

Microbiology

product catalogue 2024 / 2025



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Your laboratory quality
for:

- **microbiological**
testing

In the fields:

- Food and feed
Consumer goods in
food contact such as:
 - Films
 - Paper/board
 - Glass/canning
- Consumer goods in
body contact such as:
 - Cosmetics
 - Tattoo ink
 - Textiles
- Water
- Disinfectant
- Medical devices
- Building materials
- Parasites

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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.

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].

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

More than 500 PT's in 2023

Accredited PT-provider



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

proficiency testing schemes

After the establishment of a microbiological laboratory in 2022, the focus since then has been on the further development of already established proficiency tests (e.g. canned food and plastic surfaces), as well as the new development and establishment of new proficiency tests in all areas. In the area of food, a proficiency test in the matrix "alcoholic beverages" (*Dekkera bruxellensis* in beer) could be implemented for the first time in 2023. Likewise, further new developments in the field of medical devices (identification of microorganisms by means of MALDI-ToF) and disinfectants (bactericidal activity) could be carried out for the first time. Further new developments (e.g. testing of sterilization of medical devices 5 (ISO 11737-1) anaerobic spores) are planned or already underway, such as fungicidal/ levurocidal activity of disinfectants or in the matrix paper / cardboard (inhibition zone test according to DIN EN 1104).

From the year 2024 we offer for the first time " proficiency tests for simulated microbiological evaluation" for various microorganisms and parameters (e.g. aerobic total count, yeasts, molds, lactic acid bacteria, *E.coli*, etc.). The focus here will be on the evaluation part of the examination and our two-part concept allows the two central steps "colony counting" and "calculation of the microbial load" to be considered separately on the basis of photo sets and raw data tables.

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.

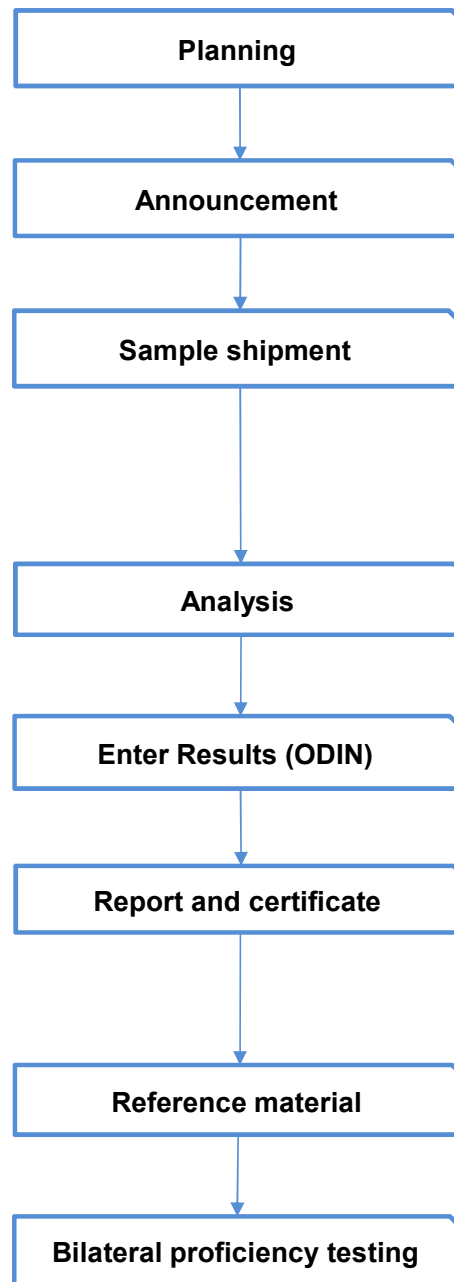
- After receiving the samples you will have a period of 4 weeks for analysing

- 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



Image source:
iStock.com/3dts

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.

Features

The microbiological proficiency testing rounds are characterized by the application of vegetative microorganisms and spores and not lyophilisates. This means that we are exclusively working with

- living bacteria
- living yeasts and moulds

in our real matrices.

Vegetative microorganisms and spores

Testing with matrix reference

Through the use of vegetative microorganisms we ensure that the bacteria have an actual matrix reference and the participants can use their own nutrient media and their internal testing method in a real system of matrix and microorganism.

Matrix reference

Use of mono germ systems

we substantially apply "mono germ systems" which means that only 1 germ or bacterium has to be analyzed in the corresponding proficiency testing. Due to that fact we are able to avoid unrequested negative effects caused by other microorganisms during the analysis and the following evaluation of the results.

Mono germ systems

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.

Evaluation

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 30 of this catalogue.

milk and cream

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010013 | E.coli milk 1 risk group 1, frozen | E.coli, total count quantitative (2 samples milk) | May-24 | Login or register |
| 2010463 | E.coli milk 2 risk group 1, frozen | E.coli, total count quantitative (2 samples milk) | Nov-24 | |
| 2010033 | Enterobact. milk 1 risk group 1, frozen | Enterobacteriaceae, total count quantitative (2 samples milk) | May-24 | |
| 2010465 | Enterobact. milk 2 risk group 1, frozen | Enterobacteriaceae, total count quantitative (2 samples milk) | Nov-24 | |
| 2010089 | Campylobacter spp. milk risk group 2, frozen | Campylobacter spp. qualitative (3 samples milk) | May-24 | |
| 2010467 | aerobic spores milk risk group 1, frozen | aerobic mesophilic spores, total count quantitative (2 samples milk) | May-24 | |
| 2010546 | psychrotrophic bacteria milk risk group 1, frozen | psychrotrophic total count (7°C), psychrotrophic total count (21°C) quantitative (2 samples milk) | Nov-24 | |
| 2010604 | EHEC O157 milk risk grup 3**, frozen | EHEC O157 qualitative (3 samples milk) | Jul-24 | |
| 2010606 | EHEC O104 milk risk grup 3**, frozen | EHEC O104 qualitative (3 samples milk) | Jul-24 | |
| 2010608 | EHEC Screening milk risk grup 3**, frozen | at least 1 of the EHEC strain O26, O103, O111, O145, O157, O104, O121 and O118 (3 samples milk) | Jul-24 | |
| 2010612 | total count in milk 1 risk group 1, frozen | aerobic total count (2 samples milk) | May-24 | |
| 2010614 | total count in milk 2 risk group 1, frozen | aerobic total count (2 samples milk) | Nov-24 | |
| 2010926 | Geotrichum spp. in milk (lactic mould) risk group 1, frozen | Geotrichum spp., aerobic total count (2 samples milk) | Nov-24 | |
| 2010924 | yeasts in milk risk group 1, frozen | yeasts, aerobic total count (2 samples milk) | Aug-24 | |
| 2010944 | norovirus milk risk group 2, frozen | determination of norovirus qualitative (3 samples) | Aug-24 | |

[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: |
|----------|---|--|--------|--|
| 2010317 | characteristic microorganisms yoghurt risk group 1 | Lactobacillus bulgaricus, Streptococcus thermophilus (2 samples à 10g yoghurt) | May-24 | Login or register |

cheese

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|---|---|--------|--|
| 2010111 | E.coli cheese risk group 1, frozen | E.coli, total count quantitative (2 samples cheese, 2 samples reference solution) | Jul-24 | |
| 2010176 | yeasts cheese risk group 1, frozen | Yeasts, total count quantitative (2 samples cheese) | May-24 | |
| 2010178 | moulds cheese risk group 1, frozen | Moulds, total count quantitative (2 samples cheese) | May-24 | |
| 2010137 | Listeria cheese risk group 2, frozen | Listeria monocytogenes qualitative (3 samples cheese) | Aug-24 | |
| 2010469 | coagulase-positive Staphylococcus cheese risk group 2, frozen | coagulase-positive Staphylococcus, total count quantitative (2 samples cheese) | Jul-24 | |
| 2010471 | Enterobact. cheese risk group 1, frozen | Enterobacteriaceae, total count quantitative (2 samples cheese, 2 samples reference solution) | Jul-24 | |
| 2010156 | Bacillus cereus processed cheese risk group 2, frozen | Bacillus Cereus, total count quantitative (2 samples processed cheese) | May-24 | |

ice-cream

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|--|--|--------|--|
| 2010548 | Enterobact. ice-cream risk group 1, frozen | Enterobacteriaceae, total count quantitative (2 samples ice-cream, 2 samples reference solution) | Jul-24 | |
| 2010550 | Salmonella spp. ice-cream risk group 2, frozen | Salmonella spp. qualitative (3 samples ice-cream) | Jul-24 | |
| 2010552 | E.coli ice-cream risk group 1, frozen | E.coli, total count quantitative (2 samples ice-cream, 2 samples reference solution) | Jul-24 | |
| 2010554 | L.monocytogenes ice-cream risk group 2, frozen | Listeria monocytogenes qualitative (3 samples ice-cream) | Jul-24 | |

[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: |
|----------|--|---|--------|--|
| 2010160 | Coliforme bact. milk powder risk group 1, frozen | Coliforme total count, aerobic total count quantitative (2 samples milk powder) | May-24 | Login or register |
| 2010063 | yeasts milk powder 1 risk group 1, frozen | yeasts, total count quantitative (2 samples milk powder) | Jan-24 | |
| | | | Jan-25 | |
| 2010473 | yeasts milk powder 2 risk group 1, frozen | yeasts, total count quantitative (2 samples milk powder) | Sep-24 | |
| 2010065 | moulds milk powder 1 risk group 1, frozen | moulds, total count quantitative (2 samples milk powder) | Feb-24 | |
| | | | Feb-25 | |
| 2010475 | moulds milk powder 2 risk group 1, frozen | moulds, total count quantitative (2 samples milk powder) | Nov-24 | |
| 2010477 | Enterobact. milk powder risk group 1, frozen | Enterobacteriaceae, total count quantitative (2 samples milk powder, 2 samples reference solution) | Jan-24 | |
| | | | Jan-25 | |
| 2010479 | E.coli milk powder risk group 1, frozen | E.coli, total count quantitative (2 samples milk powder, 2 samples reference solution) | Jan-24 | |
| | | | Jan-25 | |
| 2010481 | lactobacillus milk powder risk group 1, frozen | lactobacillus, total count quantitative (2 samples milk powder) | Nov-24 | |
| 2010483 | Shigella spp. milk powder risk group 2, frozen | Shigella spp. qualitative (3 samples milk powder) | May-24 | |
| 2010095 | Enterococcus milk powder risk group 1, frozen | Enterococcus, total count quantitative (2 samples milk powder) | Apr-24 | |
| 2010057 | Clostridia milk powder risk group 2, frozen | sulfite-reducing Clostridia, anaerobic, mesophilic, sulfite-reducing spores, anaerobic total count, C.perfringens quantitative (2 samples milk powder) | Jun-24 | |
| 2010940 | Clostridia milk powder qualitative risk group 2, frozen | sulfite-reducing Clostridia (SRC) qualitative (3 samples milk powder) | Jun-24 | |
| 2010109 | Bacillus cereus milk powder risk group 2, frozen | Bacillus Cereus, total count quantitative (2 samples milk powder) | May-24 | |
| 2010932 | Bacillus cereus milk powder qualitative risk group 2, frozen | B.cereus qualitative (3 samples milk powder) | May-24 | |

[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: |
|----------|---|---|--------|--|
| 2010081 | Cronobacter spp. milk powder risk group 2, frozen | Cronobacter spp. (= Enterobacter Sakazakii) qualitative (3 samples milk powder) | Mar-24 | Login or register |
| | | | Mar-25 | |
| 2010148 | Salmonella spp. milk powder 1 risk group 2, frozen | Salmonella spp. qualitative (3 samples milk powder) | Mar-24 | |
| | | | Mar-25 | |
| 2010485 | Salmonella spp. milk powder 2 risk group 2, frozen | Salmonella spp. qualitative (3 samples milk powder) | Nov-24 | |
| 2010083 | coagulase-positive Staphylococcus milk powder risk group 2, frozen | coagulase-positive Staphylococcus, total count quantitative (2 samples milk powder) | Mar-24 | |
| | | | Mar-25 | |
| 2010930 | coagulase-positive Staphylococcus milk powder qualitative risk group 2, frozen | coagulase-positive Staphylococcus qualitative (3 samples milk powder) | Mar-24 | |
| | | | Mar-25 | |
| 2010059 | Listeria milk powder 1 risk group 2, frozen | Listeria monocytogenes quantitative and qualitative, total count (3 samples for qualitative testing, 2 samples for quantitative testing) | Jan-24 | |
| | | | Jan-25 | |
| 2010153 | Listeria milk powder 2 risk group 2, frozen | Listeria monocytogenes quantitative and qualitative, total count (3 samples for qualitative testing, 2 samples for quantitative testing) | Aug-24 | |
| 2010534 | thermophilic bacteria (55 °C) milk powder risk group 1, frozen | thermophilic aerobic total count (55 °C, vegetative), thermalresistant Spores of thermophilic bacteria (2 samples milk powder) | Sep-24 | |
| 2010934 | anaerobic, mesophilic spores milk powder risk group 2, frozen | anaerobic, mesophilic spores milk powder total count quantitative (2 samples milk powder) | Sep-24 | |
| 2010938 | Pseudomonas spp. milk powder qualitative risk group 1, frozen | Pseudomonas spp. qualitative (3 samples milk powder) | Jun-24 | |

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fruit and vegetables products

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010043 | yeasts fruit preparation risk group 1, frozen | yeasts quantitative and qualitative (3 samples for qualitative testing, 2 samples for quantitative testing) | Aug-24 | Login or register |
| 2010101 | moulds fruit preparation risk group 1, frozen | moulds quantitative and qualitative (3 samples for qualitative testing, 2 samples for quantitative testing) | Aug-24 | |
| 2010487 | Listeria vegetables qualitative risk group 2, frozen | Listeria monocytogenes qualitative (3 samples vegetables) | Aug-24 | |
| 2010489 | Listeria vegetables quantitative risk group 2, frozen | Listeria monocytogenes, total count quantitative (2 samples vegetables) | Aug-24 | |
| 2010536 | osmophilic yeasts sugar solution risk group 1, frozen | osmophilic yeasts, total count quantitative (2 samples sugar solution) | Apr-24 | |
| 2010538 | osmophilic moulds sugar solution risk group 1, frozen | osmophilic moulds, total count quantitative (2 samples sugar solution) | Apr-24 | |
| 2010563 | yeasts dates risk group 1, frozen | yeasts, aerobic total count quantitative (2 P samples dates) | Apr-24 | |
| 2010565 | moulds dates risk group 1, frozen | moulds, aerobic total count quantitative (2 P samples dates) | Apr-24 | |

egg products

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|---|--|--------|--|
| 2010495 | Enterobact. egg products risk group 1, frozen | Enterobacteriaceae, total count quantitative (2 samples egg product, 2 samples reference solution) | Dec-24 | |
| 2010497 | Salmonella spp. mayonnaise risk group 2, frozen | Salmonella spp. qualitative (3 samples mayonnaise) | Dec-24 | |
| 2010530 | Salmonella spp. egg products risk group 2, frozen | Salmonella spp. qualitative (3 samples egg products) | Dec-24 | |
| 2010532 | E.coli egg products risk group 1, frozen | E.coli, total count quantitative (2 samples egg product, 2 samples reference solution) | Dec-24 | |

[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: |
|----------|---|---|--------|--|
| 2010097 | E.coli fruit juice risk group 1, frozen | E.coli, total count quantitative (2 samples fruit juice) | Apr-24 | Login or register |
| 2010199 | spoiling agents in fruit juice concentrate & compounds 1 risk group 1, frozen | 1 microorganism out of 3 different classes: Lactobacillus, yeasts and acid-tolerant bacteria (3 samples for qualitative testing, 2 samples for quantitative testing) | Apr-24 | |
| 2010491 | spoiling agents in fruit juice concentrate & compounds 2 risk group 1, frozen | 1 microorganism out of 3 different classes: acid-tolerant bacilli, moulds, yeasts (3 samples for qualitative testing, 2 samples for quantitative testing) | Nov-24 | |
| 2010493 | Alicyclobacillus spp. fruit juice concentrate & compounds risk group 1, frozen | Alicyclobacillus spp. qualitative (3 samples fruit juice concentrate and beverage compounds) | Oct-24 | |
| 2010544 | Salmonella spp. Tee risk group 2, frozen | Salmonella spp. qualitative (3 samples tea) | Nov-24 | |
| 2010592 | yeasts fruit juice concentrate risk group 1, frozen | yeasts, total count quantitative (2 samples fruit juice concentrate) | Apr-24 | |
| 2010594 | moulds fruit juice concentrate risk group 1, frozen | moulds, total count quantitative (2 samples fruit juice concentrate) | Apr-24 | |
| 2010596 | lactobacillus fruit juice risk group 1, frozen | lactobacillus, total count quantitative (2 samples fruit juice concentrate) | Apr-24 | |
| 2010598 | acetic acid bacteria fruit juice concentrate risk group 1, frozen | acetic acid bacteria (acid tolerant, gram-negative bacteria), total count quantitative (2 samples fruit juice concentrate) | Apr-24 | |
| 2010946 | E.coli coffee risk group 1, frozen | E.coli, total count (2 samples coffee) | Aug-24 | |
| 2010948 | Coliforme bacteria coffee risk group 1, frozen | coliforme bacteria, total count (2 samples coffee) | Aug-24 | |

alcoholic beverages

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|---|---|--------|--|
| 2010275 | Dekkera bruxellensis wine qualitative risk group 1, frozen | Dekkera bruxellensis qualitative (3 samples) | Aug-24 | |
| 2011142 | Dekkera bruxellensis beer qualitative risk group 1, frozen | Dekkera bruxellensis qualitative (3 samples) | Aug-24 | |

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meat products

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010035 | E.coli ground meat 1 risk group 1, frozen | E.coli, total count quantitative (2 samples ground meat, 2 samples reference solution) | Mar-24 | Login or register |
| | | | Mar-25 | |
| 2010499 | E.coli ground meat 2 risk group 1, frozen | E.coli, total count quantitative (2 samples ground meat, 2 samples reference solution) | Nov-24 | |
| 2010039 | Enterobact. ground meat 1 risk group 1, frozen | Enterobacteriaceae, total count quantitative (2 samples ground meat, 2 samples reference solution) | Mar-24 | |
| | | | Mar-25 | |
| 2010501 | Enterobact. ground meat 2 risk group 1, frozen | Enterobacteriaceae, total count quantitative (2 samples ground meat, 2 samples reference solution) | Nov-24 | |
| 2010142 | coagulase-positive Staphylococcus ground meat risk group 2, frozen | coagulase-positive Staphylococcus, total count quantitative (2 samples ground, meat) | Mar-24 | |
| | | | Mar-25 | |
| 2010140 | Salmonella spp. ground meat 1 risk group 2, frozen | Salmonella spp. qualitative (3 samples ground meat) | Mar-24 | |
| | | | Mar-25 | |
| 2010503 | Salmonella spp. ground meat 2 risk group 2, frozen | Salmonella spp. qualitative (3 samples ground meat) | Nov-24 | |
| 2010174 | Pseudomonas spp. ground meat risk group 2, frozen | Pseudomonas spp., total count quantitative (2 samples ground meat) | Jun-24 | |
| 2010151 | Listeria ground meat qualitative 1 risk group 2, frozen | Listeria monocytogenes qualitative (3 samples ground meat) | Mar-24 | |
| | | | Mar-25 | |
| 2010505 | Listeria ground meat qualitative 2 risk group 2, frozen | Listeria monocytogenes qualitative (3 samples ground meat) | Aug-24 | |
| 2010507 | Listeria ground meat quantitative risk group 2, frozen | Listeria monocytogenes, total count quantitative (2 samples ground meat) | Aug-24 | |
| 2010212 | lactobacillus ground meat risk group 1, frozen | lactobacillus, total count quantitative (2 samples ground meat) | Mar-24 | |
| | | | Mar-25 | |
| 2010146 | Campylobacter spp. poultry meat risk group 2, frozen | Campylobacter spp. qualitative (3 samples poultry) | May-24 | |
| 2010936 | Coliforme bacteria ground meat risk group 1, frozen | coliforme bacteria, total count quantitative (2 samples ground meat) | Aug-24 | |
| 2010942 | Clostridia ground meat risk group 2, frozen | sulfit-reducing Clostridia (SRC), anaerobic total count, sulfit-reducing spores, C.perrfringens quantitative (2 samples ground meat) | Jun-24 | |
| 2010277 | Brochothrix thermosphacta ground meat qualitative risk group 1, frozen | Brochothrix thermosphacta qualitative (3 samples) | Aug-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 30 of this catalogue.

fish and seafood

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010509 | Yersinia enterocolitica seafood risk group 2, frozen | Yersinia enterocolitica qualitative (3 samples seafood) | May-24 | Login or register |
| 2010511 | pathogenic Vibrio spp. seafood risk group 2, frozen | pathogenic Vibrio spp. qualitative (3 samples seafood) | May-24 | |
| 2010540 | Salmonella spp. seafood risk group 2, frozen | Salmonella spp. qualitative (3 samples seafood) | May-24 | |

infant formula

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|---|--|--------|--|
| 2010521 | infant food variation 1 risk group 2 | minimum 1 out of variable parameters quantitative: SRC, yeasts, moulds, TVC 30°C; minimum 1 out of variable parameters qualitative: and Salmonella spp., Cronobacter spp. and Enterobacteriaceae (3-6 samples baby food) | Aug-24 | |
| 2010182 | Bifidobacteria infant food risk group 1 | Bifidobacteria quantitative (2 samples baby food) | Jul-24 | |
| 2010117 | identification of germs infant food risk group 1/2 | variable germs (1-3 samples baby food) | Aug-24 | |
| 2010273 | Enterobacteriaceae infant formula (powder) qualitative risk group 1 | Enterobacteriaceae qualitative (3 samples) | Aug-24 | |

animal feed

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|--|--|--------|--|
| 2010188 | Clostridia animal feed risk group 2, frozen | sulfite-reducing Clostridia (vegetative), lactobacilli, anaerobic mesophilic sulfite-reducing spores, anaerobic mesophilic total spores quantitative (2 samples animal feed) | Aug-24 | |
| 2010519 | Salmonella spp. animal feed risk group 2, frozen | Salmonella spp. qualitative (3 samples animal feed) | Dec-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 30 of this catalogue.

other food matrices

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010144 | Salmonella spp. chocolate risk group 2, frozen | Salmonella spp. qualitative (3 samples chocolate) | Mar-24 | Login or register |
| | | | Mar-25 | |
| 2010513 | Listeria convenience products risk group 2, frozen | Listeria monocytogenes qualitative (3 samples prepared meal) | Aug-24 | |
| 2010515 | Salmonella spp. spice powder risk group 2, frozen | Salmonella spp. qualitative (3 samples spice powder) | Dec-24 | |
| 2010542 | Salmonella spp. herbage risk group 2, frozen | Salmonella spp. qualitative (3 samples herbage) | Dec-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 30 of this catalogue.

Consumer goods in food contact:

films / synthetic leather

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|---|--------|--|
| 2010119 | moulds plastic surface risk group 1 | determination of surface bacteria count moulds quantitative (2 samples á 2 samples) | Sep-24 | Login or register |
| 2010191 | aerobic total count plastic surface risk group 1 | determination of surface bacteria count aerobic total count quantitative (2 samples á 2 samples) | Sep-24 | |

paper / board

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|--|--|--------|--|
| 2010352 | spore-forming bacteria board risk group 1 | determination of spores of aerobic spore-forming bacteria quantitative (2-4 samples) | Nov-24 | |
| 2010279 | Paper - transition of antimicrobial components (EN 1104) | Determination of transition of antimicrobial components (EN 1104; inhibition zone test) (3 samples) | Nov-24 | |

glass / canning

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|--|--|--------|--|
| 2010172 | mesophilic sterility testing tinned food risk group 1, frozen | mesophilic germ load (products with low acidity (pH > 4,5)) (3 samples tinned food) | Sep-24 | |
| 2010928 | thermophilic sterility testing tinned food risk group 1, frozen | thermophilic germ load (55°C) (products with low acidity (pH > 4,5)) (3 samples tinned food) | Sep-24 | |
| 2010950 | anaerobic mesophilic sterility testing tinned food risk group 2, frozen | anaerobic, mesophilic spores qualitative (3 samples tinned food) | Sep-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 30 of this catalogue.

Consumer goods in body contact:

cosmetics

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|--|---|--|--------|--|
| 2010071 | aerobic bacteria O/W-emulsion risk group 2, frozen | aerobic bacteria quantitative (2 samples O/W-emulsion) | Oct-24 | Login or register |
| 2010079 | moulds O/W-emulsion risk group 1, frozen | moulds quantitative (2 samples O/W-emulsion) | Oct-24 | |
| 2010077 | identification of germs O/W-emulsion risk group 2, frozen | Identification of variable germs qualitative (3 samples O/W-emulsion) | Oct-24 | |
| 2010356 | S.aureus (ATCC 6538) O/W-emulsion risk group 2, frozen | S.aureus qualitative (3 samples O/W-emulsion) | Oct-24 | |
| 2010358 | E.coli (ATCC 8739) O/W-emulsion risk group 2, frozen | E.coli qualitative (3 samples O/W-emulsion) | Oct-24 | |
| 2010360 | C.albicans (ATCC 10231) O/W-emulsion risk group 2, frozen | C.albicans qualitative (3 samples O/W-emulsion) | Oct-24 | |
| 2010362 | Ps.aeruginosa (ATCC 9027) O/W-emulsion risk group 2, frozen | Ps.aeruginosa qualitative (3 samples O/W-emulsion) | Oct-24 | |
| For the following proficiency testing scheme you can not enter your results online: | | | | |
| 2010085 | challenge test O/W-emulsion risk group 2, cooled | challenge test (determination after 0, 2, 7, 14 and 28 days of all 5 relevant microorganism) (5 samples O/W-emulsion) | Apr-24 | |

tattoo ink

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|--|--|--------|--|
| 2010354 | aerobic bacteria in tattoo ink quantitative risk group 1, frozen | aerobic total count quantitative (2 samples tattoo ink) | Oct-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 30 of this catalogue.

Consumer goods in body contact:

textiles

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|--|---|--------|--|
| 2010076 | Antimicrobial Fabric Test textiles - AATCC 100 | antibacterial activity quantitative method (1 - 2 textile samples) | May-24 | Login or register |
| 2010078 | Antibacterial Parallel Streak textiles - AATCC 147 | antibacterial activity qualitative method (Size of the inhibition zones [mm]) (1 - 3 textile samples) | May-24 | |
| 2010080 | Antibacterial Activity textiles - ISO 20743 | - <i>Staphylococcus aureus</i> - <i>Klebsiella pneumoniae</i> antibacterial activity quantitative using absorption method (incl. plate count procedure) (2 textile samples) | May-24 | |
| 2010082 | 4-field test - microbial reduction textiles EN 16615 | antibacterial activity levurocidal activity quantitative method (1 - 2 textile samples) | May-24 | |
| 2011104 | Antibacterial Activity textiles - AATCC 90 | Antibacterial effect qualitative method (size of inhibition zones [mm]) (3 textile samples) | May-24 | |

plastics - surfaces

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|---|---|--------|--|
| 2010623 | Antibacterial activity plastics - ISO 22196 | Measurement of antibacterial activity on plastic surfaces | May-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 30 of this catalogue.

drinking water

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|--|---|--------|--|
| 2010654 | E.coli / Coliforme bacteria drinking water risk group 1 | E.coli / Coliforme bacteria quantitative (2 samples and corresponding matrix) | Apr-24 | Login or register |
| 2010656 | aerobic total count drinking water risk group 1 | aerobic total count quantitative (aerobic total count at 22 °C, aerobic total count at 36 °C) (2 samples and corresponding matrix) | Apr-24 | |
| 2010658 | Enterococcus drinking water quantitative risk group 1/2 | Enterococcus quantitative (2 samples and corresponding matrix) | Apr-24 | |
| 2010660 | Ps.aeruginosa drinking water risk group 2 | Ps.aeruginosa quantitative (2 samples and corresponding matrix) | Jul-24 | |
| 2010662 | identification of germs drinking water risk group 2 | identification of variable micro organisms quantitative (samples (positive or negative) and corresponding matrix) | Apr-24 | |
| 2010114 | Legionella spp. drinking water risk group 2 | Legionella spp. quantitative (2 samples (positive or negative) and corresponding matrix) | Sep-24 | |

surface- and waste water

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|--|--|--------|--|
| 2010670 | E.coli / Coliforme bacteria surface- and waste water risk group 1 | E.coli / Coliforme bacteria quantitative (2 samples and corresponding matrix) | Apr-24 | |
| 2010672 | Enterococcus surface- and waste water risk group 1/2 | Enterococcus quantitative (2 samples and corresponding matrix) | Apr-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 30 of this catalogue.

recooling water

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|--|---|--------|--|
| 2010958 | Legionella recooling water risk group 2 | Legionella quantitative (2 lyophilised samples and water) | Sep-24 | Login or register |
| 2010960 | Pseudomonas aeruginosa recooling water risk group 2 | Pseudomonas aeruginosa quantitative (2 lyophilised samples and water) | Jul-24 | |
| 2010962 | total count recooling water risk group 2 | total count quantitative (2 lyophilised samples and water) | Jul-24 | |

mineral water and table water

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|---|--|--------|--|
| 2010674 | aerobic total count mineral water and table water risk group 1 | aerobic total count at 20 °C, aerobic total count at 37 °C quantitative (2 samples and corresponding matrix) | Apr-24 | |
| 2010676 | streptococci (faecal) mineral water and table water risk group 2 | streptococci (faecal) mineral water and table water qualitative (3 samples and corresponding matrix) | Oct-24 | |
| 2010680 | Pseudomonas aeruginosa mineral water and table water risk group 2 | Pseudomonas aeruginosa qualitative (3 samples and corresponding matrix) | Oct-24 | |
| 2010952 | sulfite-reducing, spore-forming anaerobes mineral water risk group 2 | anaerobic, sulfite-reducing spores qualitative (3 samples and water) | Aug-24 | |
| 2010134 | Coliforme bacteria mineral water and table water risk group 1 | Coliforme bacteria qualitative (3 samples and water) | Oct-24 | |
| 2010138 | E.coli mineral water and table water risk group 1 | E.coli qualitative (3 samples and water) | Oct-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 30 of this catalogue.

disinfectant

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|--|---|--------|--|
| 2010686 | bactericidal activity (phase 2 / step 1-test) | quantitative suspension test S.aureus (ATCC 6538), Ps.aeruginosa (ATCC 15442) test conditions: (a) 20 °C (b) 5, 15, 30 and 60 minutes (c) with and without organic load | Jun-24 | Login or register |
| 2010688 | fungicidal / yeasticidal activity (phase 2 / step 1-test) | quantitative suspension test Aspergillus niger (ATCC 16404), Candida albicans (ATCC 10231) test conditions: (a) 20 °C (b) 5, 15, 30 and 60 minutes (c) with and without organic load | Jun-24 | |
| 2010690 | mycobactericidal, tuberculocidal activity (phase 2 step 1) | quantitative suspension test Mycobacterium terrae (ATCC 15769), Mycobacterium avium (ATCC 15755) test conditions: (a) 20 °C (b) 5, 15, 30 and 60 minutes (c) with and without organic load | Jun-24 | |
| 2010692 | sporicidal activity (phase 1-test) | quantitative suspension test Bacillus subtilis-Spores (ATCC 6633) test conditions: (a) 20 °C (b) 30, 30 and 120 minutes | Jun-24 | |
| 2010694 | virucidal activity (chem. disinfectant, phase 2 step 1) | quantitative suspension test Poliovirus (type 1), Adenovirus (type 5) test conditions: (a) 20 °C (b) 5, 15, 30 and 60 minutes (c) with and without organic load | Jun-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 30 of this catalogue.

medical devices

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010696 | testing of sterilization of medical devices 1 (ISO 11737-1) risk group 1 | aerobic total count quantitative (2 transparent bags) | Jun-24 | Login or register |
| 2010964 | testing of sterilization of medical devices 2 (ISO 11737-1) risk group 1 | yeasts quantitative (2 samples) | Jun-24 | |
| 2010966 | testing of sterilization of medical devices 3 (ISO 11737-1) risk group 1 | moulds quantitative (2 samples) | Jun-24 | |
| 2010968 | testing of sterilization of medical devices 4 (ISO 11737-1) risk group 1 | aerobic spores quantitative (2 samples) | Jun-24 | |
| 2011171 | testing of sterilization of medical devices 5 (ISO 11737-1) risk group 2 | anaerobic spores quantitative (2 transparent bags) | Jun-24 | |
| 2010281 | Tests for in vitro cytotoxicity (ISO 10993-5) | Tests for in vitro cytotoxicity (ISO 10993-5) (3 samples) | Nov-24 | |
| 2010283 | Microbial barrier testing of packaging materials risk group 1 | Testing the germ tightness of packaging materials (2 samples) | Nov-24 | |
| 2010657 | Identification of microorganisms using MALDI-ToF risk group 2 | Identification of microorganisms using MALDI-ToF (1 sample) | Nov-24 | |
| 2010321 | Test method Medical face masks (EN 14683) | Bacterial filter efficiency and pressure difference (1 sample á 12 face masks) | May-24 | |
| 2010567 | microbiological analysis of endoscopes risk group 2 | aerobic total count, germ identification on rinse water (3 samples) | Oct-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 30 of this catalogue.

other building materials

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010682 | moulds (contact samples) risk group 2 | moulds quantitative (2 samples building material) | Apr-24 | Login or register |
| 2010684 | moulds (material samples) risk group 2 | moulds qualitative (3 samples building material) | Apr-24 | |

indoor air

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|---|---|--------|--|
| 2010954 | moulds indoor air risk group 1 | moulds quantitative (2 samples gel filter) | Jul-24 | |
| 2010956 | yeasts indoor air risk group 1 | yeasts quantitative (2 samples gel filter) | Jul-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 30 of this catalogue.

parasites

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | To view pricing information visit our online Portal: |
|----------|---|--|--------|--|
| 2010285 | cryptosporidia risk group 1 | Detection by ELISA (1-3 SAF tubes) | Jun-24 | Login or register |
| 2010287 | trypanosoma risk group 1 | Microscopic detection (1-3 slide preparations) | Jun-24 | |
| 2010289 | Plasmodium falciparum risk group 1 | Microscopic detection (1-3 slide preparations) | Jun-24 | |
| 2010291 | ectoparasites risk group 1 | Microscopic identification (1-3 slide preparations) | Jun-24 | |
| 2010293 | Parasites (general) risk group 1 | Microscopic identification (1-3 slide preparations) | Jun-24 | |

simulated microbiological evaluation

| Art. No. | Proficiency testing type ^[A] | requested parameters | period | |
|----------|---|---|--------|--|
| 2011198 | Simulated evaluation aerobic total count | colony counting (2 photo sets), Calculation of germ load (raw data table) | Jul-24 | |
| 2011199 | Simulated evaluation aerobic spore-forming bacteria | colony counting (2 photo sets), Calculation of germ load (raw data table) | Jul-24 | |
| 2011200 | Simulated evaluation yeasts | colony counting (2 photo sets), Calculation of germ load (raw data table) | Jul-24 | |
| 2011201 | Simulated evaluation mould | colony counting (2 photo sets), Calculation of germ load (raw data table) | Jul-24 | |
| 2011202 | Simulated evaluation lactic acid bacteria | colony counting (2 photo sets), Calculation of germ load (raw data table) | Jul-24 | |
| 2011203 | Simulated evaluation Sulfite-reducing clostridia | colony counting (2 photo sets), Calculation of germ load (raw data table) | Jul-24 | |
| 2011204 | Simulated evaluation E.coli and Coliforms | colony counting (2 photo sets), Calculation of germ load (raw data table) | Jul-24 | |

[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 |
|--|--------|---|--|------------------------|
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For proficiency testing schemes labelled with "risk group 2, or 3*" we need a permission or an exemption for working with pathogenic microorganisms of your lab if existing in your country (e.g. "infection protection law (IfSG)" in Germany). The appropriate form you can find in the product catalogue on page 57.**

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 cancelation
- 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 derivative 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

Please use the order form on page 49.

milk and cream

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|---|--|----------------|------------------------|
| 2201001 | reference solution E.coli risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201002 | reference solution Enterobacteriaceae risk group 1, frozen | Enterobacteriaceae (VRBD), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201003 | E.coli milk risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201004 | Enterobacteriaceae milk risk group 1, frozen | Enterobacteriaceae (VRBD), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201005 | aerobic spores milk risk group 1, frozen | aerobic spores (PC), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201006 | Campylobacter spp. milk risk group 2, frozen | Campylobacter spp. (CCD) | qualitative testing positive or negative | 25 ml | pos. 71 € neg. 55 € |
| 2201076 | psychrotrophic bacteria milk risk group 1, frozen | psychrotrophic total count (7°C) (PC), psychrotrophic total count (21°C) (PC) | quantitative testing | 10 ml | 101 € |
| 2201074 | yeasts milk risk group 1, frozen | yeasts (YGC), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201075 | Geotrichum milk (lactic mould) risk group 1, frozen | Geotrichum spp. (YGC) aerobic total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201091 | EHEC O157 milk risk grup 3**, frozen | EHEC O157 | qualitative testing positive or negative (only available during the period of the proficiency testing) | 25 ml | pos. 71 € neg. 55 € |
| 2201092 | EHEC O104 milk risk grup 3**, frozen | EHEC O104 | qualitative testing positive or negative (only available during the period of the proficiency testing) | 25 ml | pos. 71 € neg. 55 € |
| 2201085 | norovirus milk risk group 2, frozen | determination of norovirus | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

* sometimes we used more than one method per paramter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order form on page 49.

other milk products

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|--|--------------------------|----------------|--------|
| 2201101 | characteristic microorganisms yoghurt risk group 1 | Lactobacillus bulgaricus, Streptococcus thermophilus | quantitative testing | 10 g | 71 € |

cheese

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|--|--|----------------|------------------------|
| 2201007 | E.coli cheese risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201008 | L.monocytogenes cheese risk group 2, frozen | L.monocytogenes (ALOA) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201009 | Enterobacteriaceae cheese risk group 1, frozen | Enterobacteriaceae (VRBD), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201010 | moulds cheese risk group 1, frozen | Moulds (YGC), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201011 | yeasts cheese risk group 1, frozen | Yeasts (YGC), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201012 | coagulase-positive Staphylococcus cheese risk group 2, frozen | coagulase-positive Staphylococcus (BP), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201013 | B.cereus processed cheese risk group 2, frozen | B.cereus (MYP), total count (PC) | quantitative testing | 10 g | 101 € |

ice-cream

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|---|--|----------------|------------------------|
| 2201063 | Enterobacteriaceae ice-cream risk group 1, frozen | Enterobacteriaceae (VRBD), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201065 | Salmonella spp. ice-cream risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201064 | E.coli ice-cream risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201066 | L.monocytogenes ice-cream risk group 2, frozen | L.monocytogenes (ALOA) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

* sometimes we used more than one method per parameter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order form on page 49.

milk powder

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|---|---|----------------|------------------------|
| 2201014 | coliforme bacteria milk powder risk group 1, frozen | coliforme total count (VRBL), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201015 | moulds milk powder risk group 1, frozen | moulds (YGC), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201016 | yeasts milk powder risk group 1, frozen | yeasts (YGC), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201017 | E.coli milk powder risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201018 | Enterobacteriaceae milk powder risk group 1, frozen | Enterobacteriaceae (VRBD), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201019 | Enterococcus milk powder risk group 1, frozen | Enterococcus (CATC), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201020 | Lactobacillus milk powder risk group 1, frozen | Lactobacillus (MRS), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201021 | Shigella spp. milk powder risk group 2, frozen | Shigella spp. (HEA / XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201022 | Clostridia milk powder risk group 2, frozen | sulfite-reducing Clostridia, anaerobic, mesophilic, sulfite-reducing spores, anaerobic total count, C.perfringens | quantitative testing | 10 g | 101 € |
| 2201083 | Clostridia milk powder qualitative risk group 2, frozen | sulfite-reducing Clostridia (SRC) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201023 | B.cereus milk powder risk group 2, frozen | B.cereus (MYP), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201079 | B.cereus milk powder qualitative risk group 2, frozen | B.cereus (MYP) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201024 | Cronobacter spp. milk powder risk group 2, frozen | Cronobacter spp. (ESIA) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

* sometimes we used more than one method per parameter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order form on page 49.

milk powder

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|--|---|----------------|------------------------|
| 2201025 | Salmonella spp. milk powder risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201026 | coagulase-positive Staphylococcus milk powder quantitative risk group 2, frozen | coagulase-positive Staphylococcus (BP), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201078 | coagulase-positive Staphylococcus milk powder qualitative risk group 2, frozen | coagulase-positive Staphylococcus (BP) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201028 | L.monocytogenes milk powder qualitative risk group 2, frozen | L.monocytogenes (ALOA) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201027 | L.monocytogenes milk powder quantitative risk group 2, frozen | L.monocytogenes (ALOA), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201062 | thermophilic bacteria milk powder risk group 1, frozen | thermophilic aerobic total count (55 °C, vegetative), thermalresistant Spores of thermophilic bacteria | quantitative testing | 10 g | 101 € |
| 2201080 | anaerobic, mesophilic spores milk powder risk group 2, frozen | anaerobic, mesophilic spores milk powder, total count quantitative (PC) | quantitative testing | 10 g | 101 € |
| 2201082 | Pseudomonas spp. milk powder risk group 2, frozen | Pseudomonas spp. (CFC) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

* sometimes we used more than one method per parameter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order from on page 49.

fruit and vegetables products

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|--|---|----------------|------------------------|
| 2201029 | moulds fruit preparation quantitative risk group 1, frozen | Moulds (YGC) | quantitative testing | 10 g | 101 € |
| 2201030 | moulds fruit preparation qualitative risk group 1, frozen | Moulds (YGC) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201031 | yeasts fruit preparation quantitative risk group 1, frozen | yeasts (YGC) | quantitative testing | 10 g | 101 € |
| 2201032 | yeasts fruit preparation qualitative risk group 1, frozen | yeasts (YGC) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201033 | L.monocytogenesvegetable s quantitative risk group 2, frozen | L.monocytogenes (ALOA), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201034 | L.monocytogenesvegetable s qualitative risk group 2, frozen | L.monocytogenes (ALOA) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201067 | osmophilic yeasts sugar solution risk group 1, frozen | osmophilic yeasts (YGC), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201068 | osmophilic moulds sugar solution risk group 1, frozen | osmophilic moulds (YGC), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201102 | yeasts dates risk group 1, frozen | yeasts, aerobic total count | quantitative testing | 10 g | 101 € |
| 2201103 | moulds dates risk group 1, frozen | moulds, aerobic total count | quantitative testing | 10 g | 101 € |

egg products

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|--|---|----------------|------------------------|
| 2201036 | Salmonella spp. mayonnaise risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201037 | Enterobacteriaceae egg products risk group 1, frozen | Enterobacteriaceae (VRBD), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201056 | Salmonella spp. egg products risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201057 | E.coli egg products risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 g | 101 € |

* sometimes we used more than one method per paramter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order from on page 49.

non-alcoholic beverages

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|---|---|----------------|------------------------|
| 2201035 | E.coli fruit juice risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201058 | Alicyclobacillus spp. in fruit juice concentrate and beverage compounds qualitative risk group 1, frozen | Alicyclobacillus spp. (BAT) | qualitative testing positive or negative | 10 ml | pos. 71 € neg. 55 € |
| 2201061 | Salmonella spp. tea risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201069 | yeasts fruit juice concentrate risk group 1, frozen | yeasts (YGC), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201070 | moulds fruit juice concentrate risk group 1, frozen | moulds (YGC), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201071 | lactobacillus fruit juice risk group 1, frozen | Lactobacillus (MRS), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201072 | acetic acid bacteria fruit juice concentrate risk group 1, frozen | acetic acid bacteria (OSA), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201086 | E.coli coffee risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201087 | Coliforme bacteria coffee risk group 1, frozen | coliforme bacteria (VRB), total count (PC) | quantitative testing | 10 ml | 101 € |
| 2201090 | spoiling agents in fruit juice concentrate and beverage risk group 1, frozen | spoiling agent quantitative microorganisms can vary between Lactobacillus, yeasts and acid-tolerant bacteria, acid-tolerant bacilli, moulds, yeasts | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

alcoholic beverages

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|----------------------|---|----------------|------------------------|
| 2201094 | Dekkera bruxellensis wine risk group 1, frozen | Dekkera bruxellensis | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

* sometimes we used more than one method per parameter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order form on page 49.

meat products

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|--|---|----------------|------------------------|
| 2201038 | E.coli ground meat 1 risk group 1, frozen | E.coli (TBX), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201039 | Enterobact. ground meat 1 risk group 1, frozen | Enterobacteriaceae (VRBD), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201040 | Lactobacillus ground meat risk group 1, frozen | Lactobacillus (MRS), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201041 | coagulase-positive Staphylococcus ground meat risk group 2, frozen | coagulase-positive Staphylococcus (BP), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201042 | Pseudomonas spp. ground meat risk group 2, frozen | Pseudomonas spp. (CFC), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201043 | Salmonella spp. ground meat risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201044 | L.monocytogenes ground meat quantitative risk group 2, frozen | L.monocytogenes (ALOA), total count (PC) | quantitative testing | 10 g | 101 € |
| 2201045 | L.monocytogenes ground meat qualitative risk group 2, frozen | L.monocytogenes (ALOA) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201046 | Campylobacter spp. poultry risk group 2, frozen | Campylobacter spp. (CCD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201081 | Coliforme Bakterien ground meat risk group 1, frozen | coliforme bacteria, total count (PC) | quantitative testing | 10 g | 101 € |
| 2201084 | Clostridia ground meat risk group 2, frozen | sulfit-reducing Clostridia (SRC), anaerobic total count, sulfit-reducing spores, C.perfringens | quantitative testing | 10 g | 101 € |
| 2201095 | Brochothrix thermosphacta ground meat risk group 1, frozen | Brochothrix thermosphacta | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

fish and seafood

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|-------------------------|---|----------------|------------------------|
| 2201047 | Yersinia enterocolitica seafood risk group 2, frozen | Yersinia enterocolitica | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201048 | pathogenic Vibrio spp. seafood risk group 2, frozen | pathogenic Vibrio spp. | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201060 | Salmonella spp. seafood risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

* sometimes we used more than one method per parameter

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Please use the order form on page 49.

animal feed

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|---|---|----------------|------------------------|
| 2201053 | Clostridia animal feed risk group 2, frozen | sulfite-reducing Clostridia (vegetative), lactobacilli, anaerobic mesophilic sulfite-reducing spores, anaerobic mesophilic total spores, total count (PC) | quantitative testing | 20 g | 101 € |
| 2201054 | Salmonella spp. animal feed risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

infant formula

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|--------------------|---|----------------|------------------------|
| 2201093 | Enterobacteriaceae infant formula (powder) risk group 1 | Enterobacteriaceae | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |

other food matrices

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|------------------------|---|----------------|------------------------|
| 2201049 | Salmonella spp. chocolate risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201050 | Salmonella spp. spice powder risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201052 | L.monocytogenes convenience products risk group 2, frozen | L.monocytogenes (ALOA) | qualitative testing positive or negative | 25 g | pos. 71 € neg. 55 € |
| 2201059 | Salmonella spp. herbage risk group 2, frozen | Salmonella spp. (XLD) | qualitative testing positive or negative | 10 g | pos. 71 € neg. 55 € |

* sometimes we used more than one method per parameter

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Please use the order form on page 49.

Consumer goods in food contact:

films / synthetic leather

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|---|--------------------------|----------------|--------|
| 2251001 | moulds plastic surface risk group 1 | surface determination of moulds | quantitative testing | 2 foils | 101 € |
| 2251002 | aerobic total count plastic surface risk group 1 | surface determination of aerobic bacteria | quantitative testing | 2 foils | 101 € |

paper / board

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|---|--|----------------|------------------------|
| 2251003 | spore-forming bacteria board risk group 1 | surface determination of spore-forming bacteria | quantitative testing | 1 sample | 101 € |
| 2251029 | Determination of transition of antimicrobial components (EN 1104; inhibition zone test) | Determination of transition of antimicrobial components (EN 1104; inhibition zone test) | qualitative testing positive or negative | 1 sample | pos. 71 € neg. 55 € |

glass / canning

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|--|--|----------------|------------------------|
| 2251004 | mesophilic sterility testing tinned food risk group 1, frozen | mesophilic germ load (products with low acidity (pH > 4,5)) | qualitative testing positive or negative | 190 g | pos. 71 € neg. 55 € |
| 2251019 | thermophilic sterility testing tinned food risk group 1, frozen | thermophilic germ load (55°C) (products with low acidity (pH > 4,5)) | qualitative testing positive or negative | 190 g | pos. 71 € neg. 55 € |
| 2251020 | anaerobic mesophilic spores tinned food risk group 2, frozen | anaerobic, mesophilic spores | qualitative testing positive or negative | 190 g | pos. 71 € neg. 55 € |

* sometimes we used more than one method per parameter

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Please use the order form on page 49.

Consumer goods in body contact:

cosmetics

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|---|---|----------------|------------------------|
| 2251005 | aerobic bacteria O/W-emulsion risk group 2, frozen | aerobic bacteria (CASO) | quantitative testing | 10 g | 101 € |
| 2251006 | moulds O/W-emulsion risk group 1, frozen | moulds (SDA) | quantitative testing | 10 g | 101 € |
| 2251007 | E.coli O/W-emulsion risk group 2 frozen | ATCC 8739 E.coli (CASO) | qualitative testing positive or negative | 10 g | pos. 71 € neg. 55 € |
| 2251008 | S.aureus O/W-emulsion risk group 2, frozen | ATCC 6538 S.aureus (CASO) | qualitative testing positive or negative | 10 g | pos. 71 € neg. 55 € |
| 2251009 | identification of germs O/W-emulsion risk group 2, frozen | identification of germs | qualitative testing positive or negative | 10 g | pos. 71 € neg. 55 € |
| 2251010 | C.albicans O/W-emulsion risk group 2, frozen | ATCC 10231 C.albicans (SDA / PDA) | qualitative testing positive or negative | 10 g | pos. 71 € neg. 55 € |
| 2251011 | Ps.aeruginosa O/W-emulsion risk group 2, frozen | ATCC 9027 Ps.aeruginosa (CASO) | qualitative testing positive or negative | 10 g | pos. 71 € neg. 55 € |
| 2251028 | challenge test O/W-emulsion risk group 2, cooled | challenge test (determination after 0, 2, 7, 14 and 28 days of all 5 relevant microorganism) | on request | on request | 101 € |

tattoo ink

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|-----------------------|--------------------------|----------------|--------|
| 2251012 | aerobic bacteria in tattoo ink risk group 1, frozen | aerobic bacteria (PC) | quantitative testing | 10 ml | 101 € |

* sometimes we used more than one method per parameter

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Please use the order form on page 49.

Consumer goods in body contact:

textiles

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|---|--------------------------|----------------|-------------------------|
| 2251024 | Antimicrobial Fabric Test textiles - AATCC 100 | antibacterial activity quantitative method | quantitative testing | on request | 115 € |
| 2251025 | Antibacterial Parallel Streak textiles - AATCC 147 | antibacterial activity qualitative method (Size of the inhibition zones [mm]) | qualitative testing | on request | pos. 100 € neg. 70 € |
| 2251026 | Antibacterial Activity textiles ISO 20743 | - Staphylococcus aureus - Klebsiella pneumoniae antibacterial activity quantitative using absorption method (incl. plate count procedure) | quantitative testing | on request | 115 € |
| 2251027 | 4-field test - microbial reduction textiles EN 16615 | antibacterial activity levurocidal activity quantitative method | quantitative testing | on request | 1 € |

plastics - surfaces

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|---|--------------------------|----------------|--------|
| 2251035 | Antibacterial activity plastics - ISO 22196 | Measurement of antibacterial activity on plastic surfaces | quantitative testing | on request | 115 € |

* sometimes we used more than one method per parameter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order form on page 49.

drinking water

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|---|--------------------------|----------------|--------|
| 2221001 | E.coli / Coliforme bacteria drinking water risk group 1 | E.coli / Coliforme bacteria | quantitative testing | on request | 55 € |
| 2221002 | aerobic total count drinking water risk group 1 | aerobic total count | quantitative testing | on request | 55 € |
| 2221003 | Enterococcus drinking water quantitative risk group 1/2 | Enterococcus | quantitative testing | on request | 55 € |
| 2221004 | Ps. Aeruginosa drinking water risk group 2 | Ps. Aeruginosa | quantitative testing | on request | 55 € |
| 2221005 | identification of germs drinking water risk group 1/2 | identification of variable micro organisms | quantitative testing | on request | 55 € |
| 2221021 | Legionella spp. drinking water risk group 2 | Legionella spp. quantitative | quantitative testing | on request | 55 € |

surface- and waste water

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|-----------------------------|--------------------------|----------------|--------|
| 2221009 | E.coli / Coliforme bacteria surface- and waste water risk group 1 | E.coli / Coliforme bacteria | quantitative testing | on request | 55 € |
| 2221010 | Enterococcus surface- and waste water risk group 2 | Enterococcus | quantitative testing | on request | 55 € |

* sometimes we used more than one method per parameter

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Please use the order form on page 49.

recooling water

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---|------------------------|--------------------------|----------------|--------|
| 2221018 | Legionella spp. recooling water risk group 2 | Legionella spp. | quantitative testing | on request | 101 € |
| 2221017 | Pseudomonas aeruginosa recooling water risk group 2 | Pseudomonas aeruginosa | quantitative testing | on request | 101 € |
| 2221016 | total count recooling water risk group 2 | total count | quantitative testing | on request | 101 € |

mineral water and table water

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|------------------------------------|---|----------------|------------------------|
| 2221011 | aerobic total count mineral water and table water risk group 1 | aerobic total count | quantitative testing | on request | 55 € |
| 2221012 | streptococci (faecal) mineral water and table water risk group 2 | streptococci (faecal) | qualitative testing positive or negative | on request | pos. 60 € neg. 30 € |
| 2221013 | E.coli mineral water and table water risk group 1 | E.coli | qualitative testing positive or negative | on request | pos. 60 € neg. 30 € |
| 2221022 | Coliforme bacteria mineral water and table water risk group 1 | Coliforme bacteria | qualitative testing positive or negative | on request | pos. 60 € neg. 30 € |
| 2221014 | Pseudomonas aeruginosa mineral water and table water risk group 2 | Pseudomonas aeruginosa | qualitative testing positive or negative | on request | pos. 60 € neg. 30 € |
| 2221015 | sulfite-reducing, spore- forming anaerobes mineral water and table water risk group 2 | anaerobic, sulfite-reducing spores | quantitative testing | on request | 55 € |

* sometimes we used more than one method per parameter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order from on page 49.

disinfectant

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|--|--------------------------|----------------|--------|
| 2251013 | bactericidal activity | <i>S.aureus</i> (ATCC 6538), <i>Ps.aeruginosa</i> (ATCC 15442) | quantitative testing | on request | 120 € |
| 2251014 | fungicidal / yeasticidal activity | <i>Aspergillus niger</i> (ATCC 16404), <i>Candida albicans</i> (ATCC 10231) | quantitative testing | on request | 120 € |
| 2251015 | mycobactericidal / tuberculocidal activity | <i>Mycobacterium terrae</i> (ATCC 15769), <i>Mycobacterium avium</i> (ATCC 15755) | quantitative testing | on request | 120 € |
| 2251016 | sporicidal activity | <i>Bacillus subtilus-Sporens</i> (ATCC 6633) | quantitative testing | on request | 120 € |
| 2251017 | virucidal activity | Poliovirus (type 1), Adenovirus (type 5) | quantitative testing | on request | 120 € |

medical devices

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|---|--------------------------|-------------------------|-------------------------|
| 2251018 | testing for sterilization of medical devices 1 (ISO 11737-1) risk group 1 | aerobic total count | quantitative testing | 1 sample | 120 € |
| 2251021 | testing for sterilization of medical devices 2 (ISO 11737-1) risk group 1 | yeasts | quantitative testing | 1 sample | 120 € |
| 2251022 | testing for sterilization of medical devices 3 (ISO 11737-1) risk group 1 | moulds | quantitative testing | 1 sample | 120 € |
| 2251023 | testing for sterilization of medical devices 4 (ISO 11737-1) risk group 1 | aerobic spores | quantitative testing | 1 sample | 120 € |
| 2251030 | Tests for in vitro cytotoxicity (ISO 10993-5) | Tests for in vitro cytotoxicity (ISO 10993-5) | qualitative testing | 3 samples | pos. 100 € neg. 70 € |
| 2251031 | Testing the germ tightness of packaging materials risk group 1 | moulds | qualitative testing | 1 sample | pos. 100 € neg. 70 € |
| 2251032 | Identification of microorganisms using MALDI-ToF risk group 2 | Identification of microorganisms using MALDI-ToF | qualitative testing | 1 sample | pos. 100 € neg. 70 € |
| 2251033 | Test method Medical face masks (EN 14683) | Bacterial filter efficiency and pressure difference | quantitative testing | 1 sample á 5 face masks | 120 € |
| 2251034 | microbiological analysis of endoscopes risk group 2 | Germ identification on rinse water (3 samples) | quantitative testing | on request | 120 € |

* sometimes we used more than one method per paramter

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Please use the order form on page 49.

other building materials

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|--|-------------|---|----------------|------------|
| 2281001 | moulds (contact samples) building material risk group 1/2 | Moulds | quantitative testing | on request | on request |
| 2281002 | moulds (material samples) building material risk group 1/2 | Moulds | qualitative testing positive or negative | on request | on request |

indoor air

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|-----------------------------------|-------------|--------------------------|----------------|--------|
| 2221019 | moulds indoor air risk group 1 | Moulds | quantitative testing | 1 filter | 101 € |
| 2221020 | yeasts indoor air risk group 1 | Yeasts | quantitative testing | 1 filter | 101 € |

* sometimes we used more than one method per parameter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order from on page 49.

parasites

| Art. No. | material description | parameter * | additional information** | packaging unit | prices |
|----------|---------------------------------------|----------------------------|--------------------------|----------------|------------|
| 2201096 | cryptosporidia risk group 1 | Detection by ELISA | qualitative testing | on request | on request |
| 2201097 | trypanosoma risk group 1 | Microscopic detection | qualitative testing | on request | on request |
| 2201098 | Plasmodium falciparum risk group 1 | Microscopic detection | qualitative testing | on request | on request |
| 2201099 | ectoparasites risk group 1 | Microscopic identification | qualitative testing | on request | on request |
| 2201100 | Parasites (general) risk group 1 | Microscopic identification | qualitative testing | on request | on request |

* sometimes we used more than one method per parameter

** The values of the germ contents varies for each material from 101 to 103 KBE and can be asked before order.

Please use the order form on page 49.

| | 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 € |

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.

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.

Please do not hesitate to contact us.

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.

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:

| | |
|---|--|
| Cancellation 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

Responsible person:

| |
|-----------------|
| name, surname |
| street |
| post code, city |
| fon |
| e-mail |

Please tick as appropriate and enclose the necessary documents:

- 1 **Possession of a permission for working with pathogenic microorganisms if existing in your country?**
- yes (please enclose copy)
- no
- 2 **Possession of an exemption for working with pathogenic microorganisms if existing in your country?**
- yes (please enclose verification document)
- no
- 3 **Only for german customers the possession of a permission acc. to §44 IfSG (german infection protection law) or an exemption acc. §45 IfSG is obligatory.**
- yes (please enclose copy or verification document)
- no

Because of the fact that this permission usually is person-linked, so please inform us immediately if there is a turnover of staff and send an updated version of the permission to DRRR GmbH.

date

signature