

# Consumer goods and Packaging

## product catalogue 2021 / 2022



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chemical-physical

organoleptic

### In the fields:

Consumer goods /  
packaging in food  
contact such as:

- Films
- Paper and board
- Glass / canning /  
cans

Contamination from  
packaging

Consumer goods in  
body contact such as:

- Textiles
- Cosmetics
- Tattoo ink
- Jewellery

Other consumer goods  
such as:

- Printing inks
- Toys
- Cleaning agent
- Leather
- E-cigarettes

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



#### Proficiency testing provider

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

**More than 500 PT's in 2020**

#### 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 valid only for the scope listed in the annex of the accreditation certificate [#5494.01].

**Accredited PT-provider**

In the product catalogue in the column "Accreditation" it is marked accordingly whether the proficiency test is covered by the scope of A2LA or whether the proficiency test is not covered by the scope of accreditation.



#### 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].

In the product catalogue in the column "Accreditation" it is marked accordingly whether the proficiency test is covered by the scope of DAkkS or whether the proficiency test is not covered by any scope of accreditation.

#### Reference material producer

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

**High-quality reference material**

#### Customer support

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

**Any time competent contact persons**

### **A2LA-Accreditation (USA)**

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

### **Adhesive**

Adhesives have become an indispensable part of our lives and are used in the manufacture of many products. There is a multitude of different adhesives that cure by different chemical or physical processes, e.g. polymerization, polyaddition, polycondensation, drying or cooling. For household use, it is important that the handicraft adhesives used mostly by children do not contain any ingredients that are harmful to health. Therefore, this year we are offering a new proficiency testing program in the field of adhesives, in which preservatives, formaldehyde, VOC and solvents are tested.

### **Enamel and Ceramics**

Many kitchen utensils are made of enamel or ceramic. If these products are colored, metals such as lead, cadmium and cobalt may be released. It is therefore important to check the migration of metals from enamel and ceramics.

### **Paper / board**

We are expanding our offer in the field of chemical-physical analysis of paper and cardboard. Proficiency testing for the determination of specific migration and extraction of selected parameters will be available from 2021. In addition, there will be a proficiency testing or the gravimetric determination of dry content, ash and residue on ignition.

### **Films**

In order to meet the new requirements according to VO (EU) 2020/1245, we offer various additional specific migration tests, e.g. for primary aromatic amines and for heavy metals.

### **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**

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

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

## Secure payment with IRIS (Internet Remuneration Information Service).

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

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



Book Ringtrials Online

➤ Proficiency testing catalog



Enter Results Online

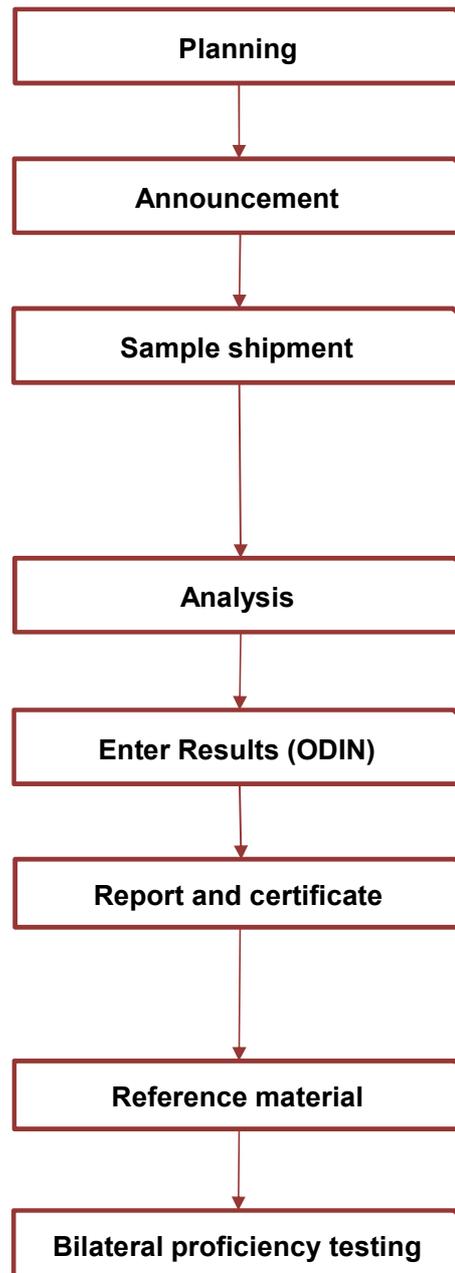
➤ Booked proficiency testings



Download Reports and  
Certificates

➤ Booked proficiency testings

- A precise planning and organisation of each proficiency testing round
- 2 weeks before we will dispatch the samples you will get an announcement with the proficiency testing details
- All materials send out are in line with a homogeneity test and stability test; therefore we reserve the right to purchase the sample and engage the testing take through external qualified subcontractors
- After receiving the samples you will have a period of 4 weeks for analysing
- Mail back the results via internet by using our result sheets in an Excel file or fill out our result sheets online in ODIN
- At the latest 3 weeks after the deadline you will get the report (optional by login in ODIN, as hardcopy by regular mail or as pdf-file by e-mail) incl. participation certificate with overview of your lab performance
- After the proficiency testing we can offer you reference materials
- Possibility to perform a bilateral proficiency testing (bPT)



## Why take part in proficiency testing?

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

## Your benefits in DRRR proficiency testing schemes

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



Image source:  
iStock.com/3dts

**We work according to:**

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

Homogenous and stable sample material

**Laboratory performance:**

by calculation of the following parameters:

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

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

**Statistical models:**

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

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

Selection of statistical method with the 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)**



**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.

**Your terms and conditions:**

You have participated in the regular DRRR-proficiency testing and you would like to verify your performance. 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.

**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.

Costs for the bPT 75,00 € + sample material and shipping costs

Alternative you can also order reference material.

## Features

The inspectors of the DRRR-team are represented 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 laboratory can be presented.

**Market-leading statistical evaluation**

For your registration we recommend to use our online catalogue (ODIN) or the registration forms on our homepage ([www.DRRR.de](http://www.DRRR.de)). You can also use the registration forms on page 28 of this catalogue.

## films

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010073	overall migration one sided contact EN 1186-5; EN 1186-4	overall migration in food simulating matrix: ethanol 10%; 20%; 50%, acetic acid 3%, distilled water, vegetable oil	Oct-21	379 €	127 €	[A], [D]
2010304	overall migration total immersion EN 1186-2; EN 1186-3	overall migration in food simulating matrix: ethanol 10%; 20%; 50%, acetic acid 3%, distilled water, vegetable oil	Nov-21	379 €	127 €	[A], [D]
2010570	overall migration by article filling EN 1186-9	overall migration in food simulating matrix: ethanol 10%; 20%; 50%, acetic acid 3%	Jul-21	379 €	127 €	[A], [D]
2010572	overall migration fatty foodstuffs ("substitute tests")	overall migration in food simulating matrix: ISO-octane, ethanol 95%	Mar-21	379 €	127 €	[A], [D]
			Mar-22	379 €	127 €	[A], [D]
2010574	overall migration at high temperatures EN 1186-13	overall migration in food simulating matrix: olive oil	Mar-21	379 €	127 €	[A], [D]
			Mar-22	379 €	127 €	[A], [D]
2010622	overall Migration from plastic using MPPO as a simulant EN 1186-13	overall migration by using Tenax (MPPO) as a simulant	Jan-21	379 €	127 €	[A], [D]
			Jan-22	379 €	127 €	[A], [D]
2010311	overall migration (pouch) EN 1186-7, EN 1186-6	overall migration in simulants: ethanol 10%, 20%, 50%, acetic acid 3% and vegetable oil	Sep-21	379 €	127 €	[A], [D]
2010075	specific migration (caprolactam) CEN/TS 13130-16	specific migration of caprolactam in food simulating matrix: ethanol 10%; 20%; 50%, acetic acid 3%, distilled water, vegetable oil	Dec-21	379 €	127 €	[A], [D]
2010306	specific migration (1-octen) EN 13130-26	specific migration of 1-octen in food simulating matrix: ethanol 50%, 95% ,vegetable oil	May-21	379 €	127 €	[A], [D]
2010308	specific migration (acrylonitrile) EN 13130-3	specific migration of acrylonitrile in food simulating matrix: ethanol 10%, acetic acid 3%, distilled water, olive oil	Aug-21	379 €	127 €	[A], [D]
2010310	specific migration (terephthalic acid) EN 13130-2	specific migration of terephthalic acid in food simulating matrix: Ethanol 10%; 50%, acetic acid 3%, distilled water, vegetable oil	Aug-21	379 €	127 €	[A], [D]
2010628	specific migration (melamine)	specific migration of melamin in food simulating matrix: ethanol 10%, acetic acid 3%, distilled water, vegetable oil	Aug-21	379 €	127 €	[A], [D]

\* price only valid by online result release and report in ODIN / price for result release by mail/fax plus 40,00 € /  
price for report by post plus 40,00 €

\*\* additional submitted result sheets by e-mail, post or fax will be charged as additional sample sets

[A] = Proficiency test under scope of A2LA accreditation

[D] = Proficiency test under scope of DAkkS accreditation

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## films

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010630	specific migration (vinyl acetate) CEN/TS 13130-9	specific migration of vinyl acetate in food simulating matrix: ethanol 10%, acetic acid 3%, distilled water, olive oil	Mar-21	379 €	127 €	[A], [D]
			Mar-22	379 €	127 €	[A], [D]
2010251	specific migration (acrylonitrile trimers)	acrylonitrile trimers	Aug-21	379 €	127 €	[A], [D]
2010401	specific migration (primary aromatic amines) 1	CAS 95-53-4 (o-toluidine), CAS 92-87-5 (benzidine), CAS 62-53-3 (aniline) and CAS 91-94-1 (3,3'-dichlorobenzidine) in simulant distilled water, 3% acetic acid	May-21	379 €	127 €	[A], [D]
2010403	specific migration (primary aromatic amines) 2	CAS 90-04-0 (2-methoxyaniline), CAS 106-47-8 (4-chloroaniline), CAS 91-59-8 (2-naphthylamine) and CAS 119-93-7 (3,3'-dimethylbenzidine) in simulant 10% ethanol and 15% ethanol	May-21	379 €	127 €	[A], [D]
2010464	specific migration metals part 1	specific migration of antimony, arsenic, cadmium in simulant acetic acid 3%, water	Okt. 21	379 €	127 €	[A], [D]
2010466	specific migration metals part 2	specific migration of total chromium, lead, iron in simulant acetic acid 3%, water	Okt. 21	379 €	127 €	[A], [D]
2010115	identification of film material: mono-layer plastic film	qualitative identification of mono films	Sep-21	369 €	123 €	[A], [D]
2010167	identification of different PA types	e.g. PA6, PA6.6, PA11, PA12	Mar-21	369 €	123 €	[A], [D]
			Mar-22	369 €	123 €	[A], [D]
2010210	identification of plastic granules	qualitative determination of plastic granules	Mar-21	369 €	123 €	[A], [D]
			Mar-22	369 €	123 €	[A], [D]
2010312	identification of film material: multi-layer plastic films	qualitative identification of multi-layer films	Mar-21	369 €	123 €	[A], [D]
			Mar-22	369 €	123 €	[A], [D]
2010220	testing of ethylene glycol in food simulating matrix EN 13130-7	ethylene glycol in food simulating matrix: ethanol 10%; 20%; 50%, acetic acid 3%, distilled water, vegetable oil	Jun-21	379 €	127 €	[A], [D]
2010222	testing of di-ethylene glycol in food simulating matrix EN 13130-7	di-ethylene glycol in food simulating matrix: ethanol 10%; 20%; 50%, acetic acid 3%, distilled water, vegetable oil	Jun-21	379 €	127 €	[A], [D]
2010578	testing of Bisphenol A in food simulating matrix	testing of Bisphenol A in food simulating matrix: distilled water, acetic acid 3%, ethanol 10%	Sep-21	379 €	127 €	[A], [D]

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[D] = Proficiency test under scope of DAkkS accreditation

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## films

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010580	testing of formaldehyde in food simulating matrix CEN /TS 13130-23	testing of formaldehyde in food simulating matrix: distilled water, acetic acid 3%, ethanol 10%, vegetable oil	Aug-21	379 €	127 €	[A], [D]
2010632	testing of acrylamide in food simulating matrix CEN/TS 13130-10	testing of acrylamide in food simulating matrix: ethanol 10%, acetic acid 3%, distilled water, olive oil	Jun-21	369 €	123 €	[A], [D]
2010322	determination of overall migrat on synthetic samples	determination of overall migrat in simulating matrix: ethanol 10%; 20%; 50%, acetic acid 3%, distilled water	Jul-21	379 €	127 €	[A], [D]
2010582	determination of the phthalate content in consumer goods	DBP, BBP, DEHP, DNOP, DINP, DIDP, DEP, DMP	Oct-21	450 €	150 €	[A], [D]
2010584	determination of vinylchloride monomer in synthetic sample	vinyl chloride monomer	Oct-21	400 €	133 €	[A], [D]
2010634	acetaldehyde in mineral water	acetaldehyde	Jul-21	379 €	127 €	[A], [D]
2010576	determination of overall migration potential by rapid extraction	overall migration in food simulating matrix: ISO-octane, ethanol 95%	Apr-21	379 €	127 €	[A], [D]
2010636	determination of bisphenol A content in plastics	bisphenol A monomer	Apr-21	379 €	127 €	[A], [D]
2010638	determination of 1,3 butadiene content in plastics	1,3 butadiene monomer	May-21	379 €	127 €	[A], [D]
2010307	styrol oligomers in synthetic samples	CAS 1081-75-0 (1,3-Diphenylpropane), CAS 16606-47-6 (2,4-Diphenyl-1-butene), CAS 20071-09-4 (trans-1,2-Diphenylcyclobutane), CAS 18964-53-9 (2,4,6-Triphenyl-1-hexene) and CAS 26681-79-8 (1-Phenyl-4-(1-phenylethyl)-1,2,3,4-tetrahydronaphthalene)	Dec-21	369 €	123 €	[A], [D]
2010405	determination of the PAH content in plastics	CAS 91-20-3 (naphthalene), CAS 120-12-7 (anthracene), CAS 56-55-3 (benzo(a)anthracene), CAS 218-01-9 (chrysene), CAS 205-99-2 (benzo(b)fluoranthene), CAS 207-08-9 (benzo(k)fluoranthene), CAS 205-82-3 (benzo(j)fluoranthene), CAS 192-97-2 (benzo(e)pyrene), CAS 50-70-3 (benzo(a)pyrene), CAS 53-70-3 (dibenz(ah)anthracene) (at least 5 of the parameters quantitative)	May-21	379 €	127 €	[A], [D]

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### paper / board

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010318	mineral oil in cardboard	MOSH C16-C25, MOSH C25-C35, MOAH C16-C25, MOAH C25-C35	Nov-21	389 €	129 €	[A], [D]
2010180	mineral oil in foodstuff	MOSH C16-C25, MOSH C25-C35, MOSH C35-C50, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50	May-21	389 €	129 €	[A], [D]
2010590	mineral oil in cocoa butter and chocolate	MOSH C16-C25, MOSH C25-C35, MOSH C35-C50, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50	Jul-21	389 €	129 €	[A], [D]
2010245	mineral oil in cheese and milk powder	MOSH C16-C25, MOSH C25-C35, MOSH C35-C50, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50	Jul-21	389 €	129 €	[A], [D]
2010320	mineral oil in edible fat and edible oil	MOSH C16-C25, MOSH C25-C35, MOSH C35-C50, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50	Aug-21	389 €	129 €	[A], [D]
2010586	migration of mineral oil from cardboard	Migration of mineral oil in food simulating matrix: Tenax	Mar-21	389 €	129 €	[A], [D]
			Mar-22	389 €	129 €	[A], [D]
2010620	migration from paper and board using MPPO as a simulant EN 14338	overall migration by using Tenax (MPPO) as a simulant	Nov-21	379 €	127 €	[A], [D]
2010640	pH value in aqueous extract (cold and hot)	pH value	Nov-21	379 €	127 €	[A], [D]
2010642	formaldehyde in aqueous extract EN 1541	formaldehyde (cold water extract)	Jul-21	379 €	127 €	[A], [D]
2010644	determination of glyoxal content DIN 54603	glyoxal (cold water extract)	Jun-21	379 €	127 €	[A], [D]
2010646	colour fastness of dyed paper and board (EN 646)	testing with distilled water, acetic acid 3%, olive oil, alkali salt solution	May-21	379 €	127 €	[A], [D]
2010648	colour fastness of fluorescent whitened paper and board (EN 648)	testing with distilled water, acetic acid 3%, olive oil, alkali salt solution	May-21	379 €	127 €	[A], [D]
2010442	overall migration of paper and cardboard	overall migration in simulant ethanol 95%	Apr-21	379 €	127 €	[A], [D]
2010448	specific migration (Benzophenone)	specific migration of benzophenone in simulant ethanol 95%	Apr-21	379 €	127 €	[A], [D]
2010711	gravimetric determination of constituents of paper - cardboard	dry content, residue on ignition, ash	May-21	379 €	127 €	[A], [D]

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### paper / board

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010450	determination of the DIPN content in paper - cardboard (EN 14719)	DIPN (Diisopropylnaphthalin)	May-21	379 €	127 €	[A], [D]
2010452	determination of 1,3-dichloro-2-propanol and 3-monochloro-1,2-propanediol	1,3-dichloro-2-propanol, 3-monochloro-1,2-propanediol in water extract	Jun-21	379 €	127 €	[A], [D]
2010454	PCB in paper - cardboard	total PCB content	Jun-21	379 €	127 €	[A], [D]
2010456	cadmium and lead in aqueous extract (EN 12498)	cadmium, lead	Jul-21	379 €	127 €	[A], [D]
2010458	determination of acid soluble manganese (ISO 1830)	manganese	Jul-21	379 €	127 €	[A], [D]
2010460	bisphenol S in thermal paper	Bisphenol S	Aug-21	379 €	127 €	[A], [D]

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## textiles

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010324	extractable heavy metals in textiles	cadmium, lead, nickel, mercury, chromium	Jul-21	379 €	127 €	[A], [D]
2010185	formaldehyde	free and hydrolised formaldehyde	May-21	379 €	127 €	[A], [D]
2010326	flameretardants	tributyl phosphate (CAS No 126-73-8), o-triskresyl phosphate (CAS No 78-30-8), tris(2-chloroethyl)-phosphate (CAS No 115-96-8), tris(2-chloro-1-methylethyl)-phosphate (CAS No 13674-84-5)	Dec-21	379 €	127 €	[A], [D]
2010328	azo dyes qual. and quant.	Qualitative and quantitative determination of aromatic amines derived from azo dyes acc. EN 14362-1. The quantitative determination is not in the Scope of accreditation.	Nov-21	379 €	127 €	[A], [D]
2010224	aniline in textiles	CAS 62-53-3 (aniline)	May-21	379 €	127 €	[A], [D]
2010225	2,4-xylydine and 2,6-xylydine in textiles	CAS 95-68-1 (2,4-xylydine), CAS 87-62-7 (2,6-xylydine)	May-21	379 €	127 €	[A], [D]
2010226	alkylphenols and alkylphenol ethoxylates in textiles	CAS 68412-54-5 (nonylphenol ethoxylate), CAS 9002-93-1 (octylphenol ethoxylate), CAS 84852-15-3 4-(nonylphenol isomer mixture), CAS 140-66-9 (4-tert-octylphenol)	Nov-21	379 €	127 €	[A], [D]
2010227	chlorophenols in textiles	Tetrachlorophenol-, trichlorophenol-, dichlorophenol-, monochlorophenol-isomers and CAS 87-86-5 (pentachlorophenol)	Nov-21	379 €	127 €	[A], [D]
2010173	organotin compounds in textiles	CAS 1118-46-3 (monobutyltin trichloride), CAS 3091-25-6 (trichlorooctylstannane), CAS 683-18-1 (dibutyltin dichloride), CAS 3542-36-7 (dioctyltin dichloride), CAS 1461-22-9 (tributyltin chloride), CAS 639-58-7 (triphenyltin chloride), CAS 3091-32-5 (tricyclohexyltin chloride), CAS 1461-25-2 (tetra-n-butyltin)	Oct-21	379 €	127 €	[A], [D]
2010175	perfluorinated compounds in textiles	CAS 1763-23-1 (perfluorooctane sulfonic acid)	Oct-21	379 €	127 €	[A], [D]
2010177	pesticides in textiles	Chlorinated and phosphorus containing pesticides	Sep-21	379 €	127 €	[A], [D]
2010179	metals in textiles	e.g. tin, cadmium and mercury	Sep-21	379 €	127 €	[A], [D]

Proficiency Testing for mechanical textile testing can be found in the catalogue "material testing" or the online catalogue: e. g. fabric properties, functional properties, colour fastness, determination of fibre blends, laminated fabrics, personal protective equipment (PPE)

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## textiles

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010181	phthalates in textiles	CAS 28553-12-0 (DINP), CAS 117-81-7 (DEHP), CAS 117-84-0 (DNOP), CAS 26761-40-0 (DIDP), CAS 85-68-7 (BBP), CAS 84-74-2 (DBP), CAS 84-69-5 (DIBP), CAS 131-18-0 (DPP), CAS 71888-89-6 (DIHP), CAS 117-82-8 (DMEP)	Aug-21	379 €	127 €	[A], [D]
2010527	PAH in textiles	CAS 91-20-3 (naphthalene), CAS 120-12-7 (anthracene), CAS 56-55-3 (benzo(a)anthracene), CAS 218-01-9 (chrysene), CAS 205-99-2 (benzo(b)fluoranthene), CAS 207-08-9 (benzo(k)fluoranthene), CAS 205-82-3 (benzo(j)fluoranthene), CAS 50-70-3 (benzo(e)pyrene), CAS 50-70-3 (benzo(a)pyrene), CAS 53-70-3 (dibenz(ah)anthracene) (minimum 5 of the parameters quantitative) A PAH concentration in the samples of approximately 0,1-10 mg/kg per PAH is to be expected.	Aug-21	379 €	127 €	[A], [D]
2010184	release of aromatic amines from azo dyes in textiles by skin bacteria	CAS 100-01-6 (nitroaniline)	Dec-21	379 €	127 €	[A]
2010430	determination of lead release with saliva simulant solution in textiles (EN 16711-3)	lead	May-21	379 €	127 €	[A], [D]

Proficiency Testing for mechanical textile testing can be found in the catalogue "material testing" or the online catalogue: e. g. **fabric properties, functional properties, colour fastness, determination of fibre blends, laminated fabrics, personal protective equipment (PPE)**

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### tattoo ink

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010338	preservatives in tattoo ink	benzothiazolinone (BIT)	Dec-21	260 €	87 €	[A], [D]
2010340	aromatic amins in tattoo ink	aniline, o-Anisidine, o-toluidine, 5-nitro-o-toluidine, o-dianisidine	Dec-21	379 €	127 €	[A], [D]
2010560	elements in tattoo ink	tin, zinc, nickel, strontium, antimony, barium, cadmium, cobalt, lead (minimum 4 of the parameters quantitative)	Apr-21	260 €	87 €	[A], [D]

### jewellery

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010568	jewellery (acc. to EN 1811)	testing for nickel release	Jul-21	379 €	127 €	[A], [D]

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## cosmetics

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010330	soap	AOX, EOX	Sep-21	369 €	123 €	[A], [D]
2010206	care products	methylparaben, ethylparaben, propylparaben, n-butylparaben, phenoxyethanol, benzoic acid, sorbic acid, methylisothiazolinone, isobutylparaben	Oct-21	379 €	127 €	[A], [D]
3010015	shampoo, lotion	fat, density, pH-value, dry residue, water content, urea	Aug-21	379 €	127 €	[A], [D]
2010201	cream, lotion	dexpanthenol, tocopherolacetat, retinolpalmitate	Sep-21	379 €	127 €	[A], [D]
3010017	dental care	fluoride	Oct-21	250 €	84 €	[A], [D]
2010332	metals in cosmetics	aluminium, copper, zinc	Apr-21	369 €	123 €	[A], [D]
2010700	heavy metals in cosmetics	lead, arsenic, antimony, nickel, cobalt, zinc, cadmium	Oct-21	379 €	127 €	[A], [D]
2010334	quant. determination of UV filters	EHS, BMDM, EHT, PBSA, OC, titanium dioxide	Apr-21	379 €	127 €	[A], [D]
2010336	PAH in decorative cosmetics	naphthalene, anthracene, benzo(a)anthracene, chrysene, benzo(b)fluoranthren, benzo(k)fluoranthren, benzo(j)fluoranthren, benzo(e)pyren, benzo(a)pyren, dibenz(ah)anthracene (minimum 3 of the parameters quantitative) A PAH concentration in the samples of approximately 0,5-50 mg/kg per PAH is to be expected.	Jul-21	379 €	127 €	[A], [D]
2010556	tensides in cosmetics	Sodium Laureth Sulfate, Cocamidopropyl betaine (CAPB), Coco-glucoside	Feb-21	379 €	127 €	[A], [D]
			Feb-22	379 €	127 €	[A], [D]
2010558	mineral oil hydrocarbons in care products	MOSH C10 - C50, MOAH C10 - C50	Mar-21	379 €	127 €	[A], [D]
			Mar-22	379 €	127 €	[A], [D]
2010650	anti dandruff substances	pirocton-olamine, zinc pyrithione	Mar-21	379 €	127 €	[A], [D]
			Mar-22	379 €	127 €	[A], [D]

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## cosmetics

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010652	solvents	ethanol, isopropyl alcohol, acetone, glycol	Aug-21	379 €	127 €	[A], [D]
2010329	perfume, body spray	flash point	Aug-21	310 €	103 €	-
2010397	Self-tanner	dihydroxyacetone, erythrulose, formaldehyde	Apr-21	379 €	127 €	[A], [D]
2010399	determination of sunscreen UVA photoprotection in vitro (ISO 24443)	UVA photoprotection	Apr-21	379 €	127 €	-

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## printing inks

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010314	migration of printing ink constituents quant. determination of monomers and initiators -round 1-	CAS 94108-97-1: Di(tri-methylolpropan)tetraacrylat (Di-TMPTA), CAS 57472-68-1: Dipropylene glycol diacrylate (DPGDA), CAS 119313-12-1: 1-Butanone,2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)- CAS 84434-11-7: 2,4,6-trimethylbenzoylphenyl phosphinate  food simulating matrices: 50% ethanol, 95% ethanol	Jul-21	520 €	177 €	[A], [D]
2010316	migration of printing ink constituents quant. determination of monomers and initiators -round 2-	CAS 42978-66-5: Tri(propylene glycol)diacrylate (TPGDA), CAS 15625-89-5: Tri(methylolpropan)triacrylate (TMPTA), CAS 272460-97-6: 1-Propanone,1-[4-[(4-benzoylphenyl)thio]phenyl]-2-methyl-2-[(4-methylphenyl)sulfonyl]-, CAS 162881-26-7: Bis(2,4,6-trimethylbenzoyl)-phenylphosphineoxide  food simulating matrices: 50% ethanol, 95% ethanol	Feb-21	520 €	177 €	[A], [D]
			Feb-22	520 €	177 €	[A], [D]
2010193	printing ink constituents in synthetic samples - monomers -round 3-	CAS 94108-97-1: Di(tri-methylolpropan)tetraacrylat (Di-TMPTA), CAS 57472-68-1: Dipropylene glycol diacrylate (DPGDA), CAS 42978-66-5: Tri(propylene glycol)diacrylate (TPGDA), CAS 15625-89-5: Tri(methylolpropan)triacrylate (TMPTA)	Sep-21	520 €	177 €	[A], [D]
3010019	printing ink constituents in synthetic samples - initiators -round 4-	CAS 119344-86-4: 2-dimethylamino-2-(4-methyl-benzyl)-1-(4-morpholin-4-yl-phenyl)-butan-1-one CAS 84434-11-7: 2,4,6-trimethylbenzoylphenyl phosphinate CAS 272460-97-6: 1-Propanone,1-[4-[(4-benzoylphenyl)thio]phenyl]-2-methyl-2-[(4-methylphenyl)sulfonyl]-, CAS 162881-26-7: Bis(2,4,6-trimethylbenzoyl)-phenylphosphineoxide	Nov-21	520 €	177 €	[A], [D]

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## toys

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010562	elements in toys; scrapped-off materials	tin, zinc, nickel, strontium, antimony, barium, cadmium, cobalt, lead (minimum 4 of the parameters quantitative)	May-21	379 €	127 €	[A], [D]
2010564	colourfastness of articles for common use (acc. to DIN 53160-1)	Test with artificial saliva	Jun-21	379 €	127 €	[A], [D]
2010566	colourfastness of articles for common use (acc. to DIN 53160-2)	Test with artificial sweat	Jun-21	379 €	127 €	[A], [D]
2010626	toys on water basis	chloromethylisothiazolinone (CMI), methylisothiazolinone (MI), benzisothiazolinone (BIT)	Apr-21	379 €	127 €	
2010253	finger color (EN 71-12)	N-Nitrosodiethanolamine (NDELA)	Apr-21	379 €	127 €	[A], [D]
2010255	toy material extract: dyes (EN 71-11)	dyes	Jul-21	379 €	127 €	[A], [D]
2010257	aqueous migrate: phenol (EN 71-11)	phenol	Aug-21	379 €	127 €	[A], [D]
2010259	aqueous migrate: bisphenol A (EN 71-11)	bisphenol A	Jul-21	379 €	127 €	[A], [D]
2010262	aqueous migrate: acrylamide (EN 71-11)	acrylamide	Aug-21	379 €	127 €	[A], [D]
2010299	wobble mass, slime (EN 71-3)	boron	Sep-21	379 €	127 €	[A], [D]
2010301	formaldehyde release (EN 717-3) (use of a model matrix)	formaldehyde (flask method)	Oct-21	379 €	127 €	[A], [D]
2010309	primary aromatic amines in finger paint and colorants	CAS 95-53-4 (o-Toluidine), CAS 90-04-0 (2-Methoxyaniline), CAS 106-47-8 (4-Chloraniline), CAS 91-59-8 (2-Naphthylamine), CAS 92-87-5 (Benzidine), CAS 62-53-3 (Aniline), CAS 119-93-7 (3,3'-Dimethylbenzidine), CAS 91-94-1 (3,3'-Dichlorbenzidine) and CAS 119-90-4 (3,3'-Dimethoxybenzidine). The samples contain at least 5 aromatic amines.	Dec-21	379 €	127 €	[A], [D]
2010440	preservative in finger pain (EN 71-7)	sorbic acid, benzoic acid, 2-phenoxyethanol, PHB ester	Aug-21	379 €	127 €	[A], [D]

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## cleaning agent

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010914	organic acids	citric acid, formic acid, amidosulfonic acid	Oct-21	350 €	120 €	-
2010916	oxidizing agent	sodium hypochlorite, hydrogen peroxide, percarbonate	Oct-21	350 €	120 €	-
2010918	reducing agent	sodium dithionite, sulphurous acid, oxalic acid	Oct-21	350 €	120 €	-
2010920	acid / alkali cleaning agent	pH value, acid reserve, alkali reserve	Apr-21	350 €	120 €	-
2010922	alcohol-based cleaner	ethanol	Apr-21	220 €	75 €	-
2010432	hygienic rinsing agent - disinfectant	DDAC (didecyldimethylammonium chloride), BAC (benzalkonium chloride)	Jul-21	350 €	120 €	-
2010436	denaturant	Bitrex (denatonium benzoate)	Jul-21	350 €	120 €	-
2010438	disinfectant	formaldehyde, glutaraldehyde, triclosan	Jul-21	350 €	120 €	-

## metals

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010171	determination of elements in metal by X-ray fluorescence analysis (XRF)	determination of various elements, e.g. nickel, copper, zinc, lead	Jul-21	379 €	127 €	[A], [D]
2010416	chemical analysis of refractory products by X-ray fluorescence (XRF) - Fused cast-bead method (ISO 12677)	Determination of various elements, e.g. nickel, copper, zinc, lead	Jul-21	379 €	127 €	[A], [D]

Proficiency Testing for coating thickness in metal can be found in the catalogue "material testing" or the online catalogue.

## e-cigarettes

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010264	liquids from e-cigarettes	glycerin, propylene glycol, nicotine	Sep-21	379,00 €	127,00 €	[A], [D]
2010420	liquid from CBD cigarettes	CBD, terpenes	Sep-21	379,00 €	127,00 €	[A], [D]

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## leather

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010186	identification of leather by microscopy	identification of leather (imitation leather and leather of various animal species)	May-21	379 €	127 €	[A]
2010189	determination of the total metal content in leather (ISO 17072-2)	e.g. chromium, lead and cadmium	May-21	379 €	127 €	[A], [D]
2010233	determination of water soluble substances in leather	water-soluble substances, water-soluble inorganic substances	May-21	379 €	127 €	[A], [D]
2010192	determination of volatile substances in leather	Mass of volatile substances	Jun-21	379 €	127 €	[A], [D]
2010194	determination of preservatives in leather	CAS 21564-17-0 (TCMTB), CAS 59-50-7 (CMK), CAS 90-43-7 (OPP), CAS 26530-20-1 (OIT)	Jun-21	379 €	127 €	[A], [D]
2010196	determination of formaldehyde content in leather	CAS 50-00-0 (formaldehyde)	Jun-21	379 €	127 €	[A], [D]
2010198	determination of aromatic amines from azo dyes in leather	qualitative and quantitative detection of azo dyes over aromatic amines according to ISO 17234-1	Jul-21	379 €	127 €	[A], [D]
2010200	determination of 4-aminoazobenzene in leather	CAS 60-09-3 (4-aminoazobenzene) according to ISO 17234-2	Jul-21	379 €	127 €	[A], [D]
2010202	chlorophenols in leather	Tetrachlorophenol-, trichlorophenol-, dichlorophenol-, monochlorophenol-isomers and CAS 87-86-5 (pentachlorophenol)	Jul-21	379 €	127 €	[A], [D]
2010265	organotin compounds in leather	CAS 1118-46-3 (monobutyltin trichloride), CAS 3091-25-6 (trichlorooctylstannane), CAS 683-18-1 (dibutyltin dichloride), CAS 3542-36-7 (dioctyltin dichloride), CAS 1461-22-9 (tributyltin chloride), CAS 639-58-7 (triphenyltin chloride), CAS 3091-32-5 (tricyclohexyltin chloride), CAS 1461-25-2 (tetra-n-butyltin)	Aug-21	379 €	127 €	[A], [D]
2010211	alkylphenols and alkylphenol ethoxylates in leather	CAS 68412-54-5 (nonylphenol ethoxylate), CAS 9002-93-1 (octylphenol ethoxylate), CAS 84852-15-3 4-(nonylphenol isomer mixture), CAS 140-66-9 (4-tert-octylphenol)	Aug-21	379 €	127 €	[A], [D]
2010305	naphthalene in leather	CAS 91-20-3 (naphthalene)	Jun-21	379 €	127 €	[A], [D]
2010418	determination of extractable metals in leather (ISO 17072-1)	e.g. chrome, lead and cadmium	May-21	379 €	127 €	[A], [D]

Proficiency Testing for mechanical leather testing can be found in the catalogue "material testing" or the online catalogue.

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### kitchen utensils and dishes

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010407	release of metals from enamel (ISO 4531)	Release of various metals in the simulant 3% acetic acid	Oct-21	379 €	127 €	[A], [D]
2010411	specific migration of lead and cadmium from ceramics (EN 1388-1)	Lead and cadmium in the simulant acetic acid (40 ml/l)	Oct-21	379 €	127 €	[A], [D]
2010414	specific migration of cobalt from ceramics	Cobalt in the simulants 4% acetic acid, 0,5% citric acid and 10% acetic acid	Oct-21	379 €	127 €	[A], [D]

### adhesive

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010422	preservatives in adhesive	Methylisothiazolinone (MIT), Chloromethylisothiazolinone (CIT), Benzisothiazolinone (BIT), Octylisothiazolinone (OIT), Phenoxyethanol	Jun. 21	379 €	127 €	[A], [D]
2010424	formaldehyde in adhesive	Formaldehyde	Jun. 21	379 €	127 €	[A], [D]
2010426	VOC in adhesive	VOC	Jun. 21	379 €	127 €	[A], [D]
2010428	solvents in adhesive	e.g. ethanol, acetone, benzene, toluene, methyl acetate	Jun. 21	379 €	127 €	[A], [D]

### rubber

Art. No.	proficiency testing type	requested parameters	period	price *	additional samples **	Accreditation
2010853	determination of the content of PAH in rubber	CAS 91-20-3 (naphthalene), CAS 120-12-7 (anthracene), CAS 56-55-3 (benzo(a)anthracene), CAS 218-01-9 (chrysene), CAS 205-99-2 (benzo(b)fluoranthene), CAS 207-08-9 (benzo(k)fluoranthene), CAS 205-82-3 (benzo(j)fluoranthene), CAS 192-97-2 (benzo(e)pyrene), CAS 50-70-3 (benzo(a)pyrene), CAS 53-70-3 (dibenz(ah)anthracene) (at least 5 of the parameters quantitative)	Sep-21	379 €	127 €	[A], [D]

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## films

Art. No.	proficiency testing type	requested parameters	period	price for six assessors *	each additional assessor	Accreditation
<b>For the following proficiency testing schemes you can not enter your results online:</b>						
3010011	sensory of packaging acc. to DIN 10955	examination for panels - minimum number of participants: 6 assessors! organoleptic analysis - sample preparation, intensity estimation, descriptive testing	Oct-21	637 €	102 €	[A], [D]

## paper / board

Art. No.	proficiency testing type	requested parameters	period	price for six assessors *	each additional assessor	Accreditation
<b>For the following proficiency testing schemes you can not enter your results online:</b>						
3010024	sensory of board and paper acc. to EN 1230	examination for panels - minimum number of participants: 6 assessors! organoleptic analysis - sample preparation, intensity estimation, descriptive testing	Oct-21	637 €	102 €	[A], [D]
				price for first assessor *	each additional assessor	Accreditation
3010022	threshold value examination off flavour	organoleptic analysis - threshold value examination for packaging off-flavour	Aug-21	306 €	102 €	[A], [D]

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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 / assessor (organoleptic)

Up to nine additional result sheets can be returned for chemical-physical, microbiological and physical-mechanical proficiency testing rounds are free of charge. As a participant, you benefit from our international recognized proficiency testing schemes. By submitting up to ten result sheets you are now enabled to run international comparisons to check different methods and different lab technicians with one proficiency testing round. Your benefit: Participating in DRRR-proficiency testing services save costs for your quality assurance! If you need additional sample sets, you have the opportunity to order it according to our latest product catalogue.

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

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

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

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**contact person** \_\_\_\_\_

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**country (if not Germany)** \_\_\_\_\_

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### Importance

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

Description reference material

### Benefit of using certified reference materials

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

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

Profit with our high quality standards for your lab work

### Characteristics

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

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

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

### Identification

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

Availability and order request of reference material

Please use the order from on page 46.

## films

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151001	overall migration of plastic film (one-sided contact)	ethanol 10 %, ethanol 20 %, ethanol 50 %, acetic acid 3 %, distilled water, vegetable oil	-	1 film á app. 40 x 60 cm	89 €
1151002	overall migration of plastic film (total immersion)	ethanol 10 %, ethanol 20 %, ethanol 50 %, acetic acid 3 %, distilled water, vegetable oil	-	1 film á app. 40 x 60 cm	89 €
1151044	overall migration of plastic film (article filling)	ethanol 10 %, ethanol 20 %, ethanol 50 %, acetic acid 3 %	-	310 ml	89 €
1151045	overall migration of plastic film (fatty foodstuffs) ("substitute tests")	ISO-octane, ethanol 95 %	-	1 film á app. 40 x 60 cm	89 €
1151046	overall migration of plastic film at high temperatures	olive oil	-	on request	89 €
1151056	overall migration from plastic using MPPO as a simulant	overall migration by using Tenax (MPPO) as a simulant	-	app. 20 x 30 cm	89 €
1151116	overall migration (pouch)	ethanol 10%, 20%, 50%, acetic acid 3% and vegetable oil	-	on request	89 €
1151003	specific migration of plastic film: caprolactam	ethanol 10 %, ethanol 20 %, ethanol 50 %, acetic acid 3 %, distilled water, vegetable oil	-	1 film á app. 40 x 30 cm	89 €
1151004	specific migration of plastic film: therephthalic acid	ethanol 10 %, ethanol 50 %, acetic acid 3 %, distilled water, vegetable oil	-	1 film á app. 34 x 15 cm	89 €
1151005	specific migration of plastic film: acrylonitrile	ethanol 10 %, acetic acid 3 %, distilled water, olive oil	-	app. 103 g granulate	89 €
1151054	specific migration of plastic film: 1-Octen	ethanol 50 %, ethanol 95 %, vegetable oil	-	app. 90 g granulate	89 €
1151058	specific migration of plastic film: melamine	ethanol 10%, acetic acid 3%, distilled water, vegetable oil	-	4 x 5 g granules	89 €
1151059	specific migration of plastic film: vinyl acetate	ethanol 10%, acetic acid 3%, distilled water, olive oil	-	103 g	89 €
1151105	specific migration (acrylonitrile trimers)	acrylonitrile trimers	-	on request	89 €
1151130	specific migration (primary aromatic amines) 1	CAS 95-53-4 (o-toluidine), CAS 92-87-5 (benzidine), CAS 62-53-3 (aniline) and CAS 91-94-1 (3,3'-dichlorobenzidine) in simulant distilled water, 3% acetic acid	-	on request	89 €
1151131	specific migration (primary aromatic amines) 2	CAS 90-04-0 (2-methoxyaniline), CAS 106-47-8 (4-chloroaniline), CAS 91-59-8 (2-naphthylamine) and CAS 119-93-7 (3,3'-dimethylbenzidine) in simulant 10% ethanol and 15% ethanol	-	on request	89 €

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

Please use the order form on page 46.

## films

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151158	specific migration metals part 1	specific migration of antimony, arsenic, cadmium in simulant acetic acid 3%, water	-	on request	89 €
1151159	specific migration metals part 2	specific migration of total chromium, lead, iron in simulant acetic acid 3%, water	-	on request	89 €
1151006	identification of polymer material (mono-layer plastic film)	qualitative identification (e.g. PE, PP, ...)	-	set consists of 3 foils á app.10 x 10	89 €
1151007	identification of plastic granules	qualitative identification	-	30 ml	89 €
1151008	identification of polymer material (multi-layer plastic film)	qualitative identification of single polymer layers in a multi-layer plastic foil (e.g. PE, PP, ...)	-	set consists of 3 foils á app.20 x 30 cm	89 €
1151079	identification of different PA types	e.g. PA6, PA6.6, PA11, PA12	-	app. 15 g	89 €
1151077	testing of: ethylene glycol in food simulant	ethanol 10%; 20%; 50%, acetic acid 3%, distilled water, vegetable oil	-	100 ml	89 €
1151078	testing of: di-ethylene glycol in food simulant	ethanol 10%; 20%; 50%, acetic acid 3%, distilled water, vegetable oil	-	100 ml	89 €
1151048	testing of: Bisphenol A in food simulant	distilled water, acetic acid 3 %, ethanol 10 %	-	100 ml	89 €
1151049	testing of: formaldehyde in food simulant	distilled water, acetic acid 3 %, ethanol 10 %, vegetable oil	-	100 ml	89 €
1151060	testing of: acrylamide	ethanol 10%, acetic acid 3%, distilled water, olive oil	-	100 g	89 €
1151047	determination of overall migration potential by rapid extraction	ISO-octane, ethanol 95 %	-	on request	89 €
1151009	determination of overall migration on synthetic samples	ethanol 10 %, ethanol 20 %, ethanol 50 %, acetic acid 3 %, distilled water	-	app. 20 x 30 cm	89 €
1151050	determination of the phthalate content in consumer goods	DBP, BBP, DEHP, DNOP, DINP, DIDP, DEP, DMP	-	3 g	300 €

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

Please use the order form on page 46.

## films

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151051	determination of vinylchloride monomer in synthetic sample	vinyl chloride monomer	-	on request	89 €
1151061	acetaldehyde in mineral water	acetaldehyde	-	75 ml	89 €
1151062	determination of bisphenol A content in plastics	bisphenol A monomer	-	5 g	89 €
1151063	determination of 1,3 butadiene content in plastics	1,3 butadiene monomer	-	4 g	89 €
1151114	styrol oligomers in synthetic samples	CAS 1081-75-0 (1,3-Diphenylpropane), CAS 16606-47-6 (2,4-Diphenyl-1-butene), CAS 20071-09-4 (trans-1,2-Diphenylcyclobutane), CAS 18964-53-9 (2,4,6-Triphenyl-1-hexene) and CAS 26681-79-8 (1-Phenyl-4-(1-phenylethyl)-1,2,3,4-tetrahydronaphthalene)	-	on request	89 €
1151132	determination of the PAH content in plastics	CAS 91-20-3 (naphthalene), CAS 120-12-7 (anthracene), CAS 56-55-3 (benzo(a)anthracene), CAS 218-01-9 (chrysene), CAS 205-99-2 (benzo(b)fluoranthene), CAS 207-08-9 (benzo(k)fluoranthene), CAS 205-82-3 (benzo(j)fluoranthene), CAS 192-97-2 (benzo(e)pyrene), CAS 50-70-3 (benzo(a)pyrene), CAS 53-70-3 (dibenz(ah)anthracene) (at least 5 of the parameters quantitative)	-	on request	89 €

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

Please use the order form on page 46.

## paper / board

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151015	mineral oil in cardboard	MOSH C16-C25, MOSH C25-C35, MOAH C16-C25, MOAH C25-C35	-	1 cardboard á app. 30 x 20 cm	89 €
1151016	mineral oil in foodstuff	MOSH C16-C25, MOSH C25-C35, MOSH C35-C50, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50	-	50 g	89 €
1151053	mineral oil in cocoa butter and chocolate	MOSH C16-C25, MOSH C25-C35, MOSH C35-C50, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50	-	100 g	89 €
1151104	mineral oil in cheese and milk powder	MOSH C16-C25, MOSH C25-C35, MOSH C35-C50, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50	-	on request	89 €
1151017	mineral oil in edible fat and edible oil	MOSH C16-C25, MOSH C25-C35, MOSH C35-C50, MOAH C16-C25, MOAH C25-C35, MOAH C35-C50	-	15 g	89 €
1151052	migration of mineral oil from cardboard	Migration of mineral oil in food simulating matrix: Tenax	-	1 cardboard á app. 30 x 20	89 €
1151055	migration from paper and board using MPPO as a simulant	overall migration by using Tenax (MPPO) as a simulant	-	1 cardboard á app. 30 x 20 cm	89 €
1151064	pH value in aqueous extract (cold and hot)	pH value	-	on request	89 €
1151065	formaldehyde in aqueous extract	formaldehyde	-	ca. 10 g	89 €
1151066	determination of glyoxal content	glyoxal	-	ca. 10 g	89 €
1151067	colour fastness of dyed paper and board	distilled water, acetic acid 3%, olive oil, alkali salt solution	-	1 cardboard á app. 30 x 20	89 €
1151068	colour fastness of fluorescent whitened paper and board	distilled water, acetic acid 3%, olive oil, alkali salt solution	-	1 cardboard á app. 30 x 20	89 €
1151149	overall migration of paper and cardboard	overall migration in simulant ethanol 95%	-	on request	89 €
1151150	specific migration (Benzophenone)	specific migration of benzophenone in simulant ethanol 95%	-	on request	89 €
1151151	gravimetric determination of constituents of paper - cardboard	dry content, residue on ignition, ash	-	on request	89 €
1151152	determination of the DIPN content in paper - cardboard (EN 14719)	DIPN (Diisopropylnaphthalin)	-	on request	89 €
1151153	determination of 1,3-dichloro-2-propanol and 3-monochloro-1,2-propanediol	1,3-dichloro-2-propanol, 3-monochloro-1,2-propanediol in water extract	-	on request	89 €

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

Please use the order form on page 46.

### paper / board

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151154	PCB in paper - cardboard	total PCB content	-	on request	89 €
1151155	cadmium and lead in aqueous extract (EN 12498)	cadmium, lead	-	on request	89 €
1151156	determination of acid soluble manganese (ISO 1830)	manganese	-	on request	89 €
1151157	bisphenol S in thermal paper	Bisphenol S	-	on request	89 €

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

Please use the order from on page 46.

## textiles

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151018	extractable heavy metals in textiles	cadmium, lead, nickel, mercury, chromium (quantitative)	-	4 g	89 €
1151019	free formaldehyde in textiles	free formaldehyde (quantitative)	-	1 g	89 €
1151020	flame retardants in textiles	tributyl phosphate (CAS No 126-73-8), o-triskresyl phosphate (CAS No 78-30-8), tris(2-chloroethyl)-phosphate (CAS No 115-96-8), tris(2-chloro-1-methylethyl)-phosphate (CAS No 13674-84-5)	-	1 g	89 €
1151021	azo dyes in textiles	qualitative determination of aromatic amines derived from azo dyes acc. EN 14362-1	-	2 g	89 €
1151082	aniline in textiles	CAS 62-53-3 (aniline)	-	on request	89 €
1151083	2,4-xylidine and 2,6-xylidine in textiles	CAS 95-68-1 (2,4-xylidine), CAS 87-62-7 (2,6-xylidine)	-	on request	89 €
1151084	alkylphenols and alkylphenol ethoxylates in textiles	CAS 68412-54-5 (nonylphenol ethoxylate), CAS 9002-93-1 (octylphenol ethoxylate), CAS 84852-15-3 4-(nonylphenol isomer	-	on request	89 €
1151085	chlorophenols in textiles	Tetrachlorophenol-, trichlorophenol-, dichlorophenol-, monochlorophenol-isomers and CAS 87-86-5 (pentachlorophenol)	-	on request	89 €
1151086	organotin compounds in textiles	CAS 1118-46-3 (monobutyltin trichloride), CAS 3091-25-6 (trichlorooctylstannane), CAS 683-18-1 (dibutyltin dichloride), CAS 3542-36-7 (dioctyltin dichloride), CAS 1461-22-9 (tributyltin chloride), CAS 639-58-7 (triphenyltin chloride), CAS 3091-32-5	-	on request	89 €
1151087	perfluorinated compounds in textiles	CAS 1763-23-1 (perfluorooctane sulfonic acid)	-	on request	89 €
1151088	pesticides in textiles	Chlorinated and phosphorus containing pesticides	-	on request	89 €
1151089	metals in textiles	e.g. tin, cadmium and mercury	-	on request	89 €
1151090	phthalates in textiles	CAS 28553-12-0 (DINP), CAS 117-81-7 (DEHP), CAS 117-84-0 (DNOP), CAS 26761-40-0 (DIDP), CAS 85-68-7 (BBP), CAS 84-74-2 (DBP), CAS 84-69-5 (DIBP), CAS 131-18-0 (DPP), CAS 71888-89-6 (DIHP), CAS 117-82-8 (DMEP)	-	on request	89 €

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

Please use the order form on page 46.

## textiles

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151091	PAH in textiles	CAS 91-20-3 (naphthalene), CAS 120-12-7 (anthracene), CAS 56-55-3 (benzo(a)anthracene), CAS 218-01-9 (chrysene), CAS 205-99-2 (benzo(b)fluoranthene), CAS 207-08-9 (benzo(k)fluoranthene), CAS 205-82-3 (benzo(j)fluoranthene), CAS 50-70-3 (benzo(e)pyrene), CAS 50-70-3 (benzo(a)pyrene), CAS 53-70-3 (dibenz(ah)anthracene) (minimum 5 of the parameters quantitative)	A PAH concentration in the samples of approximately 0,1-10 mg/kg per PAH is to be expected.	on request	89 €
1151092	release of aromatic amines from azo dyes in textiles by skin bacteria	CAS 100-01-6 (nitroaniline)	-	on request	89 €
1151143	determination of lead release with saliva simulant solution in textiles (EN 16711-3)	lead	-	on request	89 €

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

Please use the order from on page 46.

## tattoo ink

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151030	preservatives in tattoo ink	benzisothiazolinone (BIT)	-	app. 10 g	89 €
1151031	aromatic amins in tattoo ink	aniline, o-Anisidine, o-toluidine, 5-nitro-o-toluidine, o-dianisidine	-	app. 10 g	89 €
1151039	nickel in tattoo ink	tin, zinc, nickel, strontium, antimony, barium, cadmium, cobalt, lead (minimum 4 of the parameters quantitative)	-	2 g	89 €

## jewellery

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151043	jewellery (acc. to EN 1811)	testing for nickel	-	1 metal 54x85x1 mm	89 €

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

Please use the order form on page 46.

## cosmetics

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151022	soap	AOX, EOX	-	on request	89 €
1151023	care products	methylparaben, ethylparaben, propylparaben, n-butylparaben, phenoxyethanol, benzoic acid, sorbic acid, methylisothiazolinone, isobutylparaben	-	50 g	89 €
1151024	shampoo, lotion	fat, density, pH value, dry residue, water content, urea	-	300 ml	89 €
1151025	cream, lotion	dexpanthenol, tocopherolacetat, retinolpalmitate	-	50 g	89 €
1151026	dental care	fluoride	-	50 ml	89 €
1151027	metals in cosmetics	aluminium, copper, zinc	-	15 ml	89 €
1151071	heavy metals in cosmetics	lead, arsenic, antimony, nickel, cobalt, zinc, cadmium	-	50 ml	89 €
1151028	quant. determination of UV filters	EHS, BMDM, EHT, PBSA, OC, titanium dioxide	-	25 g	89 €
1151029	PAH in decorative cosmetics	naphthalene, anthracene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(j)fluoranthene, benzo(e)pyren, benzo(a)pyren, dibenz(ah)anthracene	A PAH concentration in the samples of approximately 0,5-50 mg/kg per PAH is to be expected.	5 g	89 €
1151037	tensides in cosmetics	Sodium Laureth Sulfate, Cocamidopropyl betaine (CAPB), Coco-glucoside	-	on request	89 €
1151038	mineral oil hydrocarbons in care products	MOSH C10 - C50, MOAH C10 - C50	-	10 g	89 €
1151069	anti dandruff substances	pirocton-olamine, zinc pyrithione	-	5 g	89 €
1151070	solvents	ethanol, isopropyl alcohol, acetone, glycol	-	50 ml	89 €
1151117	perfume, body spray	flash point	-	on request	89 €
1151128	self-tanner	dihydroxyacetone, erythulose, formaldehyde	-	on request	89 €
1151129	determination of sunscreen UVA photoprotection in vitro (ISO 24443)	UVA photoprotection	-	on request	89 €

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

Please use the order form on page 46.

## printing inks

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151010	migration of printing ink constituents quant. determination of monomers and initiators food simulating matrices: 50% ethanol, 95% ethanol type 1	CAS 94108-97-1: Di(tri-methylolpropan)tetraacrylat (Di-TMPTA), CAS 57472-68-1: Dipropylene glycol diacrylate (DPGDA), CAS 119313-12-1: 1-Butanone,2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)- CAS 84434-11-7: 2,4,6-trimethylbenzoylphenyl phosphinate	-	on request	100 €
1151011	migration of printing ink constituents quant. determination of monomers and initiators food simulating matrices: 50% ethanol, 95% ethanol type 2	CAS 42978-66-5: Tri(propylene glycol)diacrylate (TPGDA), CAS 15625-89-5: Tri(methylolpropan)triacylate (TMPTA), CAS 272460-97-6: 1-Propanone,1-[4-[(4-benzoylphenyl)thio]phenyl]-2-methyl-2-[(4-methylphenyl)sulfonyl]-, CAS 162881-26-7: Bis(2,4,6-trimethylbenzoyl)-phenylphosphineoxide	-	on request	100 €
1151012	printing ink constituents in synthetic samples - monomers type 3	CAS 94108-97-1: Di(tri-methylolpropan)tetraacrylat (Di-TMPTA), CAS 57472-68-1: Dipropylene glycol diacrylate (DPGDA), CAS 42978-66-5: Tri(propylene glycol)diacrylate (TPGDA), CAS 15625-89-5: Tri(methylolpropan)triacylate (TMPTA)	-	50 ml	100 €
1151013	printing ink constituents in synthetic samples - initiators type 4	CAS 119344-86-4: 2-dimethylamino-2-(4-methyl-benzyl)-1-(4-morpholin-4-yl-phenyl)-butan-1-one CAS 84434-11-7: 2,4,6-trimethylbenzoylphenyl phosphinate CAS 272460-97-6: 1-Propanone,1-[4-[(4-benzoylphenyl)thio]phenyl]-2-methyl-2-[(4-methylphenyl)sulfonyl]-, CAS 162881-26-7: Bis(2,4,6-trimethylbenzoyl)-phenylphosphineoxide	-	10 g	100 €

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

Please use the order form on page 46.

## toys

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151040	elements in toys; scrapped-off materials	tin, zinc, nickel, strontium, antimony, barium, cadmium, cobalt, lead	-	app. 5 g	89 €
1151041	colourfastness of articles for common use type 1	Test with artificial saliva	-	app. 10 x 10 cm	89 €
1151042	colourfastness of articles for common use type 2	Test with artificial saliva	-	app. 10 x 10 cm	89 €
1151057	toys on water basis	chloromethylisothiazolinone (CMI), methylisothiazolinone (MI), benzisothiazolinone (BIT)	-	app. 10 g	89 €
1151106	finger color	N-Nitrosodiethanolamine (NDELA)	-	on request	89 €
1151107	toy material extract: dyes	dyes	-	on request	89 €
1151108	aqueous migrate: phenol	phenol	-	on request	89 €
1151109	aqueous migrate: bisphenol A	bisphenol A	-	on request	89 €
1151110	aqueous migrate: acrylamide	acrylamide	-	on request	89 €
1151111	wobble mass, slime (EN 71-3)	boron	-	on request	89 €
1151112	formaldehyde release (EN 717-3) (use of a model matrix)	formaldehyde (flask method)	-	on request	89 €
1151115	primary aromatic amines in finger paint and colorants	CAS 95-53-4 (o-Toluidine), CAS 90-04-0 (2-Methoxyaniline), CAS 106-47-8 (4-Chloraniline), CAS 91-59-8 (2-Naphthylamine), CAS 92-87-5 (Benzidine), CAS 62-53-3 (Aniline), CAS 119-93-7 (3,3'-Dimethylbenzidine), CAS 91-94-1 (3,3'-Dichlorbenzidine) and CAS 119-90-4 (3,3'-Dimethoxybenzidine)	-	on request	89 €
1151148	preservative in finger pain (EN 71-7)	sorbic acid, benzoic acid, 2-phenoxyethanol, PHB ester	-	on request	89 €

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

Please use the order form on page 46.

## cleaning agent

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151072	organic acids	citric acid, formic acid, amidosulfonic acid	-	on request	89 €
1151073	oxidizing agent	sodium hypochlorite, hydrogen peroxide, percarbonate	-	60 ml	89 €
1151074	reducing agent	sodium dithionite, sulphurous acid, oxalic acid	-	on request	89 €
1151075	acid / alkali cleaning agent	pH value, acid reserve, alkali reserve	-	50 ml	89 €
1151076	alcohol-based cleaner	ethanol	-	50 ml	89 €
1151145	hygienic rinsing agent - disinfectant	DDAC (didecyldimethylammonium chloride), BAC (benzalkonium chloride)	-	on request	89 €
1151146	denaturant	Bitrex (denatonium benzoate)	-	on request	89 €
1151147	disinfectant	formaldehyde, glutaraldehyde, triclosan	-	on request	89 €

## metals

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151080	determination of elements in metal by X-ray fluorescence analysis (XRF)	determination of various elements, e.g. nickel, copper, zinc, lead	-	on request	89 €
1151136	chemical analysis of refractory products by X-ray fluorescence (XRF) - Fused cast-bead method (ISO 12677)	Determination of various elements, e.g. nickel, copper, zinc, lead	-	on request	89 €

## e-cigarettes

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151081	liquids from e-cigarettes	glycerin, propylene glycol, nicotine	-	on request	89 €
1151138	liquid from CBD cigarettes	CBD, terpenes	-	on request	89 €

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

Please use the order form on page 46.

## leather

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151093	identification of leather by microscopy	identification of leather (imitation leather and leather of various animal species)	-	on request	89 €
1151094	determination of the total metal content in leather (ISO 17072-2)	e.g. chromium, lead and cadmium	-	on request	89 €
1151095	determination of water soluble substances in leather	water-soluble substances, water-soluble inorganic substances	-	on request	89 €
1151096	determination of volatile substances in leather	Mass of volatile substances	-	on request	89 €
1151097	determination of preservatives in leather	CAS 21564-17-0 (TCMTB), CAS 59-50-7 (CMK), CAS 90-43-7 (OPP), CAS 26530-20-1 (OIT)	-	on request	89 €
1151098	determination of formaldehyde content in leather	CAS 50-00-0 (formaldehyde)	-	on request	89 €
1151099	determination of aromatic amines from azo dyes in leather	qualitative and quantitative detection of azo dyes over aromatic amines according to ISO 17234-1	-	on request	89 €
1151100	determination of 4-aminoazobenzene in leather	CAS 60-09-3 (4-aminoazobenzene) according to ISO 17234-2	-	on request	89 €
1151101	chlorophenols in leather	Tetrachlorophenol-, trichlorophenol-, dichlorophenol-, monochlorophenol-isomers and CAS 87-86-5 (pentachlorophenol)	-	on request	89 €
1151102	organotin compounds in leather	CAS 1118-48-3 (monobutyltin trichloride), CAS 3091-25-6 (trichlorooctylstannane), CAS 683-18-1 (dibutyltin dichloride), CAS 3542-36-7 (dioctyltin dichloride), CAS 1461-22-9 (tributyltin chloride), CAS 639-58-7 (triphenyltin chloride), CAS 3091-32-5 (tricyclohexyltin chloride), CAS 1461-25-2 (tetra-n-butyltin)	-	on request	89 €
1151103	alkylphenols and alkylphenol ethoxylates in leather	CAS 68412-54-5 (nonylphenol ethoxylate), CAS 9002-93-1 (octylphenol ethoxylate), CAS 84852-15-3 4-(nonylphenol isomer mixture), CAS 140-66-9 (4-tert-octylphenol)	-	on request	89 €
1151113	naphthalene in leather	CAS 91-20-3 (naphthalene)	-	on request	89 €
1151137	determination of extractable metals in leather (ISO 17072-1)	e.g. chrome, lead and cadmium	-	on request	89 €

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

Please use the order form on page 46.

### kitchen utensils and dishes

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151133	release of metals from enamel (ISO 4531)	Release of various metals in the simulant 3% acetic acid	-	on request	89 €
1151134	specific migration of lead and cadmium from ceramics (EN 1388-1)	Lead and cadmium in the simulant acetic acid (40 ml/l)	-	on request	89 €
1151135	specific migration of cobalt from ceramics	Cobalt in the simulants 4% acetic acid, 0,5% citric acid and 10% acetic acid	-	on request	89 €

### adhesive

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151139	preservatives in adhesive	Methylisothiazolinone (MIT), Chloromethylisothiazolinone (CIT), Benzisothiazolinone (BIT), Octylisothiazolinone (OIT), Phenoxyethanol	-	on request	89 €
1151140	formaldehyde in adhesive	Formaldehyde	-	on request	89 €
1151141	VOC in adhesive	VOC	-	on request	89 €
1151142	solvents in adhesive	e.g. ethanol, acetone, benzene, toluene, methyl acetate	-	on request	89 €

### rubber

Art. No.	material description	parameter *	additional information	packaging unit	prices
1151144	determination of the content of PAH in rubber	CAS 91-20-3 (naphthalene), CAS 120-12-7 (anthracene), CAS 56-55-3 (benzo(a)anthracene), CAS 218-01-9 (chrysene), CAS 205-99-2 (benzo(b)fluoranthene), CAS 207-08-9 (benzo(k)fluoranthene), CAS 205-82-3 (benzo(j)fluoranthene), CAS 192-97-2 (benzo(e)pyrene), CAS 50-70-3 (benzo(a)pyrene), CAS 53-70-3 (dibenz(ah)anthracene) (at least 5 of the parameters quantitative)	-	on request	89 €

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

Please use the order from on page 46.

## films

Art. No.	material description	parameter *	additional information	packaging unit	prices
3351001	sensory of packaging acc. to DIN 10955	sample set (raw material + instruction) for the intensity testing	-	sample set for one panel	143 €

## paper / board

Art. No.	material description	parameter *	additional information	packaging unit	prices
3351003	sensory of board and paper acc. to EN 1230	sample set (raw material + instruction) for the intensity testing	-	sample set for one panel	143 €
3351002	threshold value examination "off flavour"	sample set (raw material + instruction) for the threshold value determination	off-flavour caused by packaging	sample set for one assessor	89 €

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

Please use the order form on page 46.

	material description	description	additional information	packaging unit	price
	ADR- security certified DRRR- freezing packaging system  RM-ADR VP 1	<b>Our certified packagings fulfill the requirements of ADR especially of the dangerous goods directive GGVSE and GGVSee. These systems are also convenient for the shipping of pathogenic bacteria of risk group 2.</b>	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	<b>Our certified packagings fulfill the requirements of ADR especially of the dangerous goods directive GGVSE and GGVSee. These systems are also convenient for the shipping of pathogenic bacteria of risk group 2.</b>	guaranteed temperature assurance: 48 hours	VP 2 app. 350 x 350 x 300 mm	26 €
	Excel-Sheets lab own's measure-ment uncertainty	<b>These systems are convenient for the calculation of your lab own's measurement uncertainty.</b>	Licence contract between customer and DRRR GmbH required.	-	19 €



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.**

### IR-Seminar

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

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

### Sensory seminar

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

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

### User-Workshop

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

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

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

### Statistics seminar for beginners

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

The seminar is complemented by practical exercises with the notebook.

### Statistics seminar for advanced learners

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

The seminar is complemented by practical exercises with the notebook.

**Implementation of DIN EN ISO/IEC 17025 in food laboratories**

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

**Inhouse-Training**

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

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

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

**For special requirements we also offer customised training programmes.**

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

## Terms of payment

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

Terms of payment: 8 days net, without deduction

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

Our bank details:

Raiffeisenbank in Allgäuer Land / bank code 733 692 64

Account 102350 / IBAN DE 94733692640000102350

BIC code: GENO DEF1DTA

Sales tax ID no. DE254613132

tax number 127/124/32207

## Terms of delivery

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

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

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

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

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

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

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

## § 1 General terms and conditions

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

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

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

## § 2 Execution of the order

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

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

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

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

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

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

## § 3 Deadlines

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

## § 4 Warranty and liability

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## § 5 Exclusion of further liability and claims

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

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

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

## § 6 Remuneration and payment terms

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

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

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

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

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

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

## § 7 Confidentiality and copyright

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

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

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

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

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

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

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

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

## § 9 Guarantee of services and goods from cooperation partners

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

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

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

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

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

This applies to: ieLab, TGZ AQS Baden-Württemberg