

# **Environmental analytics**

chemical-physical

immunological, molecular biological & microbiological

# product catalogue 2026



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# **DRRR** - The company



# Deutsches Referenzbüro für Ringversuche und Referenzmaterialien GmbH (DRRR GmbH)

#### Proficiency testing provider

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

More than 1100 PT's per year

#### Accreditation ISO/IEC 17043:2023 (A2LA)

The DRRR is an accredited proficiency testing provider by A2LA according to ISO/IEC 17043:2023. 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** 





#### Reference material producer

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

#### **Customer support**

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

Any time competent contact persons

# **Proficiency testing**



#### **Features**

The inspectors of the DRRR-team are represent in different national and international committees and working groups. Thus we ensure that the DRRR quality assurance systems are available for new and up-to-date questions in all cases, if the laboratories start to establish the routine method. Due to the intensive professional exchange in the committees, it is ensured that the proficiency testing design is conformed to the new developments and the laboratories have the highest possible benefits in a participation in the proficiency testing.

National and international committees and working groups

#### Testing with matrix reference

Whenever possible, real matrices e.g. films, textiles, cardboard and cosmetics are used. This ensures that our proficiency testing schemes have an actual matrix reference and the sample preparation is part of the proficiency testing.

Matrix reference

#### 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

# **Individual Proficiency testing**



In addition to our standard programme, DRRR GmbH can organise customerspecific proficiency tests that are individually designed to your needs. Due to many years of experience in a wide range of testing and analytical areas, we are your contact for such queries.

Your customised proficiency test

Examples of customised proficiency tests carried out by DRRR:

- Qualification programmes for the automotive industry
- Qualification programmes for the textile industry
- Proficiency tests to verify methodological expertise in the area of consumer goods
- Group-wide proficiency tests to improve comparability in the area of consumer goods
- Qualification programmes in the area of food monitoring
- Association-specific proficiency tests for the fruit juice industry

Benefit from our high quality standards in all important fields of testing.

Your proficiency testing project is planned in close co-operation with the project partners. Depending on your requirements, all steps, from registration to report, can be taken over.

Statistical know-how, expertise and the established, customer-oriented processes of the DRRR ensure the successful organisation of your proficiency testing project.

Get in touch with us.

We look forward to working with you!

# **Proficiency testing - chemical-physical**



Art. no.	Proficiency testing type [A]		Parameters [*]	Period	To view pricing information:		
Soil					Login or register		
2011277	Elution of solids - percolation method (DIN 19528)		chromium (1st percolation) $[\mu g/l]$ , molybdenum (1st percolation) $[\mu g/l]$ , vanadium (1st percolation) $[\mu g/l]$ , sulphate (1st percolation) $[m g/l]$ , PAH15 (1st percolation) $[\mu g/l]$ , chromium (2:1-column percolation) $[\mu g/l]$ , molybdenum (2:1-column percolation) $[\mu g/l]$ , vanadium (2:1-column percolation) $[\mu g/l]$ , sulphate (2:1-column percolation) $[m g/l]$ , PAH15 (2:1-column percolation) $[\mu g/l]$ (all quantitative)	Oct-26			
2011278	Hydrocarbons in soil (ISO 16703)		total petroleum hydrocarbons (TPH) from $C_{10}$ to $C_{40}$ [mg/kg] (all quantitative)	Dec-26			
2011127	PFAS in soil		total perfluorooctanesulfonic acid (CAS 1763-23-1) [ $\mu$ g/kg dry matter], total perfluorooctanoic acid (CAS 335-67-1) [ $\mu$ g/kg dry matter], total perfluorononanoic acid (CAS 375-95-1) [ $\mu$ g/kg dry matter], total perfluorohexane sulfonic acid (CAS 355-46-4) [ $\mu$ g/kg dry matter], dry matter [ $g$ /100 $g$ ] (all quantitative)	Jun-26			
Drink	king water - NEW!						
2011379	Drinking water - pH, conductivity (ISO 10523, ISO 7888)		pH value [ - ], electrical conductivity [mS/m] (all quantitative)	Dec-26			
2011380	Drinking water - 1,2,4-triazole		1,2,4-triazole (CAS 288-88-0) [µg/l] (all quantitative)	Nov-26			
2011381	Drinking water - contaminants		bisphenol A (CAS 80-05-7) [ $\mu$ g/l], epichlorhydrin (CAS 106-89-8) [ $\mu$ g/l], acrylamide (CAS 79-06-1) [ $\mu$ g/l] (all quantitative)	Nov-26			
Drink	Drinking water						
2011123	PFAS in drinking water		total perfluorooctanesulfonic acid (CAS 1763-23-1) [ng/l], total perfluorooctanoic acid (CAS 335-67-1) [ng/l], total perfluorononanoic acid (CAS 375-95-1) [ng/l], total perfluorohexane sulfonic acid (CAS 355-46-4) [ng/l], total perfluorobutanoic acid (CAS 375-22-4) [ng/l], total perfluoropentanoic acid (CAS 2706-90-3) [ng/l], total perfluorohexanoic acid (CAS 307-24-4) [ng/l], total perfluorohexanoic acid (CAS 307-24-4) [ng/l], total perfluorohexanoic acid (CAS 307-24-4) [ng/l], total perfluorodecanoic acid (CAS 307-51-2) [ng/l], total perfluorodecanoic acid (CAS 307-55-1) [ng/l], total perfluorotridecanoic acid (CAS 307-55-1) [ng/l], total perfluorobutane sulfonic acid (CAS 375-93-8) [ng/l], total perfluoropentane sulfonic acid (CAS 375-92-8) [ng/l], total perfluoroheptane sulfonic acid (CAS 375-92-8) [ng/l], total perfluorodecane sulfonic acid (CAS 335-77-3) [ng/l], total perfluorodecane sulfonic acid (CAS 335-77-3) [ng/l], total perfluorodecane sulfonic acid (CAS 37980-39-5) [ng/l], total perfluorodecane sulfonic acid (CAS 79780-39-5) [ng/l], total perfluorotridecane sulfonic acid (CAS 791563-89-8) [ng/l] (all quantitative)	Sep-26			
2010395	Microplastic – particle number		particle number [particle number / g] (all quantitative)	Dec-26			
Marii	Marine water - NEW!						
2011382	Marine water - metals		arsenic (As) [ $\mu$ g/I], chromium (Cr) [ $\mu$ g/I], copper (Cu) [ $\mu$ g/I], mercury (Hg) [ $\mu$ g/I], nickel (Ni) [ $\mu$ g/I], zinc (Zn) [ $\mu$ g/I], lead (Pb) [ $\mu$ g/I], cadmium (Cd) [ $\mu$ g/I] (all quantitative)	Dec-26			
2011383	Marine water - chlorite, chlorate		chlorite [µg/l], chlorate [µg/l] (all quantitative)	Dec-26			

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<sup>[\*] =</sup> Specified parameters correspond to the status of the catalogue publication. The binding parameters for the respective proficiency testing can be viewed in our online portal (ODIN).

# **Proficiency testing - chemical-physical**



Art. no.	Proficiency testing type [A]	Parameters [*]	Period	To view pricing information:		
Surfa	Surface- and waste water (bath water) - NEW!					
2011369	Synthetic waste water - VOC	benzene (CAS 71-43-2) [μg/l], o-cresol (CAS 95-48-7) [μg/l], m-cresol (CAS 108-39-4) [μg/l], p-cresol (CAS 106-44-5) [μg/l], toluene (CAS 108-88-3) [μg/l], xylene (CAS 1330-20-7) [μg/l] (all quantitative)	Jun-26			
2011370	Synthetic waste water - PAH	acenaphthene (CAS 83-32-9) [µg/l], acenaphthylene (CAS 208-96-8) [µg/l], anthracene (CAS 120-12-7) [µg/l], benzo[a]anthracene (CAS 56-55-3) [µg/l], benzo[a]pyrene (CAS 50-32-8) [µg/l], benzo[b]fluoranthene (CAS 205-99-2) [µg/l], benzo[e]pyrene (CAS 192-97-2) [µg/l], benzo[g]fluoranthene (CAS 191-24-2) [µg/l], benzo[j]fluoranthene (CAS 205-82-3) [µg/l], benzo[k]fluoranthene (CAS 207-08-9) [µg/l], chrysene (CAS 218-01-9) [µg/l], dibenzo[a,h]anthracene (CAS 53-70-3) [µg/l], fluoranthene (CAS 206-44-0) [µg/l], fluorene (CAS 86-73-7) [µg/l], indeno[1,2,3-cd]pyrene (CAS 193-39-5) [µg/l], naphthalene (CAS 91-20-3) [µg/l], phenanthrene (CAS 85-01-8) [µg/l], pyrene (CAS 129-00-0) [µg/l] (all quantitative)	Jun-26			
2011371	Synthetic waste water - PCB	PCB 28 (CAS 7012-37-5) [ $\mu$ g/I], PCB 52 (CAS 35693-99-3) [ $\mu$ g/I], PCB 101 (CAS 37680-73-2) [ $\mu$ g/I], PCB 118 (CAS 31508-00-6) [ $\mu$ g/I], PCB 138 (CAS 35065-28-2) [ $\mu$ g/I], PCB 153 (CAS 35065-27-1) [ $\mu$ g/I], PCB 180 (CAS 35065-29-3) [ $\mu$ g/I] (all quantitative)	Jun-26			
2011376	Synthetic waste water - aromatic amines from azo dyes	o-toluidine (CAS 95-53-4) [ $\mu$ g/I], o-anisidine (CAS 90-04-0) [ $\mu$ g/I], o-dianisidine (CAS 119-90-4) [ $\mu$ g/I], 5-nitro-o-toluidine (CAS 99-55-8) [ $\mu$ g/I], o-aminoazotoluene (CAS 97-56-3) [ $\mu$ g/I], 4-chloroaniline (CAS 106-47-8) [ $\mu$ g/I], 3,3'-dichlorobenzidine (CAS 91-94-1) [ $\mu$ g/I], benzidine (CAS 92-87-5) [ $\mu$ g/I], o-tolidine (CAS 119-93-7) [ $\mu$ g/I], 2,4-diaminotoluene (CAS 95-80-7) [ $\mu$ g/I], 2,4-xylidine (CAS 95-88-1) [ $\mu$ g/I], 2,6-xylidine (CAS 87-62-7) [ $\mu$ g/I] (all quantitative)	Jun-26			
2011377	Synthetic waste water - organotin compounds	n-butyltintrichloride (as cation) (CAS 1118-46-3) [μg/l], n-octyltintrichloride (as cation) (CAS 3091-25-6) [μg/l], di-n-butyltindichloride (as cation) (CAS 683-18-1) [μg/l], di-n-octyltindichloride (as cation) (CAS 3542-36-7) [μg/l], tri-n-butyltinchloride (as cation) (CAS 1461-22-9) [μg/l], triphenyltinchloride (as cation) (CAS 639-58-7) [μg/l], tricyclohexyltinchloride (as cation) (CAS 3091-32-5) [μg/l], tetra-n-butyltin (CAS 1461-25-2) [μg/l] (all quantitative)	Jul-26			
2011378	Synthetic waste water - phthalates	DMEP (CAS 117-82-8) [μg/l], BBP (CAS 85-68-7) [μg/l], DCHP (CAS 84-61-7) [μg/l], DIDP (CAS 26761-40-0) [μg/l], DIOP (CAS 27554-26-3) [μg/l], DIBP (CAS 84-69-5) [μg/l], DINP (CAS 28553-12-0) [μg/l], DHEXP (CAS 84-75-3) [μg/l], DNOP (CAS 117-84-0) [μg/l], DPP (CAS 131-18-0) [μg/l], DPP (CAS 131-16-8) [μg/l], DEP (CAS 117-81-7) [μg/l], DBP (CAS 84-74-2) [μg/l], DEP (CAS 84-66-2) [μg/l], DIPP (CAS 605-50-5) [μg/l], DNP (CAS 84-76-4) [μg/l] (all quantitative)	Jul-26			

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# Proficiency testing - immunological, molecular biological & microbiological



Art. no.	Proficiency testing type [A]		Parameters [*]	risk group	Period	To view pricing information:
Drinking water - NEW!						
2011346	Enumeration of somatic coliphages in water (ISO 10705-2)		somatic coliphages [pfu/100 ml] (all quantitative)	risk group 1	Nov-26	
Drink	king water					
2010660	Enumeration of Ps. aeruginosa in drinking water		Ps.aeruginosa [cfu/100ml] (all quantitative)	risk group 2	Jul-26	
2010658	Enumeration of enterococci in drinking water		Enterococcus [cfu/100ml] (all quantitative)	risk group 1	Apr-26	
2010656	Aerobic total count drinking water		aerobic total count 36°C [KbE/ml], aerobic total count 22°C [KbE/ml] (all quantitative)	risk group 1	Apr-26	
2010654	Enumeration of E. coli & coliforms in drinking water		E.coli [cfu/100ml], Coliforms [cfu/100ml] (all quantitative)	risk group 1	Apr-26	
2010114	Enumeration of Legionella spp. in drinking water		Legionella spp. (direct plating) [cfu/100ml], Legionella spp. membrane filtration (with acid treatment) [cfu/100ml] (all quantitative)	risk group 2	Sep-26	
Surfa	ace- and waste water (bat	h w	ater)			
	Enumeration of E. coli & coliforms in surface and waste water		E.coli [cfu/100ml], Coliforms [cfu/100ml] (all quantitative)	risk group 1	Apr-26	
2010672	Enumeration of enterococci in surface and waste water		Enterococcus [cfu/100ml] (all quantitative)	risk group 1	Apr-26	
Reco	oling water					
2010958	Enumeration of Legionella spp. in recooling water		Legionella spp. membrane filtration (after heat treatment) [cfu/100ml], Legionella spp. membrane filtration (with acid treatment) [cfu/100ml], Legionella spp. plating (original sample) [cfu/100ml], Legionella spp. plating (after heat treatment) [cfu/100ml], Legionella spp. plating (with acid treatment) [cfu/100ml] (all quantitative)	risk group 2	Sep-26	
2010960	Enumeration of Ps. aeruginosa in recooling water		Ps.aeruginosa [cfu/100ml] (all quantitative)	risk group 2	Jul-26	
2010962	Enumeration of aerobic total count in recooling water		aerobic total count 36°C [cfu/ml], aerobic total count 22°C [cfu/ml] (all quantitative)	risk group 2	Jul-26	
Indo	or air					
2011301	Identification moulds in indoor air		identification of moulds [genus] (all qualitative)	risk group 1	Jul-26	
2010954	Enumeration moulds indoor air		moulds [cfu/filter] (all quantitative)	risk group 1	Jul-26	
Biode	egradation					
	CO2 evolution test (ISO 9439, OECD 301B)		Final degree of degradation [%], Biodegradation $t=3$ h [%], Biodegradation $t=1$ d [%], Biodegradation $t=3$ d [%], Biodegradation $t=7$ d [%], Biodegradation $t=10$ d [%], Biodegradation $t=14$ d [%], Biodegradation $t=17$ d [%], Biodegradation $t=23$ d [%], Biodegradation $t=28$ d [%] (all quantitative)		Sep-26	
2011137	Zahn-Wellens, EMPA test (ISO 9888, OECD 302B)		Final degree of degradation [%], Biodegradation $t=3$ h [%], Biodegradation $t=1$ d [%], Biodegradation $t=3$ d [%], Biodegradation $t=7$ d [%], Biodegradation $t=10$ d [%], Biodegradation $t=14$ d [%], Biodegradation $t=17$ d [%], Biodegradation $t=23$ d [%], Biodegradation $t=28$ d [%] (all quantitative)		Sep-26	
2011138	Plastic materials - aerobic biodegradability (ISO 14855-2,		Biodegradation via CO2 [%] (all quantitative)		Oct-26	
2011139	ASTM D5338-15) Plastic materials - anaerobic biodegradability (ASTM D5511)		Biodegradation via CO2 and CH4 development [%] (all quantitative)		Oct-26	

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# registration form proficiency testing



Quantity	Art. No. / Proficiency testing type	
Ç,	3 44	For questions and
		suggestions do not
		hesitate to contact the
		DRRR-team!
		+49(0)831/960 878-0
		info@DRRR.de
		© DRRR rev.: 30.10.2025 (changes reserved)
	led with "risk group 2, or 3**" we need a permission or an exemp b if existing in your country (e.g. "infection protection law (IfSG)	
inical or organizational reasons. In these rare of	ncy testing round will not be carried out within the scope of accreditation cases the DRRR will inform the participants before the start of the proficie diately free cancellation for the participants is possible until the date of the carried state of the carried state.	ency testing
Your registration is an one-time order. It is only valid for one year. Cancelation fees apply when cancelling a	This registration is permanent-registration and valid until my can  An offer with the total costs is needed	celation
registration. If you want to have a permanent-registration please tick the box on the right side.	A Purchase order from the purchasing department will follow	
er by e-mail:	info@DRRR.de	
by we confirm obligatorily the participation in the order for the additional sample sets.	the above mentioned test(s)	
· ·		DRRR-customer numi
		company
		additional line
		contact person
		street
		post code / city
		country
		email
		VAT-ID (EU)
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:		_

#### 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

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

Profit with our high quality standards for your lab work

#### Characteristics

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

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

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

#### **Availability**

For all Proficiency testing schemes in this catalogue reference material is available. You can contact us for price information or for currently available reference materials. Availability and order request of reference material

# **ODIN** - proficiency testing online



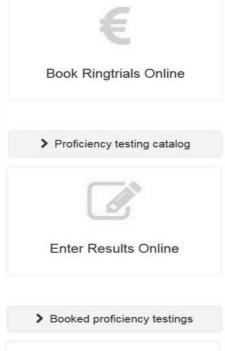
Simply brilliant, your proficiency testing with ODIN (Online Data Information Network).

- 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.



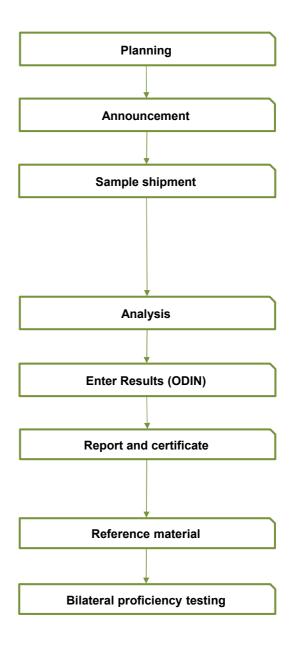
# **Proficiency testing organisation**



- 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 approximately 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)



## **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



Image source: iStock.com/3dts

## Statistical methods



#### We work according to:

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

#### Laboratory performance:

by calculation of the following paramters:

- z-score
- · z'-score
- CRD-Wert

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)

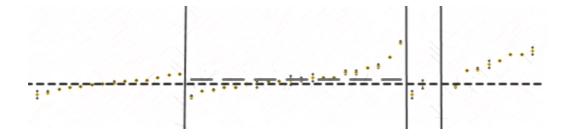
Homogeneous and stable sample material

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

Selection of statistical method with the chi<sup>2</sup>-fit test

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

Additional extended method evaluation (in case data are available)



#### 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.

#### 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.

# 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.

We offer assistance for the following questions:

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

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

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

Please do not hesitate to contact us.

## seminars / training / consulting



#### **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 users

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.

# seminars / training / consulting

#### 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.

### 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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reserved)

#### 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:

Canadation natification naviada	Permanent registration (D)		
Cancelation notification period:	single (one-time) registration (E)		
un to 2 months hafaya the musticianay testing	no costs (D)		
up to 3 months before the proficiency testing	50,00 € (E)		
2 months hafaya tha musfisianay taating atout	50,00 € (D)		
3 months before the proficiency testing start	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.

#### 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.

#### 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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