DNA in highly processed food matrix (gelatin) in this proficiency testing also the DNA of sheep, goat and fish can be requested | Dec-23 | |
| 2010313 | porcine DNA in Candy | Qualitative detection of low amounts of porcine (<i>sus scrofa</i>) DNA in candy (gummy candy) | Dec-23 | |
| 2010335 | detection of the animal species in milk | animal species qualitative (The animal species can be detected in 3 different milks by isoelectric focusing, ELISA or PCR.) | Dec-23 | |

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GMO

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010720 | soy (GMO) | qualitative detection of the screening elements P-35S, T-NOS and P-FMV as well as the quantitative detection of the relative amount of transgene soy (construct or event specific methods possible) | Nov-23 | Login or register |
| 2011010 | GMOs in honey | qualitative detection of different screening elements, e.g. P-35S, T-NOS and P-FMV | Jul-23 | |
| 2010141 | corn (GMO) | qualitative detection of the screening elements P-35S, T-NOS and pat as well as the quantitative detection of the relative amount of transgene corn (construct or event specific methods possible) | Nov-23 | |
| 2010143 | rice (GMO) | qualitative detection of the screening elements P-35S, T-NOS and bar as well as the quantitative detection of the relative amount of transgene rice (construct or event specific methods possible) | Nov-23 | |
| 2010145 | canola (GMO) | qualitative detection of the screening elements T-NOS, CTP2-CP4EPS and P-FMV as well as the quantitative detection of the relative amount of transgene canola (construct or event specific methods possible) | Dec-23 | |
| 2010147 | cotton (GMO) | qualitative detection of the screening elements P-35S, T-NOS and pat as well as the quantitative detection of the relative amount of transgene cotton (construct or event specific methods possible) | Dec-23 | |
| 2010331 | potato (GMO) | qualitative detection of different screening elements, e.g. P-35S, T-NOS and P-FMV as well as the quantitative detection of the relative amount of transgene potato (construct or event specific methods possible) | Nov-23 | |
| 2010333 | sugar beet (GMO) | qualitative detection of different screening elements, e.g. P-35S, T-NOS and P-FMV as well as the quantitative detection of the relative amount of transgene sugar beet (construct or event specific methods possible) | Nov-23 | |

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ranking test

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 3010000 | water (ranking test, basic tastes) 1 | organoleptic analysis - basic taste (2 basic tastes) | Feb-23 | Login or register |
| | | | Feb-24 | |
| 3010028 | water (ranking test, basic tastes) 2 | organoleptic analysis - basic taste (2 basic tastes) | Jun-23 | |
| 3010030 | water (ranking test, basic tastes) 3 | organoleptic analysis - basic taste (2 basic tastes) | Nov-23 | |
| 3010034 | beer (ranking test, Diacetyl) | organoleptic analysis - Diacetyl | Oct-23 | |
| 3010037 | yoghurt (ranking test, basic tastes) | organoleptic analysis - basic taste (2 basic tastes) | Oct-23 | |
| 3010003 | yoghurt (ranking test, flavours) 1 | organoleptic analysis - flavours (2 flavours) | Feb-23 | |
| | | | Feb-24 | |
| 3010041 | yoghurt (ranking test, flavours) 2 | organoleptic analysis - flavours (2 flavours) | Nov-23 | |

| | |
|--|---|
| possible basic tastes | sweet, sour, bitter, salty |
| possible flavours (except flavour taint) | strawberry, cherry, vanilla, peach, lemon |

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triangle test

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|--|---|--------|--|
| 3010006 | water (triangle test, basic taste) | organoleptic analysis - triangle test basic taste | Jul-23 | Login or register |
| 3010032 | fruit juice (triangle test, flavour taint) | organoleptic analysis - triangle test flavour taint | Sep-23 | |
| 3010020 | beer (triangle test, Diacetyl) | organoleptic analysis - triangle test Diacetyl | Oct-23 | |
| 3010039 | yoghurt (triangle test, basic taste) | organoleptic analysis - triangle test basic taste | Oct-23 | |
| 3010043 | yoghurt (triangle test, flavour) | organoleptic analysis - triangle test flavour | Feb-23 | |
| | | | Feb-24 | |
| 3010004 | tuna (triangle test) | organoleptic analysis - triangle test | Jun-23 | |
| 3010054 | texture test (triangle test) | organoleptic analysis - triangle test | Apr-23 | |
| 3010007 | colour check (triangle test) | organoleptic analysis - triangle test | Apr-23 | |
| 3010010 | apple juice (triangle test, basic taste) | organoleptic analysis - triangle test basic taste | Jun-23 | |
| 3010013 | milk (triangle test, flavour taint) | organoleptic analysis - triangle test flavour | Apr-23 | |
| 3010016 | coffee infusion (triangle test, flavour taint) | organoleptic analysis - triangle test flavour | Jul-23 | |

| | |
|---|--|
| possible basic tastes | sweet, sour, bitter, salty |
| possible flavours (except flavour taint) | strawberry, cherry, vanilla, peach, lemon |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

For your registration we recommend to use our online catalogue (ODIN) or the registration forms on our homepage (www.DRRR.de). You can also use the registration forms on page 35 of this catalogue.

threshold value

| Art. No. | proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|---|--|---|--------|--|
| For the following proficiency testing schemes you can not enter your results online: | | | | Login or register |
| 3010008 | drinking water (TON, TFN) | water quality according to EN 1622:2006 examination for panels - minimum number of participants: 3 assessors! determination of the threshold odour number (TON) determination of the threshold flavour number (TFN) | Mar-23 | |
| | | | Mar-24 | |
| 3010055 | fruit juice (threshold value examination, flavour taint) | organoleptic analysis - threshold value examination of flavour taint | Dec-23 | |

descriptive testing

| Art. No. | proficiency testing type ^[A] | requested parameters | period | |
|----------|--|---|--------|--|
| 3010049 | chocolate (simple descriptive testing) | examination for panels simple descriptive testing (up to 5 assessors) | Mar-23 | |
| | | | Mar-24 | |
| 3010051 | chocolate (profile testing) | examination for panels profile testing (up to 5 assessors) | Jun-23 | |
| 3010018 | sausage (simple descriptive testing) | examination for panels simple descriptive testing (up to 5 assessors) | Nov-23 | |
| 3010025 | fruit juice (simple descriptive testing) | examination for panels simple descriptive testing (up to 5 assessors) | Sep-23 | |
| 3010027 | cheese (simple descriptive testing) | examination for panels simple descriptive testing (up to 5 assessors) | Jul-23 | |

[A] = For accredited and non-accredited status please see [Online portal \(ODIN\)](#)

| Article No. / proficiency testing type | period | result release and report online (ODIN) | result release by e-mail / fax; report by e-mail | additional sample sets / assessor (organoleptic) |
|--|--------|---|--|--|
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Up to nine additional result sheets can be returned for chemical-physical, microbiological and physical-mechanical proficiency testing rounds are free of charge. As a participant, you benefit from our international recognized proficiency testing schemes. By submitting up to ten result sheets you are now enabled to run international comparisons to check different methods and different lab technicians with one proficiency testing round. Your benefit: Participating in DRRR-proficiency testing services save costs for your quality assurance! If you need additional sample sets, you have the opportunity to order it according to our latest product catalogue.

Please note, that the free of charge service is only valid for returning result sheets by ODIN. If you send us your results by mail, fax or postal delivery, the additional result sheet will be charged according the latest product catalogue as a sample set equivalent.

In very rare individual cases an accredited proficiency testing round will not be carried out within the scope of accreditation due to technical or organizational reasons. In these rare cases the DRRR will inform the participants before the start of the proficiency testing round, thus before the sample shipment. An immediately free cancellation for the participants is possible until the date of the sample shipment.

Your registration is an one-time order. It is only valid for one year. Cancellation fees apply when cancelling a registration. If you want to have a permanent-registration please tick the box on the right side.

Please send registration to:
fax-no. +49 (0)8 31/960 878-99
e-mail: info@DRRR.de
online via www.odin.drrr.de

- this registration is permanent-registration and valid until my cancellation
- An offer with the total costs is needed
- A Purchase order from the purchasing department will follow

DRRR-customer number

company

company (additional line)

contact person

street

post-code /city

country (if not Germany)

fon

fax

e-mail

e-mail for invoices

VAT-ID-No. (if available)

With your signature you agree with our general terms and conditions.

date

signature

Importance

Reference material is a substance or item with one or more defined (known) characteristics and sufficient homogeneity.

Description reference material

Benefit of using certified reference materials

These materials are suitable for the calibration of equipment, for the quality assurance of testing methods or to analyse derivate reference materials. DRRR-Reference materials are essential for the chemical, physical, microbiological and sensory analytics as well as for the quality assurance. Standards for the accreditation of testing and calibration laboratories demand the using of reference materials.

The use of reference materials (RM) and certified reference materials (CRM) is an important procedure to avoid mistakes in the lab routine.

Profit with our high quality standards for your lab work

Characteristics

- the reference value is developed by the total number of results of the participants of proficiency testing (consensus value)
- DRRR-Reference materials do always refer to a DRRR-Proficiency testing
- reliable reference values according to advanced statistical evaluation
- independent service without influence of societies organisations and federations

The opportunity to collaborate with the best laboratories for the different requirements assures the high quality of our materials.

Reference materials meet all requirements of the ISO Guides 31 and 35, but it does not exist any accreditation for reference materials.

Identification

The reference materials listed on the following pages have specific article numbers to identify the materials. To supply our customers with consistently high quality the DRRR-reference materials will be replaced regularly by corresponding materials during the year. Currently available reference materials and its corresponding reference values will be sent on request. We reserve our right to send you always the latest materials.

Availability and order request of reference material



**A brand of DRRR GmbH and LUFA
Nord-West**

The brand STANDARON®

The DRRR has concluded a far reaching cooperation with the IfL. The main focus of this cooperation is the development and commercialisation of long term calibration materials for the food economy. The developed materials were merchandised with the name STANDARON® .

STANDARON® long-term calibration materials (LKM) for raw milk, raw cream and pasteurised milk will be used for the calibration of IR instruments.

Reference system for raw milk analysis

With the cooperation arises a range of services that offers not only regional but also national both in North and South Germany a competent reference system for raw milk analysis. Therewith it also offers more advantages and reliabilities for our international customers. The cooperation could already prove its competence at the new introduced STANDARON® raw cream materials. The quality advantage of the materials has been clearly confirmed at linearity, precision and stability. Besides standard materials is a focus of the cooperation to produce tailor-made, customer-oriented materials which are specially designed to cover individual production processes.

The reference values of STANDARON® materials were defined by selected "reference laboratories". These laboratories are proved the requirements according to DIN EN ISO/IEC 17025:2017.

Questions about the application

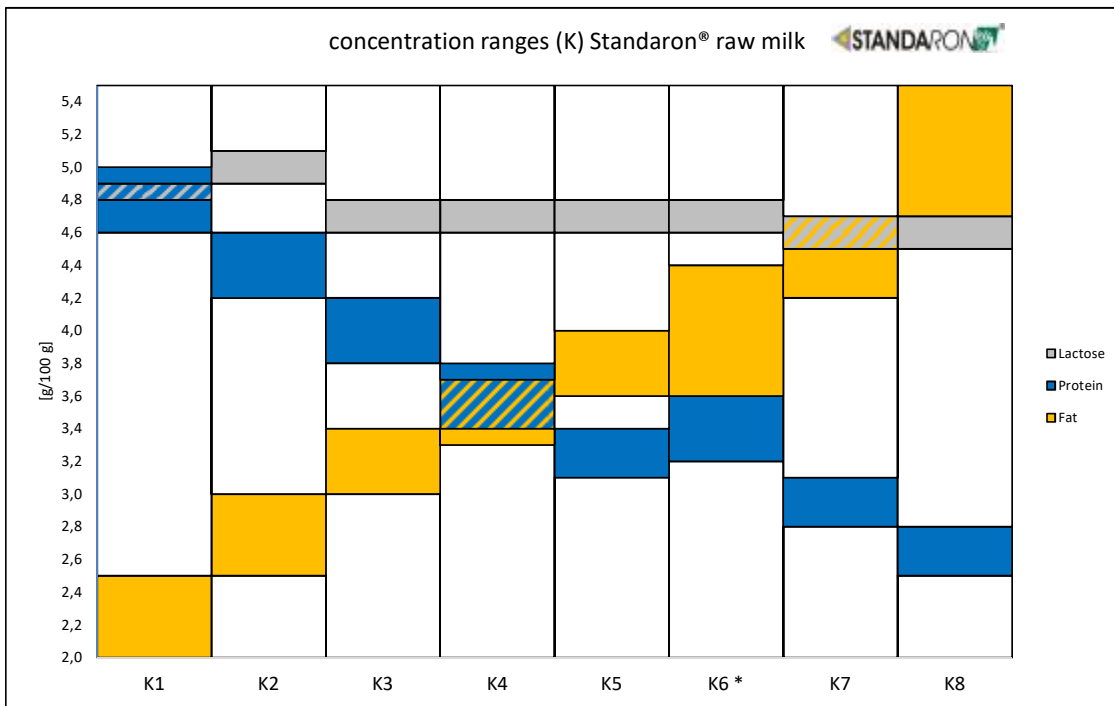
If you need any advice to assure your calibration do not hesitate to contact us.

Application of the materials

Please use the order from on page 65.

| LKM-type | Art. No. | fat | protein | lactose | dry matter | freezing point | urea | packaging unit | prices |
|------------|----------|----------------------|-----------------|---------------|--|------------------|---------------|----------------|--------|
| | | <i>Röse-Gottlieb</i> | <i>Kjeldahl</i> | <i>enzym.</i> | 102 °C | <i>cryoscopy</i> | <i>enzym.</i> | | |
| | | g/100g | g/100g | g/100g | g/100g | m°C | mg/kg | | |
| LKM RO K1 | 1141021 | 2,0 - 2,5 % | 4,6 - 5,0 % | 4,8 - 4,9 % | available reference material and the corresponding reference values are available on request | 50 ml | 20 € | | |
| LKM RO K2 | 1141022 | 2,5 - 3,0 % | 4,2 - 4,6 % | 4,9 - 5,1 % | | | | | |
| LKM RO K3 | 1141023 | 3,0 - 3,4 % | 3,8 - 4,2 % | 4,6 - 4,8 % | | | | | |
| LKM RO K4 | 1141024 | 3,3 - 3,7 % | 3,4 - 3,8 % | 4,6 - 4,8 % | | | | | |
| LKM RO K5 | 1141025 | 3,6 - 4,0 % | 3,1 - 3,4 % | 4,6 - 4,8 % | | | | | |
| LKM RO K6* | 1141026 | 3,6 - 4,4 % | 3,2 - 3,6 % | 4,6 - 4,8 % | | | | | |
| LKM RO K7 | 1141027 | 4,2 - 4,7 % | 2,8 - 3,1 % | 4,5 - 4,7 % | | | | | |
| LKM RO K8 | 1141028 | 4,7 - 5,5 % | 2,5 - 2,8 % | 4,5 - 4,7 % | | | | | |

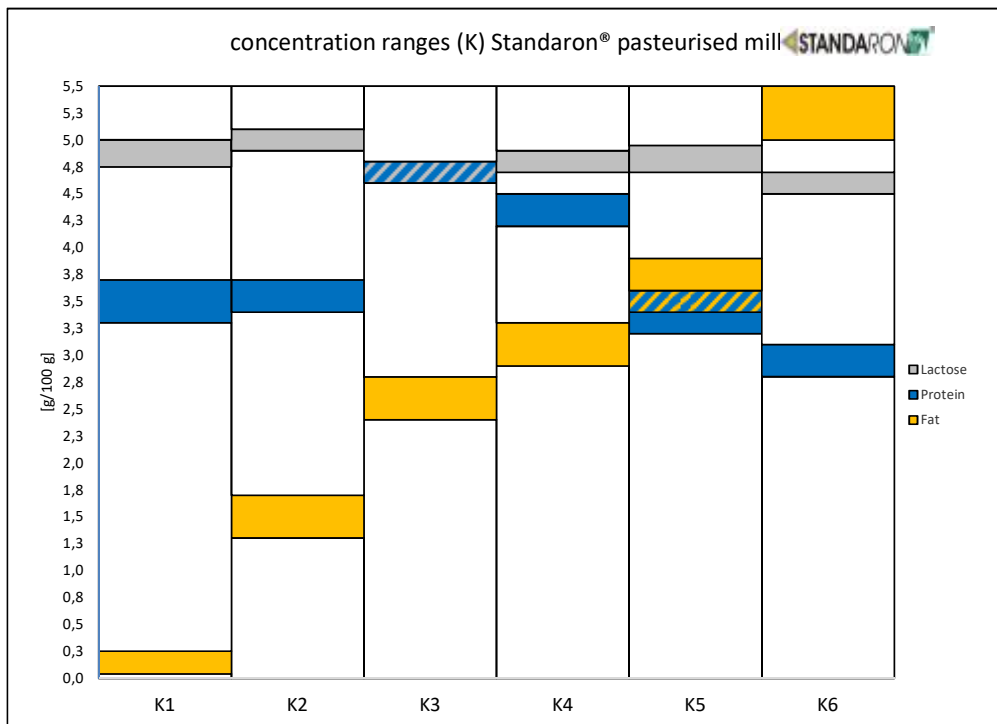
* unmodified raw milk, higher variances possible



STANDARON® - overview pasteurized milk

Please use the order from on page 65.

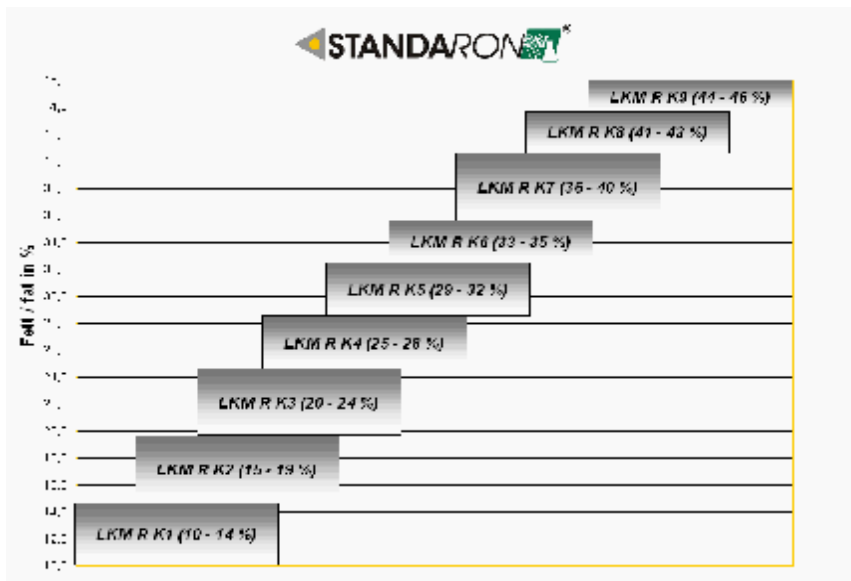
| LKM-type | Art. No. | fat | protein | lactose mono-hydrate | dry matter | freezing point | packaging unit | prices |
|------------|----------|----------------------|-----------------|----------------------|--|-------------------|----------------|--------|
| | | <i>Röse-Gottlieb</i> | <i>Kjeldahl</i> | <i>enzym.</i> | 102 °C | <i>cryos-copy</i> | | |
| | | g/100g | g/100g | g/100g | g/100g | °C | | |
| LKM PAM K1 | 1141001 | 0,04 - 0,25 % | 3,3 - 3,7 % | 4,75 - 5,0 % | available reference material and the corresponding reference values are available on request | 50 ml | 18 € | |
| LKM PAM K2 | 1141002 | 1,3 - 1,7 % | 3,4 - 3,7 % | 4,9 - 5,1 % | | | | |
| LKM PAM K3 | 1141003 | 2,4 - 2,8 % | 4,6 - 4,8 % | 4,6 - 4,8 % | | | | |
| LKM PAM K4 | 1141004 | 2,9 - 3,3 % | 4,2 - 4,5 % | 4,7 - 4,9 % | | | | |
| LKM PAM K5 | 1141005 | 3,4 - 3,9 % | 3,2 - 3,6 % | 4,7 - 4,95 % | | | | |
| LKM PAM K6 | 1141006 | 5,0 - 5,5 % | 2,8 - 3,1 % | 4,5 - 4,7 % | | | | |



STANDARON® - overview raw cream

Please use the order form on page 65.

| LKM-type | Art. No. | fat | protein | dry matter | packaging unit | prices |
|----------|----------|----------------------|--|------------|----------------|--------|
| | | <i>Röse-Gottlieb</i> | <i>Kjeldahl</i> | 102 °C | | |
| | | g/100g | g/100g | g/100g | | |
| LKM R K1 | 1141011 | 10 - 14 % | available reference material and the corresponding reference values are available on request | 50 ml | 20 € | |
| LKM R K2 | 1141012 | 15 - 19 % | | | | |
| LKM R K3 | 1141013 | 20 - 24 % | | | | |
| LKM R K4 | 1141014 | 25 - 28 % | | | | |
| LKM R K5 | 1141015 | 29 - 32 % | | | | |
| LKM R K6 | 1141016 | 33 - 35 % | | | | |
| LKM R K7 | 1141017 | 36 - 40 % | | | | |
| LKM R K8 | 1141018 | 41 - 43 % | | | 24 € | |
| LKM R K9 | 1141019 | 44 - 46 % | | | 25 € | |



Please use the order form on page 65.

| LKM-type | Art. No. | fat | protein | lactose mono-hydrate | dry matter | ash | packaging unit | prices |
|------------------|----------|--|-----------------|----------------------|---------------|-------------------|----------------|--------|
| | | <i>Röse-Gottlieb</i> | <i>Kjeldahl</i> | <i>enzym.</i> | <i>102 °C</i> | <i>cryos-copy</i> | | |
| | | g/100g | g/100g | g/100g | g/100g | °C | | |
| sweet whey | 1141031 | available reference material and the corresponding reference values are available on request | | | | | 50 ml | 22 € |
| sour whey | 1141032 | | | | | | 50 ml | |
| whey concentrate | 1141033 | | | | | | 50 ml | |

| | |
|---|------------------------|
| Your contact persons at DRRR GmbH, Kempten: Team Reference Materials Dr. Ulrich Leist | +49 (0)8 31/960 878-0 |
| Your contact persons at LUFA NORD-WEST, Oldenburg Sarah Pietsch | +49 (0)4 41/97 352-152 |

Please use the order from on page 65.

milk and cream

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|-------------------------|--|--|----------------|------------|
| 1101001 | UHT milk | fat, dry matter, protein, lactose, freezing point, density, lactulose, water activity | UHT skimmed milk 1,5 % fat 3,5 % fat | 2x50 ml | 32 € |
| 1101002 | UHT milk (lactose free) | lactose (< 0.1 %) | 1,5 % fat 3,5 % fat | 1 l | 32 € |
| 1101003 | raw milk | fat, dry matter, protein, lactose, freezing point, urea, pH value, casein | - | 50 ml | 20 € |
| 1101004 | goat's milk | fat, protein, freezing point | - | on request | 32 € |
| 1101005 | raw cream | fat, protein, dry matter | - | 50 ml | 22 € |
| 1101007 | evapored milk | fat, dry matter, protein, ash, phosphorus | 4 % fat 8 % fat | 170 g | 32 € |
| 1101027 | butter milk | phosphatides, fat, dry matter, ash, pH value, acidity acc. Soxhlet-Henkel, density in heat serum | - | 500 ml | 32 € |
| 1121064 | dairy drinks | fat, dry matter, protein, sucrose, glucose, lactose, fructose, total sugar (sum of glucose, fructose, sucrose) | - | 50 ml | 32 € |
| 1101025 | residues in milk | chloramphenicol, aldrin, dieldrin, PCB 101, trichlormethane, aflatoxin M1, streptomycine, tetracycline | - | 230 ml | 67 € |
| 1101029 | Inhibitors in milk | quant. determination of one antibiotic each from the substance groups sulfonamides, penicillins, cephalosporins, quinolones. | - | on request | on request |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

cheese

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|----------------------|--|---|----------------|--------|
| 1111001 | processed cheese | fat, dry matter, protein, lactose, sodium chloride, pH value, nitrate, citric acid, phosphorus, ash, total lactic acid | 11 - 20 % fat 21 - 30 % fat | 100 g | 44 € |
| 1111012 | processed cheese | natamycin, aflatoxin M1 | - | 50 g | 116 € |
| 1111002 | fresh cheese | fat, dry matter, protein, total lactic acid | 6 - 10 % fat 21 - 25 % fat | 175 g | 34 € |
| 1111003 | curd | fat, dry matter, protein, total lactic acid | - | 250 g | 30 € |
| 1111004 | semi hard cheese | fat, dry matter, protein, sodium chloride | 20 - 25 % fat 26 - 29 % fat 30 - 35 % fat | 100 g | 35 € |
| 1111005 | hard cheese | fat, dry matter, protein, sodium chloride | 20 - 25 % fat 26 - 29 % fat 30 - 35 % fat | 100 g | 34 € |
| 1111006 | soft cheese | fat, dry matter, protein, sodium chloride, pH value | 20 - 25 % fat | 125 g | 30 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

other milk products

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|----------------------------|---|---|----------------|--------|
| 1111007 | butter type 1 | soldis non-fat, water content, pH value, cholesterol, fat, sodium chloride | sweet cream butter mild soured butter salted butter | 250 g | 37 € |
| 1111008 | butter type 2 | fatty acid composition C4-C20 | - | 250 g | 68 € |
| 1111009 | yoghurt | fat, dry matter, protein, total lactic acid, pH-value | - | 500 g | 34 € |
| 1101008 | whey | dry matter, protein, NPN, lactose, ash, phosphorus, potassium, calcium | sweet whey sour whey | 50 ml | 28 € |
| 1111010 | pudding/dessert | fat, dry matter, protein, lactose, pH-value | - | 250 g | 37 € |
| 1111011 | AMF - anhydrous milk fat | alkalinity, free fatty acids, water content, peroxide value, carotene, butyric acid methyl ester | - | 200 ml | 32 € |
| 1121001 | ice-cream | quantitative parameters: fat, milkfat, colouring agent E 124 (cochenille red A), vanillin, vanillic acid, p-hydroxybenzaldehyde, p-hydroxybenzoic acid, lactose qualitative parameters: colouring agent E 100 (curcumin), foreign fat, colouring agent β -carotene (E 160) | - | 100 g | 37 € |
| 1101006 | sour cream - crème fraiche | fat, dry matter, protein, pH value | - | 200 g | 32 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

milk powder

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|-------------------------------|---|--|------------------------|--------|
| 1121002 | milk powder type 1 | fat, dry matter, protein, lactose, ash, free fat, nitrate, titratable acidity | skimmed milk powder whole milk powder | app. 80 - 110 g | 40 € |
| 1121063 | milk powder type 2 | bulk density after 100 tappings | - | > 110 g | 40 € |
| 1121003 | skimmed milk powder | WPNI (whey-protein-nitrogen-index) | - | sample set 3 x 20 g | 40 € |
| 1121004 | milk powder (lactose reduced) | lactose, dry matter | - | 50 g | 40 € |
| 1121005 | milk powder nitrate - nitrite | nitrate, nitrite | - | 20 - 30 g | 40 € |
| 1121006 | milk powder vitamin | vitamin D or vitamin A & C | - | 20 - 30 g | 40 € |
| 1121007 | whey powder | fat, dry matter, protein, lactose, ash, pH value, titratable acidity | sweet whey powder sour whey powder | app. 80 - 110 g | 40 € |
| 1121008 | casein | fat, water content, protein, lactose, ash, pH value | - | app. 110 g | 40 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

fruit and vegetables products

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--------------------------|---|-----------------------------|----------------|------------|
| 1121009 | sugar-mix | glucose, fructose, sucrose, maltose, starch, aspartame, acesulfame K, sorbate, saccharin, total sugar (sum of glucose, fructose, sucrose) | several materials available | 100 g | 67 € |
| 1121010 | fruit preparation | brix value, pH value, total acid, citric acid, L-malic acid, ash, phosphorous, potassium | several materials available | 100 g | 67 € |
| 1121011 | sauerkraut | ascorbic acid, titratable acid, total acid, volatile acid, lactic acid, pH value, sodium chloride, non volatile acid | - | on request | 67 € |
| 1121012 | dried fruits | fat, water content, SO ₂ (sulphur dioxide) | - | 100 g | 67 € |
| 1121013 | dry potato product | water, fat, saturated fatty acids, raw protein, ash, total carbohydrates, starch, sucrose, fibre, sodium | - | 250 g | 67 € |
| 1121014 | tomat ketchup type 1 | pH-value, titratable acid, citric acid, sodium chloride, glucose, fructose, soluble dry matter, dry matter, sorbic acid, benzoic acid, sucrose (anhydrous), total sugar (sum of glucose, fructose, sucrose) | - | 200 g | 67 € |
| 1121099 | tomat ketchup type 2 | lycopene | - | 200 g | 67 € |
| 1121065 | hot sauce | Capsaicin | - | 50 g | 67 € |
| 1121091 | legumes | fat, water content, fibre, nitrogen content, crude protein content | - | on request | 67 € |
| 1121135 | Solvent residues in food | At least 3 different solvents quantitatively, e.g. benzene, toluene, xylene | - | on request | on request |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

alcoholic beverages

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|----------------------------------|---|---|----------------|--------|
| 1121024 | fruit spirit | relative density 20 °C / 20 °C, alcohol, ethyl carbamate, ferment accompanying substance | - | on request | 67 € |
| 1121026 | beer | apparent extract, extract, alcohol content in weight per cent and volume per cent, wort, density, bitterness units, pH value | - | 200 ml | 67 € |
| 1121098 | carbonated soft drinks | carbonation (CO ₂ content), actual alcohol strength, benzoic acid, sorbic acid, phosphoric acid as PO ₄ | different varieties available (non-alcoholic and alcoholic) | 300 - 375 ml | 67 € |
| 1121128 | carbonated soft drinks - spirits | quinine (CAS No 130-95-0) | different varieties available (non-alcoholic and alcoholic) | on request | 67 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

non-alcoholic beverages

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--------------------------------|--|---|----------------|--------|
| 1121015 | coffee | water, ash, pH-value, acidity, water soluble extract, caffeine, acrylamide | - | 150 g | 67 € |
| 1121129 | green coffee | loss in mass at 105 °C acc. to ISO 6673 | - | on request | 55 € |
| 1121016 | tea | dry matter, ash, water soluble ash, water soluble extract, caffeine, theobromine, theophylline, acid-insoluble ash | - | 120 g | 67 € |
| 1121083 | pyrrolizidine alkaloids in tea | quant. determination of three distinct pyrrolizidine alkaloids, e.g. lycopsamine, echimidine, retrorsine, senecionine, seneciphylline, senkirkine, heliotrine, monocrotaline or lasiocarpine | - | 2 x 1 g | 135 € |
| 1121017 | energiedrink | pH-value, taurine, caffeine, inosit, sucrose (anhydrous), glucose (anhydrous), fructose (anhydrous), total sugar (sum of glucose, fructose, sucrose), total acid (pH 8.1) calculated as tartaric acid, relative density [20/20] | - | 500 ml | 67 € |
| 1121018 | vitamin solution | thiamine (vitamin B1), riboflavine (vitamin B2), pyridoxine (vitamin B6), cobalamin (vitamin B12), L-ascorbic acid (vitamin C), α -tocopherol (vitamin E), folic acid (vitamin B11), pantothenic acid (vitamin B5), niacin (vitamin B3) | - | 4 g | 67 € |
| 1121019 | orange juice type 1 | total carotenoid, fraction I: carotenoid, fraction II: cryptoxanthinester, fraction III: xanthophyllester | - | 100 g | 67 € |
| 1121021 | carrot juice | relative density 20 °C / 20 °C, pH-value, titratable acid, sucrose, fructose, glucose, nitrate, β -carotene, α -carotene, total carotene, total sugar (sum of glucose, fructose, sucrose) | - | 300 ml | 67 € |
| 1121058 | fruit juice concentrate type 1 | brix value, ph value, titratable acidity, citric acid, D-isocitric-acid, L-malic acid, ascorbic acid, lactic acid, citric acid - isocitric acid ration, hesperidin | - | 100 g | 67 € |
| 1121059 | fruit juice concentrate type 2 | brix value, titratable acidity, glucose, fructose, sucrose, total sugar (sum of glucose, fructose, sucrose), sugar free extract, glucose-fructose ration, % sucrose of sugar | - | 100 g | 67 € |
| 1121062 | fruit juice concentrate type 3 | brix value, ph value, titratable acidity, ash, potassium, calcium, magnesium, total phosphorus, sodium, nitrate, copper, iron | - | 100 g | 67 € |
| 1121053 | grape juice | sulphur dioxide (SO ₂) | several concentrations of SO ₂ | 80 ml | 67 € |
| 1121054 | currant juice | lead, cadmium, arsenic, copper, zinc, iron, tin, mercury, aluminium | - | 100 ml | 67 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

non-alcoholic beverages

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|---|---|------------------------|----------------|--------|
| 1121055 | tomato juice | ergosterol | - | 50 ml | 67 € |
| 1121070 | orange juice | Carbendazim | - | on request | 67 € |
| 1121092 | plant drink (milk alternative) | fat, dry matter, protein, freezing point, density | - | on request | 67 € |
| 1121114 | trace elements in mineral water | uranium, vanadium, boron | - | on request | 67 € |
| 1121115 | sugar substitutes in food | isomalt, lactite, maltitol, mannitol, sorbitol, xylitol | - | on request | 67 € |
| 1121125 | Quinolizidine alkaloids in Lupins Drink | At least 3 different quinolizidine alkaloids quantitatively, e.g. lupanine, lupinin, spartein | - | on request | 100 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

egg products

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|---------------------------|---|------------------------|----------------|--------|
| 1121028 | egg products | total lipids, dry matter, protein, pH-value, cholesterol, α -linolenic acid, eicosapentaenoic acid, docosahexaenoic acid, salt content (sodium chloride) | - | 100 g | 67 € |
| 1121029 | egg pasta | water, fat, raw protein, ash, chloride, cholesterol, total sterine, egg content, fibre | - | 300 g | 67 € |
| 1121030 | mayonnaise | total acid, dry matter, fat, phosphatid-P205, cholesterol, egg yolk content, sorbic acid, benzoic acid, salt content (sodium chloride) | - | 150 g | 67 € |
| 1121027 | residues in liquid egg | fat, nicotine, dioxins, dioxin-like PCBs | - | 100 g | 100 € |
| 1121066 | antibiotics in liquid egg | quant. determination of one antibiotic each from the substance groups nitrofurans, sulfonamides, tetracycline, chloramphenicol | - | 100 g | 100 € |
| 1121088 | egg powder | fat, alpha-amylase, ash, pH value, water content, salt content, lactic acid, hydroxybutyric acid | - | 100 g | 67 € |
| 1121126 | Hormons in liquid egg | At least one androgen, at least one estrogen and at least one progestin quantitatively | - | on request | 100 € |

declaration nutritional values

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--|---|------------------------|----------------|--------|
| 1121044 | declaration nutritional values with 2 different food stuff | energy, protein, carbohydrate, sugar, fat, saturated fatty acids, fibre, sodium | - | 125 g | 67 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

meat products

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--|--|------------------------|----------------|------------|
| 1121031 | boiled sausage type 1 | fat, water content, ash, protein, collagen, sodium chloride, nitrate, diphosphorus pentoxide (P2O5), calcium, nitrite, aw-value, starch | - | 200 g | 67 € |
| 1121032 | boiled sausage type 2 | non-protein nitrogen (NPN), collagen degradation products, L-glutamic acid, citric acid, sodium acetate, L-lactat, sodium nitrate, sodium nitrite, ascorbic acid, pH value | - | 250 g | 67 € |
| 1121033 | raw sausage type 1 | aw-value, pH-value, D- & L-lactic acid, sodium, nitrate, nitrite, sorbic acid, monounsaturated fatty acids, saturated fatty acids, fat | - | 200 g | 67 € |
| 1121060 | raw sausage type 2 | fat, water content, protein, ash, sodium chloride, hydroxyproline, diphosphorus pentoxide (P2O5), sodium, starch, solubilised milk protein | - | 200 g | 67 € |
| 1121069 | vegetarian sausage substitute | fat, protein, dry matter, sodium chloride, ash, fibre | - | 150 g | 67 € |
| 1121093 | Detection of soy protein in meat and meat products | soy protein quantitative | - | on request | 112 € |
| 1121136 | Allergens in meat products | Various allergens quantitative: egg, peanut, nuts, celery, mustard | - | on request | on request |

fish and seafood

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|----------------------|--|------------------------|----------------|--------|
| 1121034 | fish paste type 1 | water, fat, raw protein, ash, sodium chloride, arsenic, iodine | - | 100 g | 67 € |
| 1121035 | fish paste type 2 | fat, sorbic acid, benzoic acid, saccharin, cyclamate, citric acid | - | 100 g | 67 € |
| 1121127 | Nitrosamines in fish | At least 3 nitrosamines quantitatively, e.g. N-nitrosodimethylamine (NDMA), N-nitrososarcosine (NSAR), N-nitrosohydroxyproline (NHPRO) | - | on request | 100 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

cereal products

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--------------------------|---|--|----------------|------------|
| 1121037 | pastries (baking mix) | fat, dry matter, protein, ash, milk fat, starch, sucrose | - | 200 g | 67 € |
| 1121061 | pastries (bread) | propionic acid | - | 50 g | 67 € |
| 1121038 | flour | moisture content, raw protein, ash, starch, wet gluten content, falling number | - | 300 g | 67 € |
| 1121039 | gluten | Gluten (prolamin contamination) in flour, e.g. oat flour and corn flour | - | on request | 67 € |
| 1121040 | butter biscuit | ash, dry matter, raw protein, fat, semimicro butyric acid number, free butyric acid, butyric acid methyl ester, milk fat, starch, cholesterol, sucrose, fibre | - | 250 g | 67 € |
| 1101012 | corn aflatoxin | aflatoxin | 1.00 ppb - 30.00 ppb 15.00 ppb - 100.00 ppb | 50 g | 100 € |
| 1101013 | corn DON | DON | 0.10 ppm - 1.25 ppm 1.00 ppm - 6.00 ppm | 50 g | 100 € |
| 1101014 | corn fumonisin | fumonisin | 0.10 ppm - 1.25 ppm 1.00 ppm - 6.00 ppm | 50 g | 100 € |
| 1101015 | corn ochratoxin | ochratoxin | 1.00 ppb - 30.00 ppb 15.00 ppb - 100.00 ppb | 50 g | 100 € |
| 1101016 | corn zearalenone | zearalenone | 50.00 ppb - 1500.00 ppb | 50 g | 100 € |
| 1101017 | wheat DON | DON | 0.10 ppm - 1.25 ppm 1.00 ppm - 6.00 ppm | 50 g | 100 € |
| 1101018 | wheat ochratoxin | ochratoxin | 1.00 ppb - 30.00 ppb 15.00 ppb - 100.00 ppb | 50 g | 100 € |
| 1101019 | barley DON | DON | 0.05 ppm - 3.00 ppm | 50 g | 100 € |
| 1101020 | brown rice aflatoxin | aflatoxin | 1.00 ppb - 20.00 ppb | 50 g | 100 € |
| 1101021 | biscuits (soy) | soy in biscuits | 3.00 ppm - 30.00 ppm | 6 g | 100 € |
| 1121071 | cereal / cereal products | glyphosat | - | on request | on request |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

cereal products

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|---|--|------------------------|----------------|------------|
| 1121072 | rice | arsenic | - | on request | on request |
| 1121116 | determination of the sedimentation index - Zeleny test (ISO 5529) | sedimentation index (ml) - (acc. To Zeleny) | - | on request | on request |
| 1121117 | determination of alveograph properties of dough - ISO 27971 | determination of alveograph properties of dough | - | on request | on request |
| 1121118 | determination of water absorption and rheological properties using a farinograph - ISO 5530-1 | determination of water absorption and rheological properties using a farinograph | - | on request | on request |
| 1121119 | determination of rheological properties using an extensograph - ISO 5530-2 | determination of rheological properties using an extensograph | - | on request | on request |
| 1121120 | determination of water absorption and rheological properties using a valorigraph - ISO 5530-3 | determination of water absorption and rheological properties using a valorigraph | - | on request | on request |
| 1121130 | Tropane alkaloids in flour | At least 3 different tropane alkaloids quantitatively, e.g. atropine, scopolamine, hyoscyamine. | - | on request | on request |
| 1121131 | Ergot alkaloids in flour | At least 3 different ergot alkaloids quantitatively, e.g., ergotamine, ergometrine, ergosine, ergocristine, ergocryptine, and ergocornine. | - | on request | on request |
| 1121138 | amylose in rice | amylose quantitatively | - | on request | on request |
| 1121139 | Antioxidants in food | E 320 butylated hydroxyanisole (BHA), E 321 butylated hydroxytoluene (BHT), E 324 ethoxyquin | - | on request | on request |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

infant formula

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|-----------------------------|--|------------------------|----------------|------------|
| 1101009 | jar food | fat, protein, ash, moisture, vitamin C | - | on request | 100 € |
| 1121041 | baby porridge powder type 1 | water, fat, raw protein, ash, sucrose, glucose, fructose | - | 100 g | 67 € |
| 1121042 | baby porridge powder type 2 | sodium, potassium, magnesium, calcium, iron, zinc, iodine | - | 100 g | 67 € |
| 1121043 | baby porridge powder type 3 | vitamin B1, vitamin B2, vitamin B6, vitamin B12, vitamin A, vitamin C, vitamin E, folic acid, pantothenic acid, biotin | - | 200 g | 67 € |
| 1101010 | milk powder IMF type 1 | fat, protein, ash, moisture, vitamin A (retinol), vitamin C | - | 100 g | 125 € |
| 1101011 | milk powder IMF type 2 | sodium, potassium, calcium, magnesium, phosphorus, iron, copper, zinc, manganese | - | on request | 125 € |
| 1101026 | milk powder IMF allergens | gliadin, soy, casein, lactose, β -lactoglobuline | - | on request | 100 € |
| 1121140 | Bisphenol A in infant food | bisphenol A | - | on request | on request |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

other food matrices

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--|---|--|----------------|--------|
| 1121045 | protein powder | protein, riboflavine (vitamin B2), pyridoxine (vitamin B6), ascorbic acid (vitamin C) | - | 100 g | 67 € |
| 1121046 | delicatessen salad | benzoic acid, sorbic acid, PHB-ester | - | 50 g | 67 € |
| 1121048 | chocolate | fat, water content, protein, lactose, milk fat, theobromine, sucrose, total alkaloids, caffeine | chocolate bitter-sweet whole milk chocolate | 100 g | 67 € |
| 1121049 | edible fat type 1 | distribution of fatty | - | 200 ml | 67 € |
| 1121068 | edible fat type 2 | iodine, acid value, peroxide, saponification, tocopherole, free fatty acids, p-anisidine value, refraction index, water content, total sterols | - | 200 ml | 67 € |
| 1121050 | mustard | dry matter, total acid, sodium chloride, allyl mustard oil, SO2 (sulphur dioxide), fat | - | 300 g | 67 € |
| 1121089 | PAHs in animal and vegetable fats and oils | naphthalene, anthracene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(j)fluoranthene, benzo(e)pyrene, benzo(a)pyrene, dibenz(ah)anthracene (at least 5 of the parameters quantitative) | A PAH concentration in the samples of approximately 0,1-5 µg/kg per PAH is to be expected. | 50 g | 135 € |
| 1121090 | Determination of natural thickeners | agar, carrageenan, guar, gum arabic, locust bean gum, sodium alginate and pectin | | on request | 67 € |
| 1121094 | aflatoxins in chocolate | aflatoxin B1, B2, G1, G2, total aflatoxin content | | on request | 135 € |
| 1121095 | pesticides in chocolate | quant. determination of several pesticides from the fields of herbicides, insecticides and fungicides | | on request | 135 € |
| 1121100 | sugar free candies | sucrose, glucose, fructose, water content, total sugar (sum of glucose, fructose, sucrose) | total sugar content < 0.5%, reference method for sugar: enzymatics | on request | 67 € |
| 1121104 | metals in cocoa and chocolate | cadmium, lead, iron, aluminum, copper, zinc, mercury, nickel and arsenic (min. 5 of the metals contained) | - | on request | 100 € |
| 1121105 | acrylamide in cocoa and chocolate | acrylamide | - | on request | 100 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

other food matrices

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|---|--|------------------------|----------------|------------|
| 1121106 | cannabis oil | CAS 13956-29-1 Cannabidiol (CBD) | - | on request | 100 € |
| 1121107 | vegetarian bread spread | fat, protein, dry matter, salt, ashes, pH-value | - | on request | 67 € |
| 1121108 | metals in hummus | cadmium, nickel | - | on request | 67 € |
| 1121109 | pyrrolizidine alkaloids in spices | quan. determination of three distinct pyrrolizidine alkaloids, e.g. lycopsamine, echimidine, retrorsine, senecionine, seneciphylline, senkirkine, heliotrine, monocrotaline or lasiocarpine | - | on request | 100 € |
| 1121110 | nicotine replacement products | Nicotine in nicotine pouches | - | on request | 100 € |
| 1121123 | Metals in tobacco | cadmium, lead, iron, aluminum, copper, zinc, mercury, nickel and arsenic (min. 5 of the metals contained) | - | on request | 100 € |
| 1121124 | MCPD and glycidol in edible oil | 3-Monochlorpropandiol (3-MCPD), 2-Monochlorpropandiol (2-MCPD), Glycidol | - | on request | 100 € |
| 1121132 | Cannabinoids in hemp seeds | CAS 13956-29-1 Cannabidiol (CBD), total Delta-9-THC | - | on request | on request |
| 1121134 | nutritional components in a complete meal | Moisture, Ash, Fat, Nitrogen, Sodium, Chloride | - | on request | on request |
| 1121133 | phthalates in edible oil | CAS 28553-12-0 (DINP), CAS 117-81-7 (DEHP), CAS 117-84-0 (DNOP), CAS 26761-40-0 (DIDP), CAS 85-68-7 (BBP), CAS 84-74-2 (DBP), CAS 84-69-5 (DIBP), CAS 131-18-0 (DPP), CAS 71888-89-6 (DIHP), CAS 117-82-8 (DMEP) | - | on request | on request |

mineral oil in food stuff

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--|--|------------------------|----------------|--------|
| 1151016 | mineral oil in low-fat and starch-rich foodstuff | MOSH C10-C16, MOSH C16-C20, MOSH C20-C25, MOSH C25-C35, MOSH C35-C40, MOSH C40-C50, MOAH C10-C16, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50 | - | 50 g | 100 € |
| 1151053 | mineral oil in cocoa butter and chocolate | MOSH C10-C16, MOSH C16-C20, MOSH C20-C25, MOSH C25-C35, MOSH C35-C40, MOSH C40-C50, MOAH C10-C16, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50 | - | 50 g | 100 € |
| 1151104 | mineral oil in cheese and milk powder | MOSH C10-C16, MOSH C16-C20, MOSH C20-C25, MOSH C25-C35, MOSH C35-C40, MOSH C40-C50, MOAH C10-C16, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50 | - | on request | 100 € |
| 1151017 | mineral oil in edible fat and edible oil | MOSH C10-C16, MOSH C16-C20, MOSH C20-C25, MOSH C25-C35, MOSH C35-C40, MOSH C40-C50, MOAH C10-C16, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50 | - | 15 g | 100 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

honey and beeswax

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|---------------------------------------|---|------------------------|----------------|------------|
| 1121047 | honey type 1 | diastase activity, proline, HMF, conductivity, pH-value, water, glycerin, ethanol | - | 250 g | 67 € |
| 1121067 | honey type 2 | glucose, fructose, maltose, saccharose, turanose, saccharase number, free acids, ash | - | 250 g | 67 € |
| 1121074 | antibiotics in honey | quan. determination of one antibiotic of each of the substance groups sulfonamides and tetracyclines as well as of chloramphenicol and streptomycin | - | 125 ml | 100 € |
| 1121075 | pesticide residues in honey | The following pesticides can be queried: DEET, cymiazole, malathion, chlorpyrifos, chlorfenvinphos, piperonyl butoxide, bromopropylate, bifenthrin, tetradifon, lambda-cyhalothrin, acrinathrin, cis-permethrin, trans-permethrin, coumaphos, boscalid, cypermethrin, total tau-fluvalinate, deltamethrin, flumethrin, M-metalaxyl, carbaryl, propargite, acetamiprid, thiamethoxam, amitraz, carbaryl, imidaclopride, metalaxyl, carbendazim, thiaclopride, 2,4-DMP-formamide, 2,4-DMP-me-formamidine, glyphosate. | - | on request | on request |
| 1121076 | pyrrolizidine alkaloids in honey | quan. determination of three distinct pyrrolizidine alkaloids, e.g. lycopsamine, echimidine, retrorsine, senecionine, seneciphylline, senkirkine, heliotrine, monocrotaline or lasiocarpine | - | 100 g | 100 € |
| 1121077 | veterinary drug residues in honey | quan. determination of three distinct veterinary drugs or their components, e.g. thymol, phenol, naphthalene, cymiazol, coumaphos or amitraz | - | on request | on request |
| 1121078 | GMOs in honey | qualitative detection of different screening elements, e.g. P-35S, T-NOS and P-FMV | - | 100 g | 100 € |
| 1121079 | relative frequency of pollen in honey | relative frequency of pollen | - | on request | on request |
| 1121080 | falsification honey | Identification of rice syrup and sugar beet syrup in honey, qualitative proficiency test | - | on request | on request |
| 1121081 | residues in beeswax | quan. determination of three distinct substances out of the fields varroa veterinary drugs and plant protection agents | - | on request | on request |
| 1121082 | falsification beeswax | paraffin wax content, stearin content | - | app. 100 g | 100 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

animal feed

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|----------------------------------|---|------------------------|----------------|------------|
| 1121111 | metals in animal feed | cadmium, lead, iron, aluminum, copper, zinc, mercury, nickel and arsenic (min. 5 of the metals contained) | - | on request | 77 € |
| 1121112 | ingredients animal feed | moisture content, crude protein content, crude oil, crude ash, crude fiber, sugar, lactose, starch | - | on request | 77 € |
| 1121113 | animal components in animal feed | qualitative identification of animal components | - | on request | 67 € |
| 1121052 | animal feed mycotoxins | OTA, DON, aflatoxin | - | on request | 100 € |
| 1121097 | Fluoride content in animal feed | fluoride content | - | on request | 67 € |
| 1121137 | phytase in feed | phytase quantitatively | - | on request | on request |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

drinking water

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|---|-----------------------|------------------------|----------------|--------|
| 1121121 | pharmaceutical residues in drinking water | Diclofenac, Ibuprofen | - | on request | 67 € |
| 1121122 | Microplastic in water | particle number | - | on request | 100 € |

** in individual cases it can happen that there is no reference value available for a listed parameter*

Please use the order form on page 65.

determination of animal species

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|---|--|--|----------------|--------|
| 1121056 | beef, pork, horse | qualitative detection of the animal species beef, pork and horse (participation with protein and DNA based methods possible) and quantitative detection of the relative amount of animal species (only DNA-based methods possible) | - | 50 g | 112 € |
| 1121057 | porcine and beef DNA in gelatine | Qualitative detection of low amounts of porcine (<i>sus scrofa</i>) and beef (<i>bos taurus</i>) DNA in highly processed food matrix (gelatin) in this proficiency testing also the DNA of sheep, goat and fish can be requested | 3 different samples (1 x negative, 2 x positive) | 3 x 1 g | 112 € |
| 1121057 | porcine and beef DNA in gelatine | Qualitative detection of low amounts of porcine (<i>sus scrofa</i>) and beef (<i>bos taurus</i>) DNA in highly processed food matrix (gelatin) in this proficiency testing also the DNA of sheep, goat and fish can be requested | 1 material (positive or negative) | 1 g | 100 € |
| 1121096 | porcine DNA in Candy | Qualitative detection of low amounts of porcine (<i>sus scrofa</i>) DNA in candy (gummy candy) | 3 different samples | 2 g | 112 € |
| 1121103 | detection of the animal species in milk | animal species qualitative | The animal species can be detected in 3 different milks by isoelectric focusing, ELISA or PCR. | on request | 100 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

GMO

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|----------------------|--|------------------------|----------------|--------|
| 1121073 | soy (GMO) | qualitative detection of the screening elements P-35S, T-NOS and P-FMV as well as the quantitative detection of the relative amount of transgene soy (construct or event specific methods possible) | - | 10 g | 135 € |
| 1121078 | GMOs in honey | qualitative detection of different screening elements, e.g. P-35S, T-NOS and P-FMV | - | 100 g | 100 € |
| 1121084 | corn (GMO) | qualitative detection of the screening elements P-35S, T-NOS and pat as well as the quantitative detection of the relative amount of transgene corn (construct or event specific methods possible) | - | on request | 135 € |
| 1121085 | rice (GMO) | qualitative detection of the screening elements P-35S, T-NOS and bar as well as the quantitative detection of the relative amount of transgene rice (construct or event specific methods possible) | - | on request | 135 € |
| 1121086 | canola (GMO) | qualitative detection of the screening elements T-NOS, CTP2-CP4EPSPS and P-FMV as well as the quantitative detection of the relative amount of transgene canola (construct or event specific methods possible) | - | on request | 135 € |
| 1121087 | cotton (GMO) | qualitative detection of the screening elements P-35S, T-NOS and pat as well as the quantitative detection of the relative amount of transgene cotton (construct or event specific methods possible) | - | on request | 135 € |
| 1121101 | potato (GMO) | qualitative detection of different screening elements, e.g. P-35S, T-NOS and P-FMV as well as the quantitative detection of the relative amount of transgene potato (construct or event specific methods possible) | - | on request | 135 € |
| 1121102 | sugar beet (GMO) | qualitative detection of different screening elements, e.g. P-35S, T-NOS and P-FMV as well as the quantitative detection of the relative amount of transgene sugar beet (construct or event specific methods possible) | - | on request | 135 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

ranking test

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|---|--|---|---------------------------|--------|
| 3301001 | water with basic taste (ranking test) | 4 samples with different concentrations (sufficient for 5 assessors) | bitter, sweet, sour or salty | sample sets 4 x 500 ml | 135 € |
| 3301002 | beer (ranking test, Diacetyl) | 4 samples with different concentrations (sufficient for 5 assessors) | Diacetyl | sample sets 4 x 500 ml | 135 € |
| 3301003 | yoghurt with basic taste (ranking test) | 4 samples with different concentrations (sufficient for 5 assessors) | sweet sour salty | sample sets 4 x 500 ml | 135 € |
| 3301004 | yoghurt with flavours (ranking test) | 4 samples with different concentrations (sufficient for 5 assessors) | strawberry, cherry, vanilla, peach, lemon | sample sets 4 x 500 ml | 135 € |

triangle test

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--|--|---|------------------------------|--------|
| 3311001 | water with basic taste (triangle test) | 3 coded samples sets - triads (sufficient for 5 assessors) | bitter, sweet, sour or salty | 3 coded sample sets - triads | 214 € |
| 3311002 | fruit juice (triangle test, flavour taint) | 3 coded samples sets - triads (sufficient for 3 assessors) | flavour taint | 3 coded sample sets - triads | 214 € |
| 3311003 | beer (triangle test, Diacetyl) | 3 coded samples sets - triads (sufficient for 5 assessors) | Diacetyl | 3 coded sample sets - triads | 214 € |
| 3311004 | yoghurt with basic taste (triangle test) | 3 coded samples sets - triads (sufficient for 5 assessors) | sweet sour salty | 3 coded sample sets - triads | 214 € |
| 3311005 | yoghurt with flavours (triangle test) | 3 coded samples sets - triads (sufficient for 5 assessors) | strawberry, cherry, vanilla, peach, lemon | 3 coded sample sets - triads | 214 € |
| 3311007 | tuna (triangle test) | 3 coded samples sets - triads (sufficient for 5 assessors) | - | sample set 9 x 200g | 214 € |
| 3311008 | texture test (triangle test) | 3 coded samples sets - triads (sufficient for 5 assessors) | - | on request | 214 € |
| 3311009 | colour check (triangle test) | 3 coded samples sets - triads (sufficient for 5 assessors) | - | on request | 214 € |
| 3311011 | apple juice (triangle test, basic taste) | 3 coded samples sets - triads (sufficient for 5 assessors) | - | on request | 214 € |
| 3311012 | milk (triangle test, flavour taint) | 3 coded samples sets - triads (sufficient for 5 assessors) | - | on request | 214 € |
| 3311013 | coffee infusion (triangle test, flavour taint) | 3 coded samples sets - triads (sufficient for 5 assessors) | - | on request | 214 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order from on page 65.

threshold value

| Art. No. | material description | parameter * | additional information | packaging unit | prices |
|----------|--|--|--|---|--------|
| 3321001 | drinking water TON acc. to EN 1622 | sample set (raw material + instruction) for the threshold odour number determination | characteristic off-flavour in drinking water | sample set for a panel (with 3 assessors) | 161 € |
| 3321002 | drinking water TFN acc. to EN 1622 | sample set (raw material + instruction) for the threshold flavour number determination | characteristic off-flavour in drinking water | sample set for a panel (with 3 assessors) | 161 € |
| 3321007 | fruit juice (threshold value examination, flavour taint) | sample set (raw material + instruction) for the threshold value determination | off-flavour | sample set for one assessor | 97 € |

* in individual cases it can happen that there is no reference value available for a listed parameter

Please use the order form on page 65.

| | material description | description | additional information | packaging unit | price |
|--|--|--|--|---------------------------------------|-------|
| | ADR- security certified DRRR- freezing packaging system RM-ADR VP 1 | Our certified packagings fulfill the requirements of ADR especially of the dangerous goods directive GGVSE and GGVSee. These systems are also convenient for the shipping of pathogenic bacteria of risk group 2. | guaranteed temperature assurance: 24 hours | VP 1 app. 310 x 250 x 190 mm | 16 € |
| | ADR- security certified DRRR- freezing packaging system RM-ADR VP 2 | Our certified packagings fulfill the requirements of ADR especially of the dangerous goods directive GGVSE and GGVSee. These systems are also convenient for the shipping of pathogenic bacteria of risk group 2. | guaranteed temperature assurance: 48 hours | VP 2 app. 350 x 350 x 300 mm | 26 € |

| quantity | material type / material description / article no. | notes (e.g. time period for regular delivery) |
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Please notice that we process orders only at a minimum order value of 50 €.

Please send order form to:
 fax-no. +49 (0)8 31/960 878-99
 or
 e-mail: info@DRRR.de

- An offer with the total costs is needed
- A Purchase order from the purchasing department will follow

DRRR-customer number

company

company (additional line)

contact person

street

post-code /city

country (if not Germany)

fon

fax

e-mail

e-mail for invoices

VAT-ID-No. (if available)

With your signature you agree with our general terms and conditions.

_____ date

_____ signature

We have collected wide experience in building up and operating process orientated quality management systems. Our experience is based on an intensive quality management qualification (DQG –EOQ quality manager). Feedback of our costumers gives us a wide overview about the various requirements that companies have to pass at audit situations.

As a qualified and examined auditor (DGQ-EOQ auditor quality, TGA) we are capable to estimate a company from different perspectives if quality management system is fit for audit and following we can show potentials for improvement.

We offer assistance for the following questions:

- building up process orientated quality management
- building up of a secure testing agent system
- assessment of quality systems in preparation for audits
- advice in operating effective quality management systems

With our expertise in interpreting ISO 9001 over IFS to DIN 17025 we serve companies of food economy and laboratories.

On the basis of our international activities we also have experience in building up and implementation of quality management systems in developing countries. We place our services at your disposal for international questions.

IR-Seminar

The IR-seminar explains how to analyze different kind of food by IR spectroscopy. Furthermore specific peculiarities for the IR calibration of selected food will be discussed. The specific peculiarities of the calibration will be explained intensify. How to calibrate? When you have to update the calibration? What is the cause of measurement problems?

The seminar will be complemented by theoretical exercises on IR spectroscopy. In the practical exercise calibration data sets will be testes for suitability and critical data sets will be identified.

Sensory seminar

The importance of the sensory in the food stuff industry will be explained and clarified in practice. The current state of new tastes is presented. Furthermore the participant will be enabling to apply the sensory testing methods. The use of sensory methods will be explained and on the basis of various sensory materials implemented.

The sensory measurement uncertainty of each participant will be determined at a practical example.

User-Workshop

Typical questions in the chemical and microbiological analysis of food, especially dairy products are presented and possible solutions will be demonstrated.

A lot of space for the exchanging of knowledge and experience is provided at the User-Workshop. Therefore some experts are available as contact persons.

Furthermore efficient ways to increase the laboratory quality will be presented. The seminar is accompanied by the practical experience of users.

Statistics seminar for beginners

This seminar presents the Binomial-, Poisson- and Normal distribution and the application of them. Problem cases and the classis misinterpretation due to a false outlier treatment by the application of the Normal distribution are shown.

The seminar is complemented by practical exercises with the notebook.

Statistics seminar for advanced learners

This seminar presents the Shapiro-Wilk-Test, q_{i^2} -adaptation test, Median and MAD (Median absolute deviation) and their application. Furthermore the participants will be informed about the robust standard deviation after Q-method and the robust average after Hampel.

The seminar is complemented by practical exercises with the notebook.

Implementation of DIN EN ISO/IEC 17025 in food laboratories

The participants will learn all items to implement a successful internal audit. Furthermore typical errors of the implementation of the audit will be targeted and avoidance strategies are communicated. The reliable identification of the deviation in audits and their successful processing in the form of measures will be trained.

Inhouse-Training

We consider lectures, training and seminars as in important duty. Not primary concerning commercial possibilities but by reason that the knowledge transfer is the most important item in every department of our society.

- Seminar and training (one-day) of handling and implementation of proficiency testing
- Seminar and training (one-day) of operating control charts
- Seminar and training of sensory (customised product sensory)

You will benefit of the extensive experience of the DRRR, because the DRRR go through the audit situation in a perspective of 360 ° as an auditor, as an audited person and as a neutral expert.

For special requirements we also offer customised training programmes.

For questions about contents and conditions do no hesitate to contact us.

Terms of payment

Our prices are net prices (plus 19% value added tax). Customers from European countries can provide us with their EU-VAT-Identification number, then they will be exempt from German value added tax.

Terms of payment: 8 days net, without deduction

Fees for specially required customs documents such as import permits or similar will be invoiced according to time and effort.

Our bank details:

Raiffeisenbank in Allgäuer Land / bank code 733 692 64

Account 102350 / IBAN DE 94733692640000102350

BIC code: GENO DEF1DTA

Sales tax ID no. DE254613132

tax number 127/124/32207

Terms of delivery

Shipping costs for reference materials and proficiency tests will be invoiced according to time and effort. All samples and packaging materials are the property of the DRRR. Samples that are used for non-destructive testing and are therefore not subject to destruction in the course of the proficiency test can be reclaimed by the DRRR upon request. The DRRR shall bear the shipping costs for the return transport if the materials are reclaimed.

Proficiency tests or reference materials marked “frozen” are shipped with our ADR safety tested frozen packaging system. A packaging fee is charged for the polystyrene box including cooling accumulators and air bubble film as well as the protective outer packaging. Frozen materials are shipped by express service. With the delivery of reference materials, you will receive a quality certificate with the details of the respective reference values as well as associated uncertainties.

Terms of delivery (risk group 1, 2 and 3)

Proficiency tests or reference materials marked with “Risk Group 1” are not subject to any participation restrictions according to § 44 IfSG (Infektionsschutzgesetz).

For proficiency tests or reference materials marked with “risk group 2, or risk group 3***”, we need a permission from your laboratory according to § 44 IfSG (Infektionsschutzgesetz) or similar. Please enclose a copy of the permission with your registration or order.

Our general terms and conditions (Allgemeine Geschäftsbedingungen) are valid!

The German reference office for proficiency testing and reference materials GmbH (hereinafter referred to as DRRR) for freely agreed services, in particular testing, training and expert activities as well as reference materials.

§ 1 General terms and conditions

The client acknowledges the General Terms and Conditions and price lists valid at the time of placing the order. Deviating terms and conditions of individual clients cannot be accepted.

Collateral agreements, promises and other declarations by the employees of the DRRR are only binding if they are expressly confirmed in writing by the DRRR. This shall also apply to amendments to this clause.

If individual regulations within this contract or its components are ineffective, this does not affect the validity of the remaining regulations. The contracting parties shall have a duty, acting in accordance with the principles of good faith, to replace any invalid provision by one which is valid and which produces the same economic outcome as that intended by the invalid provision and providing that such replacement does not result in any change to the content of the contract; the same shall also apply analogously to any matter which requires regulation but for which no provision is made in these Terms and Conditions.

§ 2 Execution of the order

The orders accepted by the DRRR shall be carried out or expert opinions shall be prepared in accordance with the recognized rules of technology and – unless otherwise agreed in writing – in the manner customary at the DRRR. No responsibility shall be assumed for the correctness of the safety programs or safety regulations on which the tests are based, unless expressly agreed otherwise in writing.

The scope of the DRRR's work shall be specified in writing when the order is placed. If the proper execution of the order results in changes or extensions to the specified scope of the order, such changes or extensions shall be agreed in writing prior to execution. If the Customer can no longer be reasonably expected to adhere to the contract with regard to the changes or extensions, the Customer shall in this case be entitled to withdraw from the contract. However, according to § 649 BGB, the client must pay the agreed remuneration or, in the absence of an agreement, an appropriate remuneration.

The contractual services of the DRRR are deemed to have been rendered upon preparation of the respective final reports or expert reports.

A seminar registration can be cancelled free of charge for up to 6 weeks, after which the customer will be invoiced for the costs of the participants depending on the time and effort involved.

The following cancellation conditions apply to the cancellation of a proficiency testing:

| | |
|---|--|
| Cancelation notification period: | Permanent registration (D) |
| | single (one-time) registration (E) |
| up to 3 months before the proficiency testing | no costs (D) |
| | 50,00 € (E) |
| 3 months before the proficiency testing start | 50,00 € (D) |
| | half proficiency testing price (E) |
| sample shipment – deadline of the results | complete price of the proficiency testing and any further incurred costs (D & E) |

§ 3 Deadlines

The order deadlines specified by the DRRR shall not be binding unless their binding nature has been expressly agreed in written form.

§ 4 Warranty and liability

The integrity of the sample material to a defined condition is only guaranteed until the first border crossing in the case of foreign shipments.

Safety note: When sending materials of risk group 2, the DRRR must receive a letter from the recipient stating that the recipient is authorized to handle hazardous materials (e.g. pathogenic germs).

The DRRR's warranty only covers the services expressly commissioned to it pursuant to Section 2.

No warranty is thereby assumed for the correctness and functioning of the relevant overall system, measuring instruments or materials to which the examined or tested samples belong; in particular, the DRRR bears no responsibility for packaging, material selection and construction of the examined systems, measuring instruments or assemblies, unless these issues are expressly the subject of the order.

Even in the latter case, the warranty obligation and legal responsibility of the manufacturer are neither limited nor assumed.

The warranty obligation of the DRRR is limited to the rectification of an error or defect or, in the absence of a warranted characteristic, to the achievement of this characteristic within a reasonable period of time. If the rectification or creation of the characteristic fails, i.e. if it becomes impossible or unreasonable for the Customer or is refused or unduly delayed by the DRRR, the Customer shall be entitled to demand a reduction in the remuneration or rescission of the contract, at its discretion.

The DRRR shall not be liable for any work performed by the Customer in the event of incorrect proficiency tests or reference materials.

The DRRR only assumes liability for certain properties, in particular for the fact that the service is suitable for the purposes of the Customer, if a corresponding assurance of the properties in question has been given. Any liability for consequential damages from positive breach of contract due to warranted characteristics is excluded, unless the warranty was intended to protect against such consequential damages. Claims for damages of the client from §§ 463, 635 BGB due to the lack of assured characteristics remain unaffected.

If an error or defect that does not represent the absence of a warranted characteristic is due to a circumstance for which the DRRR is responsible, the DRRR shall only be liable for any damage incurred by the Customer as a result thereof per order up to a maximum amount that corresponds to the value of the order agreed in accordance with Section 2.

The materials may only be used for the corresponding scientific purpose by trained qualified personnel. The DRRR is in no case responsible and liable for used, unused or unusable samples.

The samples are intended for analytical purposes only. The DRRR assumes no liability if the samples are not used for the intended analytical purposes.

All materials are definitely not suitable for human consumption unless they are sensory materials. Oral ingestion of materials not intended for sensory purposes can be harmful to health.

In the case of sensory materials, it is the responsibility of the test persons themselves to check whether they can test the materials with regard to allergies. The ingredients of the sensory materials are declared.

All samples and packaging materials are the property of the DRRR. Samples that are used for non-destructive testing and are therefore not subject to destruction in the course of the interlaboratory comparison can be reclaimed by the DRRR upon request. The DRRR will bear the shipping costs for the return transport, if the materials are reclaimed.

The analytical properties of the material can only be guaranteed if the transport, storage and use conditions specified by the DRRR are observed.

For frozen samples, the DRRR only guarantees that the samples will be treated in accordance with the material properties stated in the data sheet. For frozen samples delivered to countries outside the EU, we can only guarantee the sample properties up to the first customs clearance point at the respective EU border.

§ 5 Exclusion of further liability and claims

The risk (transport and remuneration risk) shall pass to the Customer as soon as the goods have left the DRRR, regardless of whether the goods are transported by the Customer's own or third-party means of transport.

Claims for damages by the client are excluded. This does not apply to intent, gross negligence, breach of essential contractual obligations of the DRRR or the lack of properties guaranteed in writing.

All further claims of the client for direct and indirect damage – for whatever legal reason – in particular claims for damages due to positive breach of contract or from tort and for compensation for damage that did not occur on the object of the order itself are excluded. Irrespective of this, the client is obliged to take out the usual insurance against direct and indirect damage.

§ 6 Remuneration and payment terms

Unless otherwise stated, the prices are in euros and do not include value added tax. This will be invoiced separately at the currently applicable rate in accordance with the applicable tax regulations.

The goods remain the property of DRRR until they have been paid for in full by the customer.

The fees according to the DRRR's currently valid List of Services shall apply to the calculation of the services unless a fixed price or another basis of assessment has been expressly agreed in writing. In the absence of a valid specification of services, individual contractual arrangements shall be made in each case.

Advances on costs can be requested. Partial invoices can also be issued in accordance with the services rendered. Partial invoices need not be marked as such. The receipt of an invoice does not mean that the DRRR has fully invoiced the order.

The fees are due for payment immediately after invoicing, at the latest by the date printed on the invoice (8 days net, without deduction). Unless another arrangement has been made. If payment is made at a later date, default interest of 2% above EURIBOR will be charged on the outstanding invoice amount for the period between the due date and receipt of payment.

Objections to the invoices of the DRRR must be notified in writing within a preclusive period of 14 days after receipt of the invoice, stating reasons.

§ 7 Confidentiality and copyright

The DRRR reserves the copyrights to the expert opinions, test results, calculations, etc. prepared by it.

The DRRR and its employees may not unauthorizedly disclose or exploit business and operating relationships that come to their knowledge in the course of their work.

The DRRR may take copies for its files of written documents that have been made available to the DRRR for inspection and that are of importance for the performance of the assignment.

If the proficiency test report and the laboratory code are sent by e-mail, no guarantee can be given that confidentiality will be ensured.

§ 8 Place of jurisdiction, place of performance, applicable law

The place of jurisdiction for the assertion of claims for both parties to the contract is Kempten, provided that the conditions according to § 38 of the German Code of Civil Procedure are met. This applies in particular to dunning proceedings.

The place of performance for all obligations arising from the contract is Kempten, the contractor's registered office.

The contractual relationship and all legal relationships are subject exclusively to the law of the Federal Republic of Germany applicable between domestic contracting parties, excluding the Uniform Law on the Sale of Goods and the United Nations Convention on Contracts for the International Sale of Goods.

§ 9 Guarantee of services and goods from cooperation partners

For reference materials sold on behalf of our cooperation partners, the following conditions apply with regard to liability and warranty:

The liability of our cooperation partners, their legal representatives and vicarious agents is limited to cases of intent, gross negligence, absence of a warranted characteristic and breach of an obligation, the non-compliance of which would endanger the purpose of the contract. The liability for proven damages due to grossly negligent conduct is limited to the amount of the contractual remuneration; no liability is assumed for consequential damages. Liability is limited to the use of the reference materials for the purposes described in the respective certificate.

Our cooperation partners guarantee the application of scientific diligence as well as compliance with the recognized rules of technology.

Our cooperation partners are entitled to rectify any defects that occur. If the rectification of defects fails, the client is entitled to demand a reduction of the remuneration or cancellation of the contract at his discretion. Further warranty claims are excluded.

The warranty is limited to the stated expiration date of the reference materials.

This applies to: ieLab, TGZ AQS Baden-Württemberg