Deutsches Referenzbüro für Ringversuche und Referenzmaterialien

Microbiology

product catalogue 2022 / 2023

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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/cans

Consumer goods in body contact such as:
• Cosmetics
• Tattoo ink
• Textiles

• Water

• Disinfectant

• Medical devices

• Building materials

• Parasites

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4 DRRR - The company

Deutsches Referenzbüro für Ringversuche und Referenzmaterialien GmbH (DRRR GmbH)

Deutsches Referenzbüro für Ringversuche und Referenzmaterialien

Proficiency testing provider

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

More than 500 PT's in 2021

Accreditation ISO/IEC 17043:2010 (A2LA)

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

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

Accredited PT-provider

ilac-MRA

A2LA ACCREDITED CERT #5494.01

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

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5 News

A2LA-Accreditation (USA)

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

proficiency testing schemes

After all accredited interlaboratory comparisons in the matrix mineral and table water were already successful in 2019, a few interlaboratory comparisons in the drinking water sector were successfully carried out in 2020. Also the proficiency testing schemes accredited since 2020 could again be carried out successfully with great response. As every year, we are striving for further developments in the different fields like foodstuffs (e.g. yeasts and moulds in the matrix dates), paper / cardboard (inhibition zone test) and medical devices (e.g. test methods for medical face masks (EN 14683) or the examination of endoscopes), but also the manifold field of parasites shall be further developed.

Returning of ten result sheets

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

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

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

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6 ODIN - proficiency testing online

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

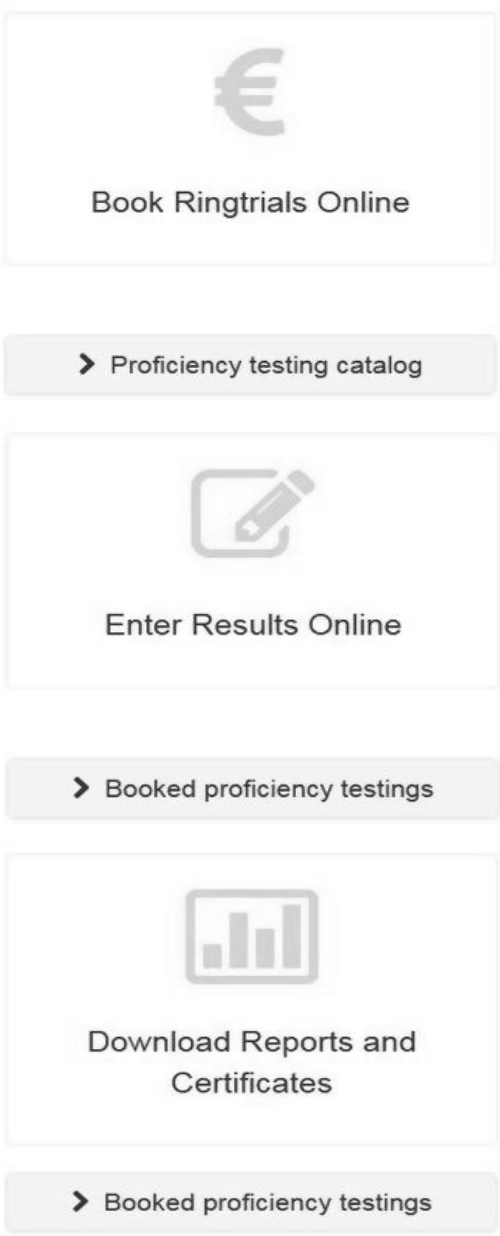
Secure payment with IRIS (Internet Remuneration Information Service).

• 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.



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7 Proficiency testing organisation

• 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.

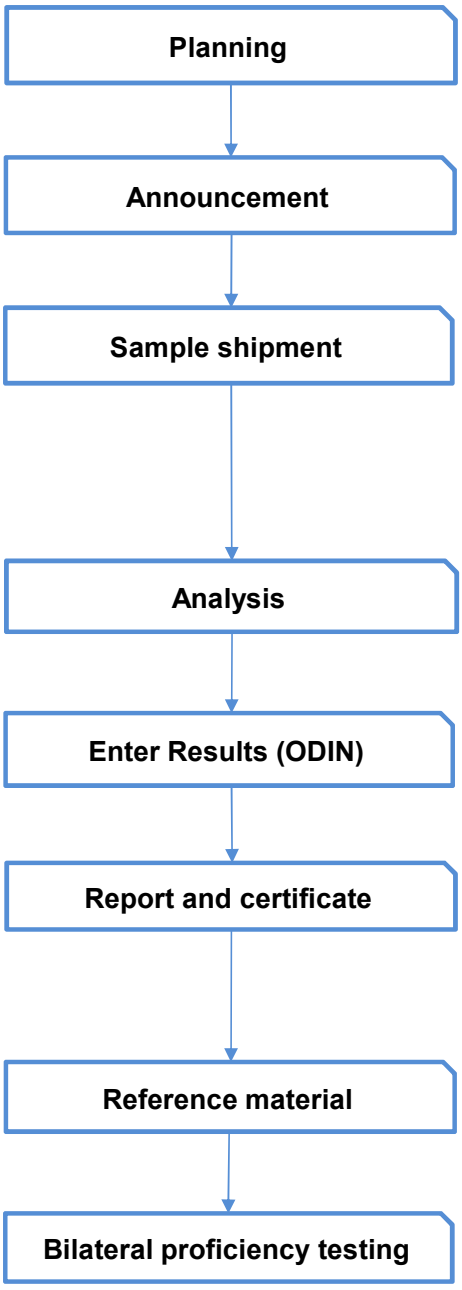
• After receiving the samples you will have a period of 4 weeks for analysing

• 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)



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8 Benefits of proficiency testing

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 analzye more samples and more parameters in one proficiency testing

• External demonstration of your performance with the results of the proficiency testing

• Build up of your own external quality assurance system with our statistical tools (contains statistical control charts, MS-Excel evaluation files and reference materials). With these tools incorporated your external quality assurance rays unmatched confidence

• Detailed planning and organization of your proficiency testing and an easier, faster and better communication with us

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9 Statistical methods

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 paramters:

- 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)

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10 Z'-score > 2: What to do?

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.

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11 Proficiency testing

Features

The microbiological proficiency testing rounds are characterized by the application of vegetative microorganisms and lyophylisates. This means that we are exclusively working with

- living bacteria
- living yeasts and moulds

in our real matrices.

Vegetative microorganisms

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 laboraotires can be presented.

Market-leading statistical evaluation

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12 microbiological proficiency testing

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-22	Login or register
2010463	E.coli milk 2 risk group 1, frozen	**E.coli, total count quantitative** (2 samples milk)	Sep-22	
2010033	Enterobact. milk 1 risk group 1, frozen	**Enterobacteriaceae, total count quantitative** (2 samples milk)	May-22	
2010465	Enterobact. milk 2 risk group 1, frozen	**Enterobacteriaceae, total count quantitative** (2 samples milk)	Nov-22	
2010089	Campylobacter spp. milk risk group 2, frozen	**Campylobacter spp. qualitative** (3 samples milk)	Feb-22 Feb-23	
2010467	aerobic spores milk risk group 1, frozen	**aerobic mesophilic spores, total count quantitative** (2 samples milk)	May-22	
2010546	psychrotrophic bacteria milk risk group 1, frozen	**psychrotrophic total count (7°C), psychrotrophic total count (21°C) quantitative** (2 samples milk)	Aug-22	
2010604	EHEC O157 milk risk grup 3**, frozen	**EHEC O157 qualitative** (3 samples milk)	Jul-22	
2010606	EHEC O104 milk risk grup 3**, frozen	**EHEC O104 qualitative** (3 samples milk)	Jul-22	
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-22	
2010612	total count in milk 1 risk group 1, frozen	**aerobic total count** (2 samples milk)	May-22	
2010614	total count in milk 2 risk group 1, frozen	**aerobic total count** (2 samples milk)	Sep-22	
2010926	Geotrichum spp. in milk (lactic mould) risk group 1, frozen	**Geotrichum spp., aerobic total count** (2 samples milk)	Nov-22	
2010924	yeasts in milk risk group 1, frozen	**yeasts, aerobic total count** (2 samples milk)	Sep-22	
2010944	norovirus milk risk group 2, frozen	**determination of norovirus qualitative** (3 samples)	Aug-22	

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

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13 microbiological proficiency testing

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 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)	Sep-22	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-22	
2010176	yeasts cheese risk group 1, frozen	**Yeasts, total count quantitative** (2 samples cheese)	May-22	
2010178	moulds cheese risk group 1, frozen	**Moulds, total count quantitative** (2 samples cheese)	May-22	
2010137	Listeria cheese risk group 2, frozen	**Listeria monocytogenes qualitative** (3 samples cheese)	Aug-22	
2010469	coagulase-positive Staphylococcus cheese risk group 2, frozen	**coagulase-positive Staphylococcus, total count quantitative** (2 samples cheese)	Jul-22	
2010471	Enterobact. cheese risk group 1, frozen	**Enterobacteriaceae, total count quantitative** (2 samples cheese, 2 samples reference solution)	Jul-22	
2010156	Bacillus cereus processed cheese risk group 2, frozen	**Bacillus Cereus, total count quantitative** (2 samples processed cheese)	May-22	

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)	Jun-22	
2010550	Salmonella spp. ice-cream risk group 2, frozen	**Salmonella spp. qualitative** (3 samples ice-cream)	Jun-22	
2010552	E.coli ice-cream risk group 1, frozen	**E.coli, total count quantitative** (2 samples ice-cream, 2 samples reference solution)	Jun-22	
2010554	L.monocytogenes ice-cream risk group 2, frozen	**Listeria monocytogenes qualitative** (3 samples ice-cream)	Jun-22	

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

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14 microbiological proficiency testing

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 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-22	Login or register
2010063	yeasts milk powder 1 risk group 1, frozen	**yeasts, total count quantitative** (2 samples milk powder)	Jan-22 Jan-23	
2010473	yeasts milk powder 2 risk group 1, frozen	**yeasts, total count quantitative** (2 samples milk powder)	Sep-22	
2010065	moulds milk powder 1 risk group 1, frozen	**moulds, total count quantitative** (2 samples milk powder)	Feb-22 Feb-23	
2010475	moulds milk powder 2 risk group 1, frozen	**moulds, total count quantitative** (2 samples milk powder)	Nov-22	
2010477	Enterobact. milk powder risk group 1, frozen	**Enterobacteriaceae, total count quantitative** (2 samples milk powder, 2 samples reference solution)	Jan-22 Jan-23	
2010479	E.coli milk powder risk group 1, frozen	**E.coli, total count quantitative** (2 samples milk powder, 2 samples reference solution)	Jan-22 Jan-23	
2010481	lactobacillus milk powder risk group 1, frozen	**lactobacillus, total count quantitative** (2 samples milk powder)	Nov-22	
2010483	Shigella spp. milk powder risk group 2, frozen	**Shigella spp. qualitative** (3 samples milk powder)	May-22	
2010095	Enterococcus milk powder risk group 1, frozen	**Enterococcus, total count quantitative** (2 samples milk powder)	Apr-22	
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-22	
2010940	Clostridia milk powder qualitative risk group 2, frozen	**sulfit-reducing Clostridia (SRC) qualitative** (3 samples milk powder)	Jun-22	
2010109	Bacillus cereus milk powder risk group 2, frozen	**Bacillus Cereus, total count quantitative** (2 samples milk powder)	May-22	
2010932	Bacillus cereus milk powder qualitative risk group 2, frozen	**B.cereus qualitative** (3 samples milk powder)	May-22	

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

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15 microbiological proficiency testing

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 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-22	Login or register
			Mar-23	
2010148	Salmonella spp. milk powder 1 risk group 2, frozen	**Salmonella spp. qualitative** (3 samples milk powder)	Mar-22	
			Mar-23	
2010485	Salmonella spp. milk powder 2 risk group 2, frozen	**Salmonella spp. qualitative** (3 samples milk powder)	Nov-22	
2010083	coagulase-positive Staphylococcus milk powder risk group 2, frozen	**coagulase-positive Staphylococcus, total count quantitative** (2 samples milk powder)	Mar-22	
			Mar-23	
2010930	coagulase-positive Staphylococcus milk powder qualitative risk group 2, frozen	**coagulase-positive Staphylococcus qualitative** (3 samples milk powder)	Mar-22	
			Mar-23	
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-22	
			Jan-23	
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-22	
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-22	
2010934	anaerobic, mesophilic spores milk powder risk group 2, frozen	**anaerobic, mesophilic spores milk powder total count quantitative** (2 samples milk powder)	Jun-22	
2010938	Pseudomonas spp. milk powder qualitative risk group 1, frozen	**Pseudomonas spp. qualitative** (3 samples milk powder)	May-22	

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

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16 microbiological proficiency testing

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.

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)	Sep-22	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)	Sep-22	
2010487	Listeria vegetables qualitative risk group 2, frozen	**Listeria monocytogenes qualitative** (3 samples vegetables)	Aug-22	
2010489	Listeria vegetables quantitative risk group 2, frozen	**Listeria monocytogenes, total count quantitative** (2 samples vegetables)	Aug-22	
2010536	osmophilic yeasts sugar solution risk group 1, frozen	**osmophilic yeasts, total count quantitative** (2 samples sugar solution)	Jun-22	
2010538	osmophilic moulds sugar solution risk group 1, frozen	**osmophilic moulds, total count quantitative** (2 samples sugar solution)	Jun-22	
2010563	yeasts dates risk group 1, frozen	**yeasts, aerobic total count quantitative** (2 Psamples dates)	Jun-22	
2010565	moulds dates risk group 1, frozen	**moulds, aerobic total count quantitative** (2 Psamples dates)	Jun-22	

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-22	
2010497	Salmonella spp. mayonnaise risk group 2, frozen	**Salmonella spp. qualitative** (3 samples mayonaise)	Dec-22	
2010530	Salmonella spp. egg products risk group 2, frozen	**Salmonella spp. qualitative** (3 samples egg products)	Dec-22	
2010532	E.coli egg products risk group 1, frozen	**E.coli, total count quantitative** (2 samples egg product, 2 samples reference solution)	Dec-22	

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

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17 microbiological proficiency testing

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.

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, 2 samples reference solution)	Apr-22	Login or register
2010199	spoiling agents in fruit juice concentrate and beverage compounds 1 risk group 1, frozen	**1 microorganism out of 3 different classes: moulds, yeasts and acid-tolerant bacteria** (3 samples for qualitative testing, 2 samples for quantitative testing)	Apr-22	
2010491	spoiling agents in fruit juice concentrate and beverage compounds 2 risk group 1, frozen	**1 microorganism out of 3 different classes: lactic acid bacteria, yeasts and acid-tolerant, gram-negative bacteria** (3 samples for qualitative testing, 2 samples for quantitative testing)	Nov-22	
2010493	Alicyclobacillus spp. in fruit juice concentrate and beverage compounds qualitative risk group 1, frozen	**Alicyclobacillus spp. qualitative** (3 samples fruit juice concentrate and beverage compounds)	Oct-22	
2010544	Salmonella spp. Tee risk group 2, frozen	**Salmonella spp. qualitative** (3 samples tea)	Nov-22	
2010592	yeasts fruit juice concentrate risk group 1, frozen	**yeasts, total count quantitative** (2 samples fruit juice concentrate)	Apr-22	
2010594	moulds fruit juice concentrate risk group 1, frozen	**moulds, total count quantitative** (2 samples fruit juice concentrate)	Apr-22	
2010596	lactobacillus fruit juice concentrate risk group 1, frozen	**lactobacillus, total count quantitative** (2 samples fruit juice concentrate)	Apr-22	
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-22	
2010946	E.coli coffee risk group 1, frozen	**E.coli, total count** (2 samples coffee)	Aug-22	
2010948	Coliforme bacteria coffee risk group 1, frozen	**coliforme bacteria, total count** (2 samples coffee)	Aug-22	

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-22	

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18 microbiological proficiency testing

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.

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-22	Login or register
			Mar-23	
2010499	E.coli ground meat 2 risk group 1, frozen	**E.coli, total count quantitative** (2 samples ground meat, 2 samples reference solution)	Nov-22	
2010039	Enterobact. ground meat 1 risk group 1, frozen	**Enterobacteriaceae, total count quantitative** (2 samples ground meat, 2 samples reference solution)	Mar-22	
			Mar-23	
2010501	Enterobact. ground meat 2 risk group 1, frozen	**Enterobacteriaceae, total count quantitative** (2 samples ground meat, 2 samples reference solution)	Nov-22	
2010142	coagulase-positive Staphylococcus ground meat risk group 2, frozen	**coagulase-positive Staphylococcus, total count quantitative** (2 samples ground, meat)	Mar-22	
			Mar-23	
2010140	Salmonella spp. ground meat 1 risk group 2, frozen	**Salmonella spp. qualitative** (3 samples ground meat)	Mar-22	
			Mar-23	
2010503	Salmonella spp. ground meat 2 risk group 2, frozen	**Salmonella spp. qualitative** (3 samples ground meat)	Nov-22	
2010174	Pseudomonas spp. ground meat risk group 2, frozen	**Pseudomonas spp., total count quantitative** (2 samples ground meat)	May-22	
2010151	Listeria ground meat qualitative 1 risk group 2, frozen	**Listeria monocytogenes qualitative** (3 samples ground meat)	Mar-22	
			Mar-23	
2010505	Listeria ground meat qualitative 2 risk group 2, frozen	**Listeria monocytogenes qualitative** (3 samples ground meat)	Aug-22	
2010507	Listeria ground meat quantitative risk group 2, frozen	**Listeria monocytogenes, total count quantitative** (2 samples ground meat)	Aug-22	
2010212	lactobacillus ground meat risk group 1, frozen	**lactobacillus, total count quantitative** (2 samples ground meat)	Mar-22	
			Mar-23	
2010146	Campylobacter spp. poultry meat risk group 2, frozen	**Campylobacter spp. qualitative** (3 samples poultry)	Feb-22	
			Feb-23	
2010936	Coliforme bacteria ground meat risk group 1, frozen	**coliforme bacteria, total count quantitative** (2 samples ground meat)	Aug-22	
2010942	Clostridia ground meat risk group 2, frozen	**sulfit-reducing Clostridia (SRC), anaerobic total count, sulfit-reducing spores, C.perfringens quantitative** (2 samples ground meat)	Jun-22	
2010277	Brochothrix thermosphacta ground meat qualitataive risk group 1, frozen	**Brochothrix thermosphacta qualitative** (3 samples	Aug-22	

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19 microbiological proficiency testing

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-22	Login or register
2010511	pathogenic Vibrio spp. seafood risk group 2, frozen	**pathogenic Vibrio spp. qualitative** (3 samples seafood)	May-22	
2010540	Salmonella spp. seafood risk group 2, frozen	**Salmonella spp. qualitative** (3 samples seafood)	May-22	

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-22	
2010195	infant food variation 2 risk group 2	**minimum 1 out of variable parameters quantitative: B.cereus,Coliforms, SRC and minimum 1 out of variable parameters qualitative: Listeria spp., E.coli and coagulase-positive Staphylococcus** (2-5 samples baby food)	Aug-22	
2010182	Bifidobacteria infant food risk group 1	**Bifidobacteria quantitative** (2 samples baby food)	May-22	
2010117	identification of germs infant food risk group 1/2	**variable germs** (1-3 samples baby food)	Aug-22	
2010273	Enterobacteriaceae infant formula (powder) qualitative risk group 1	**Enterobacteriaceae qualitative** (3 samples)	Aug-22	

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)	Jun-22	
2010519	Salmonella spp. animal feed risk group 2, frozen	**Salmonella spp. qualitative** (3 samples animal feed)	Dec-22	

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20 microbiological proficiency testing

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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-22	Login or register
			Mar-23	
2010513	Listeria convenience products risk group 2, frozen	**Listeria monocytogenes qualitative** (3 samples prepared meal)	Aug-22	
2010515	Salmonella spp. spice powder risk group 2, frozen	**Salmonella spp. qualitative** (3 samples spice powder)	Dec-22	
2010542	Salmonella spp. herbage risk group 2, frozen	**Salmonella spp. qualitative** (3 samples herbage)	Dec-22	

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21 microbiological proficiency testing

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Consumer goods in food contact:

films

Art. No.	Proficiency testing type [A]	requested parameters	period	To view pricing information visit our online Portal:
2010119	moulds foil packaging risk group 1	**determination of surface bacteria count moulds quantitative** (2 samples á 2 foil samples)	Sep-22	Login or register
2010191	aerobic bacteria foil packaging risk group 1	**determination of surface bacteria count aerobic total count quantitative** (2 samples á 2 foil samples)	Sep-22	

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)	Sep-22	
2010279	Determination of transition of antimicrobial components (EN 1104; inhinbition zone test)	**Determination of transition of antimicrobial components (EN 1104; inhinbition zone test)** (3 samples)	Sep-22	

glass / canning / cans

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-22	
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-22	
2010950	anaerobic mesophilic spores tinned food risk group 1, frozen	**anaerobic, mesophilic spores qualitative** (3 samples tinned food)	Sep-22	

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22 microbiological proficiency testing

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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 1, frozen	**aerobic bacteria quantitative** (2 samples O/W-emulsion)	Oct-22	Login or register
2010079	moulds O/W-emulsion risk group 1, frozen	**moulds quantitative** (2 samples O/W-emulsion)	Oct-22	
2010077	identification of germs O/W-emulsion risk group 2, frozen	**Identification of variable germs qualitative** (3 samples O/W-emulsion)	Oct-22	
2010356	S.aureus (ATCC 6538) O/W-emulsion risk group 2, frozen	**S.aureus qualitative** (3 samples O/W-emulsion)	Oct-22	
2010358	E.coli (ATCC 8739) O/W-emulsion risk group 2, frozen	**E.coli qualitative** (3 samples O/W-emulsion)	Oct-22	
2010360	C.albicans (ATCC 10231) O/W-emulsion risk group 2, frozen	**C.albicans qualitative** (3 samples O/W-emulsion)	Oct-22	
2010362	Ps.aeruginosa (ATCC 9027) O/W-emulsion risk group 2, frozen	**Ps.aeruginosa qualitative** (3 samples O/W-emulsion)	Oct-22	
For the following proficiency testing scheme you can not enter your results online:				
2010085	challenge test O/W-emulsion risk group 2, frozen	**challenge test (determination after 0, 2, 7, 14 and 28 days of all 5 relevant microorganism)** (5 samples O/W-emulsion)	Apr-22	

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-22	

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23 microbiological proficiency testing

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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 AATCC 100	**anitbacterial activity quantiative method** (1 - 2 textile samples)	May-22	Login or register
2010078	Antibacterial Parallel Streak AATCC 147	**anitbacterial activity qualitative method (Size of the inhibition zones [mm])** (1 - 3 textile samples)	May-22	
2010080	Antibacterial Activity ISO 20743 - AATCC 90	**- Staphylococcus aureus - Klebsiella pneumoniae anitbacterial activity quantitative using absorption method (incl. plate count procedure)** (2 textile samples)	May-22	
2010082	4-field test - microbial reduction textile EN 16615	**anitbacterial activity levurocidal activity quantiative method** (1 - 2 textile samples)	May-22	

plastics - surfaces

Art. No.	Proficiency testing type [A]	requested parameters	period	
2010623	Antibacterial activity ISO 22196	**Measurement of antibacterial activity on plastic surfaces**	May-22	

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24 microbiological proficiency testing

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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-22	Login or register
2010656	aerobic total count drinking water risk group 1	**aerobic total count quantitative** (2 samples and corresponding matrix)	Apr-22	
2010658	Enterococcus drinking water quantitative risk group 1/2	**Enterococcus quantitative** (2 samples and corresponding matrix)	Oct-22	
2010660	Ps.aeruginosa drinking water risk group 2	**Ps.aeruginosa quantitative** (2 samples and corresponding matrix)	Oct-22	
2010662	identification of germs drinking water risk group 2	**identification of variable micro organisms quantitative** (samples (positive or negative) and corresponding matrix)	Apr-22	
2010114	Legionella spp. drinking water risk group 2	**Legionella spp. quantitative** (2 samples (positive or negative) and corresponding matrix)	Sep-22	

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-22	
2010672	Enterococcus surface- and waste water risk group 1/2	**Enterococcus quantitative** (2 samples and corresponding matrix)	Oct-22	

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25 microbiological proficiency testing

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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-22	Login or register
2010960	Pseudomonas aeruginosa recooling water risk group 2	**Pseudomonas aeruginosa quantitative** (2 lyophilised samples and water)	Jul-22	
2010962	total count recooling water risk group 2	**total count quantitative** (2 lyophilised samples and water)	Jul-22	

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 22 °C, aerobic total count at 37 °C quantitative** (2 samples and corresponding matrix)	Apr-22	
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-22	
2010680	Pseudomonas aeruginosa mineral water and table water risk group 2	**Pseudomonas aeruginosa qualitative** (3 samples and corresponding matrix)	Oct-22	
2010952	anaerobic, sulfit-reducing spores mineral water and table water risk group 2	**anaerobic, sulfit-reducing spores qualitative** (3 samples and water)	Jun-22	
2010134	Coliforme bacteria mineral water and table water risk group 1	**Coliforme bacteria qualitative** (3 samples and water)	Apr-22	
2010138	E.coli mineral water and table water risk group 1	**E.coli qualitative** (3 samples and water)	Apr-22	

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26 microbiological proficiency testing

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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-22	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-22	
2010690	mycobactericidal / tuberculocidal activity (phase 2 / step 1-test)	**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-22	
2010692	sporicidal activity (phase 1-test)	**quantitative suspension test** **Bacillus subtilus-Spores (ATCC 6633)** test conditions: (a) 20 °C (b) 30, 30 and 120 minutes	Jun-22	
2010694	virucidal activity (chemical disinfectant, phase 2 / step 1-test)	**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-22	

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28 microbiological proficiency testing

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medical devices

Art. No.	Proficiency testing type [A]	requested parameters	period	To view pricing information visit our online Portal:
2010696	testing for sterilization of medical devices 1 (ISO 11737-1) risk group 1	**aerobic total count quantitative** (2 samples)	Jun-22	Login or register
2010964	testing for sterilization of medical devices 2 (ISO 11737-1) risk group 1	**yeasts quantitative** (2 samples)	Jun-22	
2010966	testing for sterilization of medical devices 3 (ISO 11737-1) risk group 1	**moulds quantitative** (2 samples)	Jun-22	
2010968	testing for sterilization of medical devices 4 (ISO 11737-1) risk group 1	**aerobic spores quantitative** (2 samples)	Jun-22	
2010281	Tests for in vitro cytotoxicity (ISO 10993-5)	**Tests for in vitro cytotoxicity (ISO 10993-5)** (3 samples)	Nov-22	
2010283	Testing the germ tightness of packaging materials risk group 1	**Testing the germ tightness of packaging materials** (2 samples)	Nov-22	
2010657	Identification of microorganisms using MALDI-ToF risk group 2	**Identification of microorganisms using MALDI-ToF** (1 sample)	Nov-22	
2010321	Test method Medical face masks (EN 14683)	**Bacterial filter efficiency where appropriate also pressure difference** (1 sample á 12 face masks)	May-22	
2010567	microbiological analysis of endoscopes risk group 2	**Germ identification on rinse water** (3 samples)	Oct-22	

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28 microbiological proficiency testing

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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-22	Login or register
2010684	moulds (material samples) risk group 2	**moulds qualitative** (3 samples building material)	Apr-22	

indoor air

Art. No.	Proficiency testing type [A]	requested parameters	period	
2010954	moulds indoor air risk group 1	**moulds quantitative** (2 samples gel filter)	Apr-22	
2010956	yeasts indoor air risk group 1	**yeasts quantitative** (2 samples gel filter)	Apr-22	

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29 microbiological proficiency testing

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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-22	Login or register
2010287	trypanosoma risk group 1	**Microscopic detection** (1-3 slide preparations)	Jun-22	
2010289	Plasmodium falciparum risk group 1	**Microscopic detection** (1-3 slide preparations)	Jun-22	
2010291	ectoparasites risk group 1	**Microscopic identification** (1-3 slide preparations)	Jun-22	
2010293	Parasites (general) risk group 1	**Microscopic identification** (1-3 slide preparations)	Jun-22	

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30 registration form proficiency testing

Deutsches Referenzbüro für Ringversuche und Referenzmaterialien

Article No. / proficiency testing type	period	result release and report online (ODIN)	result release by e-mail / fax; report by e-mail	report by postal delivery	additional sample sets

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 comparisions 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. Cancelation 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

o this registration is permanent-registration and valid until my cancelation

o An offer with the total costs is needed

o 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

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31 reference material

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

Profit with our high quality standards for your lab work

These materials are suitable for the calibration of equipment, for the quality assurance of testing methods or to analyse derivate reference materials. DRRR-Reference materials are essential for the chemical, physical, microbiological and sensory analytics as well as for the quality assurance. Standards for the accreditation of testing and calibration laboratories demand the using of reference materials.
The use of reference materials (RM) and certified reference materials (CRM) is an important procedure to avoid mistakes in the lab routine.

Characteristics

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

- 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

Identification

Availability and order request of reference material

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.

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32 microbiological reference material

Please use the order from 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	66 €
2201002	reference solution Enterobacteriaceae risk group 1, frozen	**Enterobacteriaceae (VRBD), total count (PC)**	quantitative testing	10 ml	66 €
2201003	E.coli milk risk group 1, frozen	**E.coli (TBX), total count (PC)**	quantitative testing	10 ml	66 €
2201004	Enterobacteriaceae milk risk group 1, frozen	**Enterobacteriaceae (VRBD), total count (PC)**	quantitative testing	10 ml	66 €
2201005	aerobic spores milk risk group 1, frozen	**aerobic spores (PC), total count (PC)**	quantitative testing	10 ml	66 €
2201006	Campylobacter spp. milk risk group 2, frozen	**Campylobacter spp. (CCD)**	qualitative testing (3 samples)	3 x 25 ml	95 €
2201076	psychrotrophic bacteria milk risk group 1, frozen	**psychrotrophic total count (7°C) (PC), psychrotrophic total count (21°C) (PC)**	quantitative testing	10 ml	66 €
2201074	yeasts milk risk group 1, frozen	**yeasts (YGC), total count (PC)**	quantitative testing	10 ml	66 €
2201075	Geotrichum milk (lactic mould) risk group 1, frozen	**Geotrichum spp. (YGC) aerobic total count (PC)**	quantitative testing	10 ml	66 €
2201091	EHEC O157 milk risk grup 3**, frozen	**EHEC O157**	qualitative testing (3 samples) (only available during the period of the proficiency testing)	3 x 25 ml	95 €
2201092	EHEC O104 milk risk grup 3**, frozen	**EHEC O104**	qualitative testing (3 samples) (only available during the period of the proficiency testing)	3 x 25 ml	95 €
2201085	norovirus milk risk group 2, frozen	**determination of norovirus**	qualitative testing (3 samples)	3 x 25 g	95 €

** sometimes we used more than one method per paramter*
*** The values of the germ contens varies for each material from 101 to 103 KBE and can be asked before order.*

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33 microbiological reference material

Please use the order from 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	66 €

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	66 €
2201008	L.monocytogenes cheese risk group 2, frozen	**L.monocytogenes (ALOA)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201009	Enterobacteriaceae cheese risk group 1, frozen	**Enterobacteriaceae (VRBD), total count (PC)**	quantitative testing	10 g	66 €
2201010	moulds cheese risk group 1, frozen	**Moulds (YGC), total count (PC)**	quantitative testing	10 g	66 €
2201011	yeasts cheese risk group 1, frozen	**Yeasts (YGC), total count (PC)**	quantitative testing	10 g	66 €
2201012	coagulase-positive Staphylococcus cheese risk group 2, frozen	**coagulase-positive Staphylococcus (BP), total count (PC)**	quantitative testing	10 g	66 €
2201013	B.cereus processed cheese risk group 2, frozen	**B.cereus (MYP), total count (PC)**	quantitative testing	10 g	66 €

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	66 €
2201065	Salmonella spp. ice-cream risk group 2, frozen	**Salmonella spp. (XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201064	E.coli ice-cream risk group 1, frozen	**E.coli (TBX), total count (PC)**	quantitative testing	10 g	66 €
2201066	L.monocytogenes ice-cream risk group 2, frozen	**L.monocytogenes (ALOA)**	qualitative testing (3 samples)	3 x 25 g	95 €

** sometimes we used more than one method per paramter*
*** The values of the germ contens varies for each material from 101 to 103 KBE and can be asked before order.*

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34 microbiological reference material

Please use the order from 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	66 €
2201015	moulds milk powder risk group 1, frozen	**moulds (YGC), total count (PC)**	quantitative testing	10 g	66 €
2201016	yeasts milk powder risk group 1, frozen	**yeasts (YGC), total count (PC)**	quantitative testing	10 g	66 €
2201017	E.coli milk powder risk group 1, frozen	**E.coli (TBX), total count (PC)**	quantitative testing	10 g	66 €
2201018	Enterobacteriaceae milk powder risk group 1, frozen	**Enterobacteriaceae (VRBD), total count (PC)**	quantitative testing	10 g	66 €
2201019	Enterococcus milk powder risk group 1, frozen	**Enterococcus (CATC), total count (PC)**	quantitative testing	10 g	66 €
2201020	Lactobacillus milk powder risk group 1, frozen	**Lactobacillus (MRS), total count (PC)**	quantitative testing	10 g	66 €
2201021	Shigella spp. milk powder risk group 2, frozen	**Shigella spp. (HEA / XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €
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	66 €
2201083	Clostridia milk powder qualitative risk group 2, frozen	**sulfit-reducing Clostridia (SRC)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201023	B.cereus milk powder risk group 2, frozen	**B.cereus (MYP), total count (PC)**	quantitative testing	10 g	66 €
2201079	B.cereus milk powder qualitative risk group 2, frozen	**B.cereus (MYP)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201024	Cronobacter spp. milk powder risk group 2, frozen	**Cronobacter spp. (ESIA)**	qualitative testing (3 samples)	3 x 25 g	95 €

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35 microbiological reference material

Please use the order from 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 (3 samples)	3 x 25 g	95 €
2201026	coagulase-positive Staphylococcus milk powder quantitative risk group 2, frozen	**coagulase-positive Staphylococcus (BP), total count (PC)**	quantitative testing	10 g	66 €
2201078	coagulase-positive Staphylococcus milk powder qualitative risk group 2, frozen	**coagulase-positive Staphylococcus (BP)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201028	L.monocytogenes milk powder qualitative risk group 2, frozen	**L.monocytogenes (ALOA)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201027	L.monocytogenes milk powder quantitative risk group 2, frozen	**L.monocytogenes (ALOA), total count (PC)**	quantitative testing	10 g	66 €
2201062	thermophilic bacteria milk powder risk group 1, frozen	**thermophilic aerobic total count (55 °C, vegetative), thermalresistant Spores of thermophilc bacteria**	quantitative testing	10 g	66 €
2201080	anaerobic, mesophilic spores milk powder risk group 2, frozen	**anaerobic, mesophilic spores milk powder, total count quantitative (PC)**	quantitative testing	10 g	66 €
2201082	Pseudomonas spp. milk powder risk group 2, frozen	**Pseudomonas spp. (CFC)**	qualitative testing (3 samples)	3 x 25 g	95 €

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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	66 €
2201030	moulds fruit preparation qualitative risk group 1, frozen	**Moulds (YGC)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201031	yeasts fruit preparation quantitative risk group 1, frozen	**yeasts (YGC)**	quantitative testing	10 g	66 €
2201032	yeasts fruit preparation qualitative risk group 1, frozen	**yeasts (YGC)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201033	L.monocytogenesvegetables quantitative risk group 2, frozen	**L.monocytogenes (ALOA), total count (PC)**	quantitative testing	10 g	66 €
2201034	L.monocytogenesvegetables quailtative risk group 2, frozen	**L.monocytogenes (ALOA)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201067	osmophiilic yeasts sugar solution risk group 1, frozen	**osmophilic yeasts (YGC), total count (PC)**	quantitative testing	10 g	66 €
2201068	osmophilic moulds sugar solution risk group 1, frozen	**osmophilic moulds (YGC), total count (PC)**	quantitative testing	10 g	66 €
2201102	yeasts dates risk group 1, frozen	**yeasts, aerobic total count**	quantitative testing	10 g	66 €
2201103	moulds dates risk group 1, frozen	**moulds, aerobic total count**	quantitative testing	10 g	66 €

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 (3 samples)	3 x 25 g	95 €
2201037	Enterobacteriaceae egg products risk group 1, frozen	**Enterobacteriaceae (VRBD), total count (PC)**	quantitative testing	10 g	66 €
2201056	Salmonella spp. egg products risk group 2, frozen	**Salmonella spp. (XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201057	E.coli egg products risk group 1, frozen	**E.coli (TBX), total count (PC)**	quantitative testing	10 g	66 €

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37 microbiological reference material

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	66 €
2201058	Alicyclobacillus spp. in fruit juice concentrate and beverage compounds qualitative risk group 1, frozen	**Alicyclobacillus spp. (BAT)**	qualitative testing (3 samples)	10 ml	95 €
2201061	Salmonella spp. tea risk group 2, frozen	**Salmonella spp. (XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201069	yeasts fruit juice concentrate risk group 1, frozen	**yeasts (YGC), total count (PC)**	quantitative testing	10 ml	66 €
2201070	moulds fruit juice concentrate risk group 1, frozen	**moulds (YGC), total count (PC)**	quantitative testing	10 ml	66 €
2201071	lactobacillus fruit juice concentrate risk group 1, frozen	**Lactobacillus (MRS), total count (PC)**	quantitative testing	10 ml	66 €
2201072	acetic acid bacteria fruit juice concentrate risk group 1, frozen	**acetic acid bacteria (OSA), total count (PC)**	quantitative testing	10 ml	66 €
2201086	E.coli coffee risk group 1, frozen	**E.coli (TBX), total count (PC)**	quantitative testing	10 ml	66 €
2201087	Coliforme bacteria coffee risk group 1, frozen	**coliforme bacteria (VRB), total count (PC)**	quantitative testing	10 ml	66 €
2201090	spoiling agents in fruit juice concentrate and beverage risk group 1, frozen	**spoiling agent qualitative microorganisms can vary between moulds, yeasts, acetic acid bacteria or lactobacillus**	qualitative testing (3 samples)	3 x 25 g	95 €

alcoholic beverages

Art. No.	material description	parameter *	additional information**	packaging unit	prices
2201094	Dekkera bruxellensis wine risk group 1, frozen	**Dekkera bruxellensis**	qualitative testing (3 samples)	3 x 25 g	95 €

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38 microbiological reference material

Please use the order from 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	66 €
2201039	Enterobact. ground meat 1 risk group 1, frozen	**Enterobacteriaceae (VRBD), total count (PC)**	quantitative testing	10 g	66 €
2201040	Lactobacillus ground meat risk group 1, frozen	**Lactobacillus (MRS), total count (PC)**	quantitative testing	10 g	66 €
2201041	coagulase-positive Staphylococcus ground meat risk group 2, frozen	**coagulase-positive Staphylococcus (BP), total count (PC)**	quantitative testing	10 g	66 €
2201042	Pseudomonas spp. ground meat risk group 2, frozen	**Pseudomonas spp. (CFC), total count (PC)**	quantitative testing	10 g	66 €
2201043	Salmonella spp. ground meat risk group 2, frozen	**Salmonella spp. (XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201044	L.monocytogenes ground meat quantitative risk group 2, frozen	**L.monocytogenes (ALOA), total count (PC)**	quantitative testing	10 g	66 €
2201045	L.monocytogenes ground meat qualitative risk group 2, frozen	**L.monocytogenes (ALOA)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201046	Campylobacter spp. poultry risk group 2, frozen	**Campylobacter spp. (CCD)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201081	Coliforme Bakterien ground meat risk group 1, frozen	**coliforme bacteria, total count (PC)**	quantitative testing	10 g	66 €
2201084	Clostridia ground meat risk group 2, frozen	**sulfit-reducing Clostridia (SRC), anaerobic total count, sulfit-reducing spores, C.perfringens**	quantitative testing	10 g	66 €
2201095	Brochothrix thermosphacta ground meat risk group 1, frozen	**Brochothrix thermosphacta**	qualitative testing (3 samples)	3 x 25 g	95 €

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 (3 samples)	3 x 25 g	95 €
2201048	pathogenic Vibrio spp. seafood risk group 2, frozen	**pathogenic Vibrio spp.**	qualitative testing (3 samples)	3 x 25 g	95 €
2201060	Salmonella spp. seafood risk group 2, frozen	**Salmonella spp. (XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €

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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	66 €
2201054	Salmonella spp. animal feed risk group 2, frozen	**Salmonella spp. (XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €

infant formula

Art. No.	material description	parameter *	additional information**	packaging unit	prices
2201093	Enterobacteriaceae infant formula (powder) risk group 1	**Enterobacteriaceae**	qualitative testing (3 samples)	3 x 25 g	95 €

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 (3 samples)	3 x 25 g	95 €
2201050	Salmonella spp. spice powder risk group 2, frozen	**Salmonella spp. (XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201052	L.monocytogenes convenience products risk group 2, frozen	**L.monocytogenes (ALOA)**	qualitative testing (3 samples)	3 x 25 g	95 €
2201059	Salmonella spp. herbage risk group 2, frozen	**Salmonella spp. (XLD)**	qualitative testing (3 samples)	3 x 25 g	95 €

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Consumer goods in food contact:

films

Art. No.	material description	parameter *	additional information**	packaging unit	prices
2251001	moulds foil packaging risk group 1	**surface determination of moulds**	quantitative testing	2 foils	66 €
2251002	aerobic bacteria foil packaging risk group 1	**surface determination of aerobic bacteria**	quantitative testing	2 foils	66 €

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	66 €
2251029	Determination of transition of antimicrobial components (EN 1104; inhinbition zone test)	**Determination of transition of antimicrobial components (EN 1104; inhinbition zone test)**	qualitative testing (3 samples)	3 samples	95 €

glass / canning / cans

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 (3 samples)	3 x 190 g	95 €
2251019	thermophilic sterility testing tinned food risk group 1, frozen	**thermophilic germ load (55°C) (products with low acidity (pH > 4,5))**	qualitative testing (3 samples)	3 x 190 g	95 €
2251020	anaerobic mesophilic spores tinned food risk group 1, frozen	**anaerobic, mesophilic spores**	qualitative testing (3 samples)	3 x 190 g	95 €

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41 microbiological reference material

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Consumer goods in body contact:

cosmetics

Art. No.	material description	parameter *	additional information**	packaging unit	prices
2251005	aerobic bacteria O/W-emulsion risk group 1, frozen	**aerobic bacteria (CASO)**	quantitative testing	10 g	66 €
2251006	moulds O/W-emulsion risk group 1, frozen	**moulds (SDA)**	quantitative testing	10 g	66 €
2251007	E.coli O/W-emulsion risk group 2 frozen	**ATCC 8739 E.coli (CASO)**	qualitative testing (3 samples)	3 x 10 g	95 €
2251008	S.aureus O/W-emulsion risk group 2, frozen	**ATCC 6538 S.aureus (CASO)**	qualitative testing (3 samples)	3 x 10 g	95 €
2251009	identification of germs O/W-emulsion risk group 2, frozen	**identification of germs**	qualitative testing (3 samples)	3 x 10 g	95 €
2251010	C.albicans O/W-emulsion risk group 2, frozen	**ATCC 10231 C.albicans (SDA / PDA)**	qualitative testing (3 samples)	3 x 10 g	95 €
2251011	Ps.aeruginosa O/W-emulsion risk group 2, frozen	**ATCC 9027 Ps.aeruginosa (CASO)**	qualitative testing (3 samples)	3 x 10 g	95 €
2251028	challenge test O/W-emulsion risk group 2, frozen	**challenge test (determination after 0, 2, 7, 14 and 28 days of all 5 relevant microorganism)**	on request	on request	66 €

tatto 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	66 €

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42 microbiological reference material

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Consumer goods in body contact:

textiles

Art. No.	material description	parameter *	additional information**	packaging unit	prices
2251024	Antimicrobial Fabric Test AATCC 100	**anitbacterial activity quantiative method**	quantitative testing	on request	79 €
2251025	Antibacterial Parallel Streak AATCC 147	**anitbacterial activity qualitative method (Size of the inhibition zones [mm])**	qualitative testing	on request	79 €
2251026	Antibacterial Activity ISO 20743 - AATCC 90	**- Staphylococcus aureus - Klebsiella pneumoniae anitbacterial activity quantitative using absorption method (incl. plate count procedure)**	quantitative testing	on request	79 €
2251027	4-field test - microbial reduction textile EN 16615	**anitbacterial activity levurocidal activity quantiative method**	quantitative testing	on request	79 €

plastics - surfaces

Art. No.	material description	parameter *	additional information**	packaging unit	prices
2251035	Antibacterial activity ISO 22196	**Measurement of antibacterial activity on plastic surfaces**	quantitative testing	on request	79 €

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43 microbiological reference material

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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	52 €
2221002	aerobic total count drinking water risk group 1	**aerobic total count**	quantitative testing	on request	52 €
2221003	Enterococcus drinking water quantitative risk group 1/2	**Enterococcus**	quantitative testing	on request	52 €
2221004	Ps. Aeruginosa drinking water risk group 2	**Ps. Aeruginosa**	quantitative testing	on request	52 €
2221005	identification of germs drinking water risk group 1/2	**identification of variable micro organisms**	quantitative testing	on request	52 €
2221021	Legionella spp. drinking water risk group 2	**Legionella spp. quantitative**	quantitative testing	on request	52 €

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	52 €
2221010	Enterococcus surface- and waste water risk group 2	**Enterococcus**	quantitative testing	on request	52 €

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44 microbiological reference material

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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	52 €
2221017	Pseudomonas aeruginosa recooling water risk group 2	**Pseudomonas aeruginosa**	quantitative testing	on request	52 €
2221016	total count recooling water risk group 2	**total count**	quantitative testing	on request	52 €

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 at 22 °C, aerobic total count at 37 °C**	quantitative testing	on request	52 €
2221012	streptococci (faecal) mineral water and table water risk group 2	**streptococci (faecal)**	qualitative testing (3 samples)	on request	73 €
2221013	E.coli mineral water and table water risk group 1	**E.coli**	qualitative testing (3 samples)	on request	73 €
2221022	Coliforme bacteria mineral water and table water risk group 1	**Coliforme bacteria**	qualitative testing (3 samples)	on request	73 €
2221014	Pseudomonas aeruginosa mineral water and table water risk group 2	**Pseudomonas aeruginosa**	qualitative testing (3 samples)	on request	73 €
2221015	anaerobic, sulfit-reducint spores mineral water and table water risk group 2	**anaerobic, sulfit-reducing spores**	quantitative testing	on request	52 €

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45 microbiological reference material

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disinfectant

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

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	66 €
2251021	testing for sterilization of medical devices 2 (ISO 11737-1) risk group 1	**yeasts**	quantitative testing	1 sample	66 €
2251022	testing for sterilization of medical devices 3 (ISO 11737-1) risk group 1	**moulds**	quantitative testing	1 sample	66 €
2251023	testing for sterilization of medical devices 4 (ISO 11737-1) risk group 1	**aerobic spores**	quantitative testing	1 sample	66 €
2251030	Tests for in vitro cytotoxicity (ISO 10993-5)	**Tests for in vitro cytotoxicity (ISO 10993-5)**	qualitative testing	3 samples	95 €
2251031	Testing the germ tightness of packaging materials risk group 1	**moulds**	qualitative testing	1 sample	66 €
2251032	Identification of microorganisms using MALDI-ToF risk group 2	**Identification of microorganisms using MALDI-ToF**	qualitative testing	1 sample	66 €
2251033	Test method Medical face masks (EN 14683)	**Bacterial filter efficiency where appropriate also pressure difference**	quantitative testing	1 sample á 5 face masks	66 €
2251034	microbiological analysis of endoscopes risk group 2	**Germ identification on rinse water (3 samples)**	quantitative testing	on request	66 €

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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 (3 samples)	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	66 €
2221020	yeasts indoor air risk group 1	**Yeasts**	quantitative testing	1 filter	66 €

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47 microbiological reference material

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

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48 other products / services

Please use the order from 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 dan-gerous 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 dan-gerous 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 €
	Excel-Sheets lab own's measure-ment uncertainty MICROBIOLOGY	**These systems are convenient for the calculation of your lab own's measurement uncertainty.**	Licence contract between customer and DRRR GmbH required.	-	20 €

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49 order form reference material

Deutsches Referenzbüro für Ringversuche und Referenzmaterialien

quantity	material type / material description / article no.	notes (e.g. time period for regular delivery)

For reference materials 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.**

Please notice that we process orders only at a minimum order value of 50 €.

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

- o An offer with the total costs is needed
- o 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

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50 quality management / quality assurance

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.

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IR-Seminar

The IR-seminar explains how to analyze different kind of food by IR spectroscopy. Furthermore specific peculiarties for the IR calibartion of selected food will be discussed. The specific peculiarties 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 excericise calibration data sets will be testes for suitability and critical data sets will be identifed.

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.

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

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.

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, qui²-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.

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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.

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.

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)

For special requirements we also offer customised training programmes.

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

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53 Sales terms and delivery conditions

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!

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54 General terms and conditions

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

§ 1 General terms and conditions

The client acknowledges the General Terms and Conditions and price lists valid at the time of placing the order. Deviating terms and conditions of individual clients cannot be accepted.
Collateral agreements, promises and other declarations by the employees of the DRRR are only binding if they are expressly confirmed in writing by the DRRR. This shall also apply to amendments to this clause.
If individual regulations within this contract or its components are ineffective, this does not affect the validity of the remaining regulations. The contracting parties shall have a duty, acting in accordance with the principles of good faith, to replace any invalid provision by one which is valid and which produces the same economic outcome as that intended by the invalid provision and providing that such replacement does not result in any change to the content of the contract; the same shall also apply analogously to any matter which requires regulation but for which no provision is made in these Terms and Conditions.

§ 2 Execution of the order

The orders accepted by the DRRR shall be carried out or expert opinions shall be prepared in accordance with the recognized rules of technology and – unless otherwise agreed in writing – in the manner customary at the DRRR. No responsibility shall be assumed for the correctness of the safety programs or safety regulations on which the tests are based, unless expressly agreed otherwise in writing.
The scope of the DRRR's work shall be specified in writing when the order is placed. If the proper execution of the order results in changes or extensions to the specified scope of the order, such changes or extensions shall be agreed in writing prior to execution. If the Customer can no longer be reasonably expected to adhere to the contract with regard to the changes or extensions, the Customer shall in this case be entitled to withdraw from the contract. However, according to § 649 BGB, the client must pay the agreed remuneration or, in the absence of an agreement, an appropriate remuneration.
The contractual services of the DRRR are deemed to have been rendered upon preparation of the respective final reports or expert reports.
A seminar registration can be cancelled free of charge for up to 6 weeks, after which the customer will be invoiced for the costs of the participants depending on the time and effort involved.

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

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

§ 3 Deadlines

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

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55 General terms and conditions

§ 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.

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General terms and conditions

§ 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

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57 Permission for working with pathogenic microorganisms

Deutsches Referenzbüro für Ringversuche und Referenzmaterialien

Responsible person:

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

Please tick as approprate and enclose the necessary documents:

1 **Posession of a permission for working with pathogenic microorganisms if existing in your country?**

- O yes (please enclose copy)
- O no

2 **Posession of an exemption for working with pathogenic microorganisms if existing in your country?**

- O yes (please enclose verification document)
- O no

3 **Only for german customers the posession of a permission acc. to §44 IfSG (german infection protection law) or an exemption acc. §45 IfSG is obligatory.**

- O yes (please enclose copy or verification document)
- O 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 _____

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