



Doemens Laboratory

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* Order forms at doemens.org/en/flavourstandards

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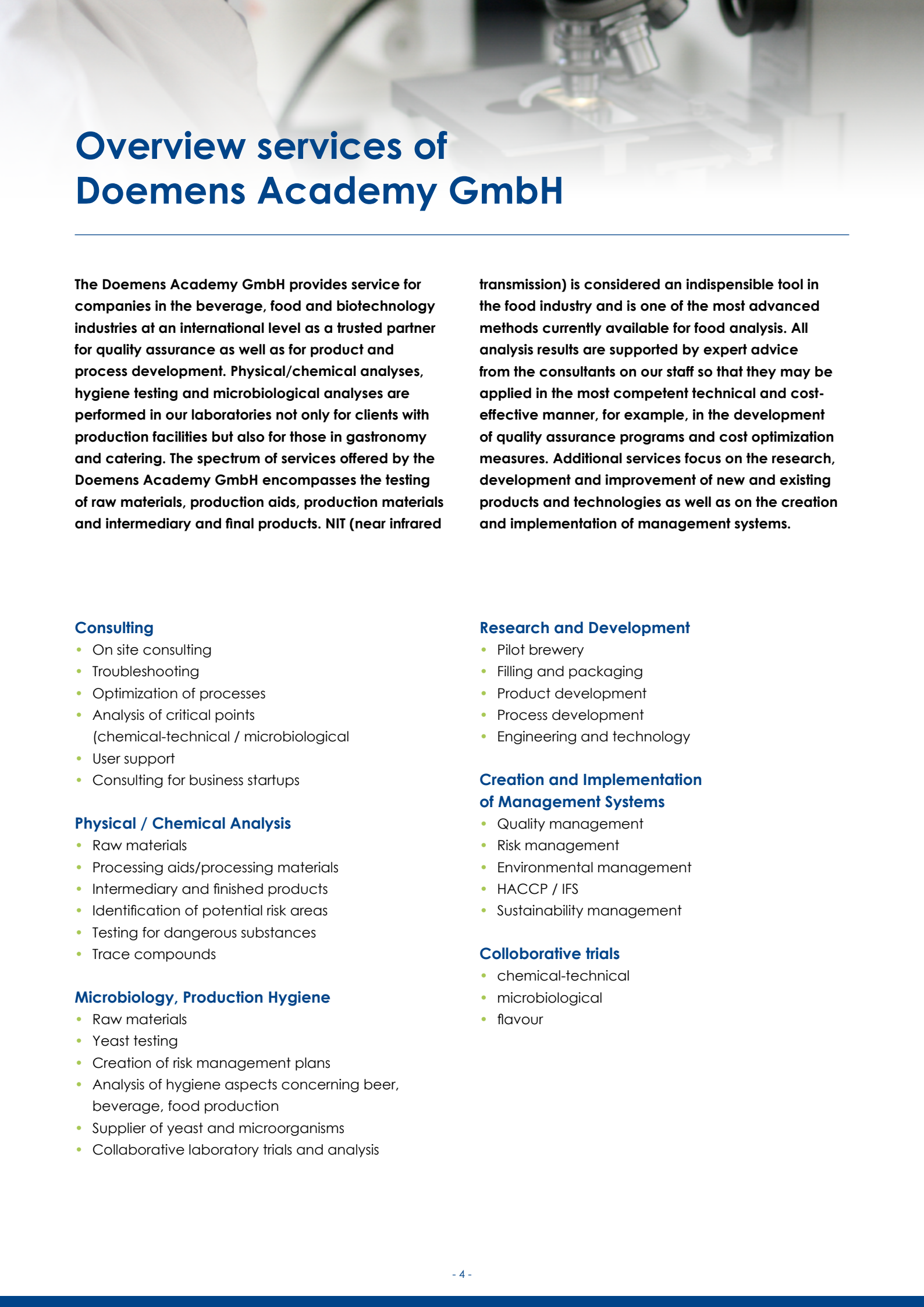
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For detailed information about the yeast bank and collection of microorganisms, please refer to the “Doemens Yeast Bank” brochure.

For information on our Doemens Flavours, please refer to the “Doemens Flavours” flyer.

Changes in prices reserved.



Overview services of Doemens Academy GmbH

The Doemens Academy GmbH provides service for companies in the beverage, food and biotechnology industries at an international level as a trusted partner for quality assurance as well as for product and process development. Physical/chemical analyses, hygiene testing and microbiological analyses are performed in our laboratories not only for clients with production facilities but also for those in gastronomy and catering. The spectrum of services offered by the Doemens Academy GmbH encompasses the testing of raw materials, production aids, production materials and intermediary and final products. NIT (near infrared

transmission) is considered an indispensable tool in the food industry and is one of the most advanced methods currently available for food analysis. All analysis results are supported by expert advice from the consultants on our staff so that they may be applied in the most competent technical and cost-effective manner, for example, in the development of quality assurance programs and cost optimization measures. Additional services focus on the research, development and improvement of new and existing products and technologies as well as on the creation and implementation of management systems.

Consulting

- On site consulting
- Troubleshooting
- Optimization of processes
- Analysis of critical points
(chemical-technical / microbiological)
- User support
- Consulting for business startups

Physical / Chemical Analysis

- Raw materials
- Processing aids/processing materials
- Intermediary and finished products
- Identification of potential risk areas
- Testing for dangerous substances
- Trace compounds

Microbiology, Production Hygiene

- Raw materials
- Yeast testing
- Creation of risk management plans
- Analysis of hygiene aspects concerning beer, beverage, food production
- Supplier of yeast and microorganisms
- Collaborative laboratory trials and analysis

Research and Development

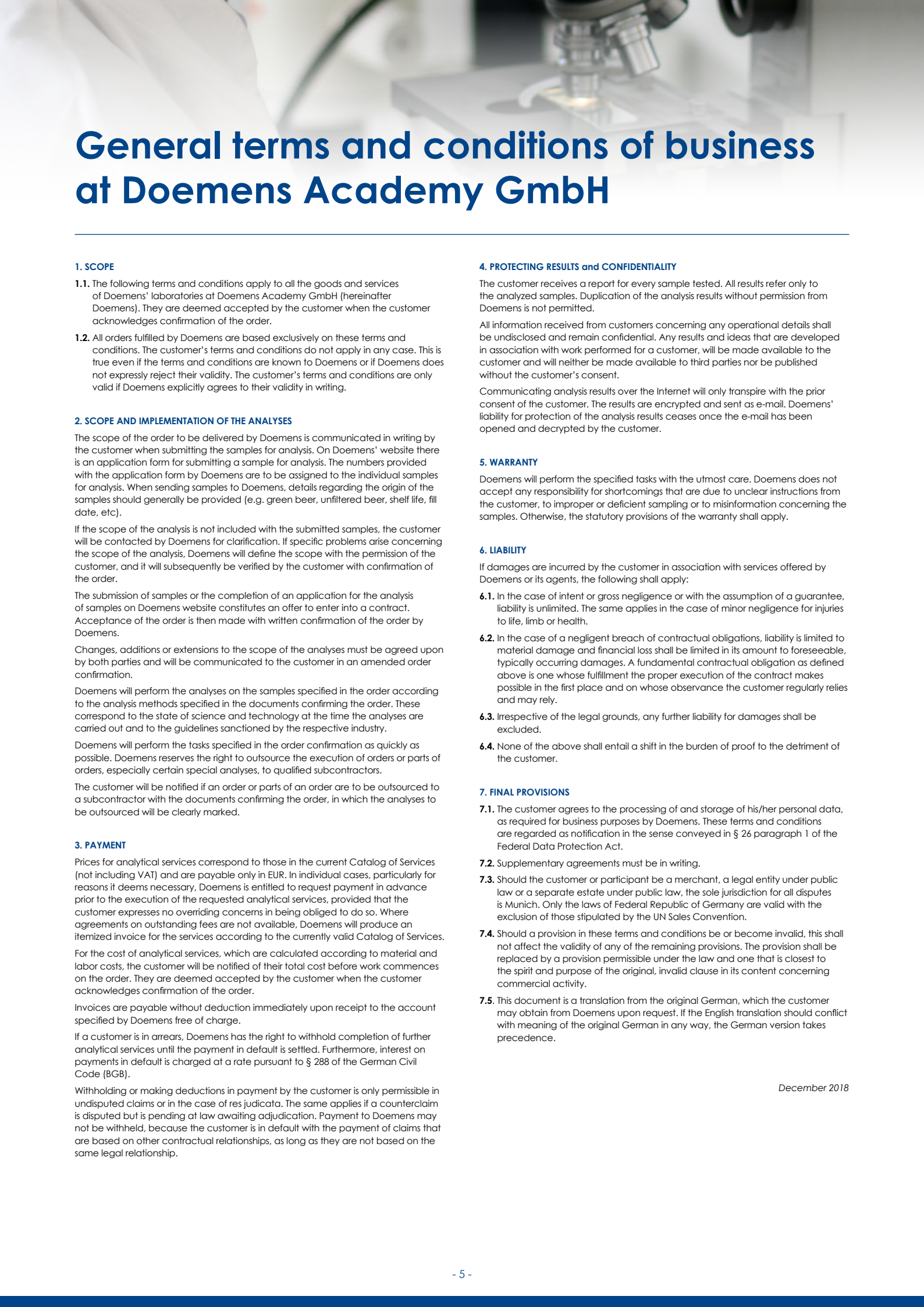
- Pilot brewery
- Filling and packaging
- Product development
- Process development
- Engineering and technology

Creation and Implementation of Management Systems

- Quality management
- Risk management
- Environmental management
- HACCP / IFS
- Sustainability management

Collaborative trials

- chemical-technical
- microbiological
- flavour



General terms and conditions of business at Doemens Academy GmbH

1. SCOPE

- 1.1. The following terms and conditions apply to all the goods and services of Doemens' laboratories at Doemens Academy GmbH (hereinafter Doemens). They are deemed accepted by the customer when the customer acknowledges confirmation of the order.
- 1.2. All orders fulfilled by Doemens are based exclusively on these terms and conditions. The customer's terms and conditions do not apply in any case. This is true even if the terms and conditions are known to Doemens or if Doemens does not expressly reject their validity. The customer's terms and conditions are only valid if Doemens explicitly agrees to their validity in writing.

2. SCOPE AND IMPLEMENTATION OF THE ANALYSES

The scope of the order to be delivered by Doemens is communicated in writing by the customer when submitting the samples for analysis. On Doemens' website there is an application form for submitting a sample for analysis. The numbers provided with the application form by Doemens are to be assigned to the individual samples for analysis. When sending samples to Doemens, details regarding the origin of the samples should generally be provided (e.g. green beer, unfiltered beer, shelf life, fill date, etc).

If the scope of the analysis is not included with the submitted samples, the customer will be contacted by Doemens for clarification. If specific problems arise concerning the scope of the analysis, Doemens will define the scope with the permission of the customer, and it will subsequently be verified by the customer with confirmation of the order.

The submission of samples or the completion of an application for the analysis of samples on Doemens website constitutes an offer to enter into a contract. Acceptance of the order is then made with written confirmation of the order by Doemens.

Changes, additions or extensions to the scope of the analyses must be agreed upon by both parties and will be communicated to the customer in an amended order confirmation.

Doemens will perform the analyses on the samples specified in the order according to the analysis methods specified in the documents confirming the order. These correspond to the state of science and technology at the time the analyses are carried out and to the guidelines sanctioned by the respective industry.

Doemens will perform the tasks specified in the order confirmation as quickly as possible. Doemens reserves the right to outsource the execution of orders or parts of orders, especially certain special analyses, to qualified subcontractors.

The customer will be notified if an order or parts of an order are to be outsourced to a subcontractor with the documents confirming the order, in which the analyses to be outsourced will be clearly marked.

3. PAYMENT

Prices for analytical services correspond to those in the current Catalog of Services (not including VAT) and are payable only in EUR. In individual cases, particularly for reasons it deems necessary, Doemens is entitled to request payment in advance prior to the execution of the requested analytical services, provided that the customer expresses no overriding concerns in being obliged to do so. Where agreements on outstanding fees are not available, Doemens will produce an itemized invoice for the services according to the currently valid Catalog of Services.

For the cost of analytical services, which are calculated according to material and labor costs, the customer will be notified of their total cost before work commences on the order. They are deemed accepted by the customer when the customer acknowledges confirmation of the order.

Invoices are payable without deduction immediately upon receipt to the account specified by Doemens free of charge.

If a customer is in arrears, Doemens has the right to withhold completion of further analytical services until the payment in default is settled. Furthermore, interest on payments in default is charged at a rate pursuant to § 288 of the German Civil Code (BGB).

Withholding or making deductions in payment by the customer is only permissible in undisputed claims or in the case of res judicata. The same applies if a counterclaim is disputed but is pending at law awaiting adjudication. Payment to Doemens may not be withheld, because the customer is in default with the payment of claims that are based on other contractual relationships, as long as they are not based on the same legal relationship.

4. PROTECTING RESULTS and CONFIDENTIALITY

The customer receives a report for every sample tested. All results refer only to the analyzed samples. Duplication of the analysis results without permission from Doemens is not permitted.

All information received from customers concerning any operational details shall be undisclosed and remain confidential. Any results and ideas that are developed in association with work performed for a customer, will be made available to the customer and will neither be made available to third parties nor be published without the customer's consent.

Communicating analysis results over the Internet will only transpire with the prior consent of the customer. The results are encrypted and sent as e-mail. Doemens' liability for protection of the analysis results ceases once the e-mail has been opened and decrypted by the customer.

5. WARRANTY

Doemens will perform the specified tasks with the utmost care. Doemens does not accept any responsibility for shortcomings that are due to unclear instructions from the customer, to improper or deficient sampling or to misinformation concerning the samples. Otherwise, the statutory provisions of the warranty shall apply.

6. LIABILITY

If damages are incurred by the customer in association with services offered by Doemens or its agents, the following shall apply:

- 6.1. In the case of intent or gross negligence or with the assumption of a guarantee, liability is unlimited. The same applies in the case of minor negligence for injuries to life, limb or health.
- 6.2. In the case of a negligent breach of contractual obligations, liability is limited to material damage and financial loss shall be limited in its amount to foreseeable, typically occurring damages. A fundamental contractual obligation as defined above is one whose fulfillment the proper execution of the contract makes possible in the first place and on whose observance the customer regularly relies and may rely.
- 6.3. Irrespective of the legal grounds, any further liability for damages shall be excluded.
- 6.4. None of the above shall entail a shift in the burden of proof to the detriment of the customer.

7. FINAL PROVISIONS

- 7.1. The customer agrees to the processing of and storage of his/her personal data, as required for business purposes by Doemens. These terms and conditions are regarded as notification in the sense conveyed in § 26 paragraph 1 of the Federal Data Protection Act.
- 7.2. Supplementary agreements must be in writing.
- 7.3. Should the customer or participant be a merchant, a legal entity under public law or a separate estate under public law, the sole jurisdiction for all disputes is Munich. Only the laws of Federal Republic of Germany are valid with the exclusion of those stipulated by the UN Sales Convention.
- 7.4. Should a provision in these terms and conditions be or become invalid, this shall not affect the validity of any of the remaining provisions. The provision shall be replaced by a provision permissible under the law and one that is closest to the spirit and purpose of the original, invalid clause in its content concerning commercial activity.
- 7.5. This document is a translation from the original German, which the customer may obtain from Doemens upon request. If the English translation should conflict with meaning of the original German in any way, the German version takes precedence.

December 2018



General Terms

The prices given do not include the mandatory VAT; discounts are not possible. Prices are subject to change. Fees for analyses and consulting not described in this catalog will be calculated on the basis of the time required to perform them.

Clients receive a report for each analysis.

Additional to customer samples there should be a covering letter containing information about required analyses.

Daily rates for consulting (based on 8 hours per day)

- The daily rates of our consultants and the use of our facilities (excluding personnel) are available upon request.
- Travel times are calculated at half the hourly rates for consulting.
- Travel expenses (e.g. transportation, flight costs or overnight accommodations) are not included.



Chemical technical Analysis

Grains and Adjuncts

CODE	DESCRIPTION	SAMPLE SIZE	PRICE
C4001	Barley analysis - big (moisture, total nitrogen, sieving test, germinative capacity, germinative energy, water sensitivity)	1000 g	180.00 €
C4000	Barley / Wheat analysis - small (wet-chemical) (moisture, total nitrogen)	100 g	53.00 €
C4018	NIT-Analysis (barley / wheat) water content & raw protein	500 g	36.00 €
C4003	Analysis of Adjuncts (moisture, protein content, extract ,as is' & d.m.)	500 g	122.00 €
C4016	Moisture	100 g	24.00 €
C4014	Sieving Test for Barley	300 g *	65.00 €
C4010	Germinative Capacity (Rapid Staining Method)	100 g	41.00 €
C4009	Germinative Energy after 3 and 5 days	100 g	41.00 €
C4017	Water Sensitivity (Pollock-Test)	100 g	41.00 €
C4015	Gelatinization Temperature	200 g	99.00 €

Additional analyses and consultation available upon request

** at higher sample volumes a multiple sorting could be necessary*

Malt and Grist

CODE	DESCRIPTION	SAMPLE SIZE	PRICE
C3001	Malt Analysis - basic (moisture content, mashing trial, extract ,as is' & dm, wort colour)	300 g	70.00 €
C3002	Malt Analysis with Nitrogen Ratio (malt analysis - basic, Kolbach Index)	300 g	99.00 €
C3007	Malt Analysis - small (wet-chemical) (moisture content, total nitrogen)	100 g	53.00 €
C3020	Alpha-Amylase Activity & Diastatic Power (alpha-amylase activity, diastatic power)	500 g	174.00 €
C3000	Mashing Trial (isothermic 65°C) (Odor & Taste, Saccharification, Filtration, Appearance, pH)	300 g	47.00 €
C3016	Moisture Content	100 g	24.00 €
C3010	Sieving Test	300 g *	65.00 €
C3006	Friability (Friabilimeter)	200 g	30.00 €
C3021	Gelatinization Temperature	200 g	99.00 €
C3015	Kolbach Index	**	82.00 €
C3024	Free Amino Nitrogen	**	100.00 €
C3025	extract	**	36.00 €
C3026	Final attenuation	**	38.00 €
C3027	β-Glucan	**	105.00 €
C3028	Colour (spectral photometric)	**	29.00 €
C3014	Boiled Wort Colour	**	47.00 €
C3029	Viscosity	**	59.00 €
C3030	Alpha-Amylase Activity	200 g	93.00 €
C3013	Diastatic Power	200 g	93.00 €

* at higher sample volumes a multiple sorting could be necessary

** unless performed in conjunction with a mashing trial, an additional charge of 35,00 EUR will be added

Additional analyses and consultation available upon request

Wort and Beer

CODE	DESCRIPTION	SAMPLE SIZE	PRICE
Wort - Analyses Packages			
C2002	Wort Analysis - comprehensive (Extract, colour, pH, Iodine value, final attenuation, total soluble Nitrogen, FAN, coagulable Nitrogen, zinc, IBU)	3000 ml***	294.00 €
C2001	Wort Analysis with Nitrogen Ratio (Extract, colour, pH, Iodine value, final attenuation, total soluble Nitrogen, FAN, coagulable Nitrogen)	2000 ml***	197.00 €
C2000	Wort Analysis - basic (Extract, colour, pH, Iodine value, final attenuation)	1000 ml***	93.00 €
Beer - Analyses Packages			
C1001	Analysis of Beer - Extended (Extract, ABV, original gravity, attenuation value, colour, pH, final attenuation, photom, Iodine value, foam, IBU, carbon dioxide)	6 bottles	150.00 €
C1000	Analysis of Beer - basic (Extract, ABV, original gravity, attenuation value, colour, pH)	2 bottles	36.00 €
C1003	Big 7 (Energy, Carbohydrate, Sugars, Fat, Saturated Fat, Protein, Salt)	12 bottles	440.00 €
C1004	Big 8 (Energy, Carbohydrate, Sugars, Fat, Saturated Fat, Fibre, Protein, Salt)	12 bottles	649.00 €
C1050	Sugar Spectrum (Fructose, Glucose, Sucrose, Maltose, Maltotriose)	300 ml	188.00 €
C1038	Final attenuation	500 ml	38.00 €
C1036	Colour (spectral photometric)	300 ml	29.00 €
C1039	Iodine value (spectral photometric)	300 ml	47.00 €
C1041	Viscosity	500 ml	59.00 €
C1042	Zinc	500 ml	64.00 €
C1043	β-Glucan	500 ml	105.00 €
C1044	Nitrogen- Alpha Amino	300 ml	100.00 €
C0090	β-Glucan & β-Glucan Gel	500 ml	194.00 €

Wort and Beer

CODE	DESCRIPTION	SAMPLE SIZE	PRICE
C1045	Total soluble Nitrogen	300 ml	47.00 €
C1046	Nitrogen-coagulable	500 ml	82.00 €
C1014	Haze (Labscat)	2 bottles	25.00 €
C1009	Forced Aging (0/60°C)	3 bottles / 15 cans	49.00 €
C1010	Forced Aging (0/40°C)	3 bottles / 15 cans	49.00 €
C1047	Polyphenols	300 ml	82.00 €
C1012	Foam	3 bottles	47.00 €
C1048	Bitter Units (EBC)	300 ml	47.00 €
C1029	Diacetyl and 2,3-Pentandion	1 bottle	99.00 €
C1051	DMS free	1 bottle	105.00 €
C1053	DMS. free + DMS-P	1 bottle	209.00 €
C1049	Carbon Dioxide	2 bottles	44.00 €
C1054	Sensory Evaluation	2 bottles	64.00 €
C1055	Triangular test (organoleptic)	5 bottles	186.00 €
C1056	Ascorbic acid	1 bottle	117.00 €

Additional analyses and consultation available upon request

*** at least 2 different vessels

Water

CODE	DESCRIPTION	SAMPLE SIZE	PRICE
C7000	Analysis of Water Hardness (Residual Alkalinity. Total Hardness. Total Alkalinity. Calcium Hardness. Magnesium Hardness. Carbonate Hardness. Non-Carbonate Hardness)	1500 ml	110.00 €
C7001	Analysis of Suitability for Brewing Liquor (Analysis of Water Hardness. p- & m- value. pH. Sensory Evaluation)	2000 ml	140.00 €
C7002	Analysis of Suitability for Brewing Liquor with Ions of Metals (Analysis of Water Hardness. p- & m- value. pH. sensory evaluation. evaporation residue. free carbon dioxide. aggressive carbon dioxide. conductivity. haze. free chlorine. cations: ammonium. Ca. Mg. Na. K. Fe. Mn. Si anions: Cl. NO ₂ . NO ₃ . SO ₄ . PO ₄)	3000 ml	695.00 €
C7009	Free Carbon Dioxide	500 ml	33.00 €
C7013	Carbon Dioxide (aggressive)	1000 ml	47.00 €
C7014	Sensory Evaluation	2 bottles	64.00 €
C7015	Triangular test (organoleptic)	5 bottles	186.00 €

Additional analyses and consultation available upon request



Spent Grains

CODE	DESCRIPTION	SAMPLE SIZE	PRICE
C5000	Analysis of wet Spent Grains (moisture content, degradable extract, soluble extract)	1000 g	140.00 €
C5001	Analysis of pre-dried Spent Grains (degradable extract, soluble extract)	1000 g	93.00 €
C5005	Iodine value of spent grains	500 g	93.00 €

Additional analyses and consultation available upon request

Soft Drinks

CODE	DESCRIPTION	SAMPLE SIZE	PRICE
C8000	Total Analysis Soft Drinks (Extract or conductivity, total acids, Carbon Dioxids, pH)	3 bottles	99.00 €
C8025	Sensory Evaluation	2 bottles	64.00 €
C8026	Triangular test (organoleptic)	5 bottles	186.00 €
C8027	Extract	1 bottle	36.00 €
C8028	Conductivity	1 bottle	36.00 €
C8029	Total acids	1 bottle	34.00 €
C8030	Carbon Dioxide	2 bottles	44.00 €
C8031	pH	1 bottle	21.00 €
C8032	Colour (spectral photometric)	1 bottle	29.00 €
C8033	Ascorbic acid	1 bottle	117.00 €
C8034	Citric Acid	1 bottle	117.00 €
C8004	Caffeine	1 bottle	117.00 €

Additional analyses and consultation available upon request

Hops

Analyses and consultation available upon request

Filtering Aids and Stabilizing Agents

Analyses and consultation available upon request

Metals

Analyses and consultation available upon request

Microbiological Analysis

Macroscopy/Microscopy/Sample preparation

CODE	DESCRIPTION	PRICE
M0001	Sample Preparation Microbiology	29.00 €
M0002	Microscopy	24.00 €
M0003	Macroscopy	19.00 €
M0004	Phase Contrast Microscopy for Viability	59.00 €
M0005	Methylene Blue Staining	59.00 €
M0006	Fluorescence Microscopy	64.00 €

Enrichment methods

CODE	DESCRIPTION	PRICE
M0007	Plating 1 Culture Media	36.00 €
M0008	Plating 2 Culture Media	59.00 €
M0009	Plating 3 Culture Media	82.00 €
M0010	Plating 4 Culture Media	99.00 €
M0011	Membrane Filtration 1 Culture Media	41.00 €
M0012	Membrane Filtration 2 Culture Media	64.00 €
M0013	Membrane Filtration 3 Culture Media	93.00 €
M0014	Membrane Filtration 4 Culture Media	117.00 €
M0015	Pour-Plate 1 Culture Media	36.00 €
M0016	Pour-Plate 2 Culture Media	59.00 €
M0017	Pour-Plate 3 Culture Media	82.00 €
M0018	Pour-Plate 4 Culture Media	99.00 €
M0019	Liquid Enrichment 1 Culture Media	41.00 €
M0020	Liquid Enrichment 2 Culture Media	64.00 €
M0021	Liquid Enrichment 3 Culture Media	82.00 €
M0022	Liquid Enrichment 4 Culture Media	99.00 €
M0039	Shelf Life Sample	36.00 €
M0040	Shelf Life Sample+ Actidion	44.00 €
M0041	Shelf Life Sample + Chloramphenicol	44.00 €

Possible Nutrients for Membranefiltration/Pour Plating/Spread Plating

POSSIBLE NUTRIENTS	DESCRIPTION NUTRIENT
Doemens Select agar	Selective nutrient for the detection of beer spoiling bacteria
NBB agar	Selective nutrient for the detection of beer spoiling bacteria
Standard I agar	Nutrient for the detection of the total cell count
MRS agar	Non-selective nutrient for lactic acid bacteria
Crystal violet agar	Selective nutrient for the detection of Saccharomyces-Wild yeasts
Lysin agar	Selective nutrient for the detection of Nonsaccharomyces-Wild yeasts (additional sample preparation needed)
MYPG CuSO ₄ agar	Selective nutrient for the detection of non brewery yeasts
OFS agar/ OS agar	Selective nutrient for the detection of soft drink spoilers
Wort agar	Nutrient for the detection of yeast and molds

Possible Nutrients for Liquid enrichment/swab samples

POSSIBLE NUTRIENTS	DESCRIPTION NUTRIENT
Doemens Select broth	Selective nutrient for the detection of beer spoiling bacteria
Doemens Select concentrate	Selective nutrient for the detection of beer spoiling bacteria
NBB broth	Selective nutrient for the detection of beer spoiling bacteria
NBB concentrate	Selective nutrient for the detection of beer spoiling bacteria
MRS broth	non-selective nutrient for lactic acid bacteria
SSL broth	Selective nutrient for the detection of soft drink spoilers
Standard I broth	Nutrient for the detection of the total cell count
Wort/Wort broth	Nutrient for the detection of yeast and molds

Microbiological analysis of drinking water

CODE	DESCRIPTION	PRICE
M0044	Analysis of Drinking Water	82.00 €
M0045	Analysis after German Drinking Water Regulations without Identification	82.00 €
M0046	Escherichia coli and coliforms without Differentiation TwVO	47.00 €
M0047	Differentiation E. coli and coliforms	47.00 €
M0048	Colony forming Units TwVO	47.00 €
M0049	Escherichia coli and coliforms without Differentiation MTVO	47.00 €
M0050	Colony forming Units MTVO	47.00 €

Identification Methods

Physiological Tests

CODE	DESCRIPTION	PRICE
M0043	Fermentability	82.00 €
M0051	Detection of spoilage for the product	85.00 €
M0054	Detection of Cytochromoxidase	21.00 €
M0055	Catalase Test	21.00 €

Genetical Tests

CODE	DESCRIPTION	PRICE
M0023	PCR Screening	82.00 €
M0024	PCR Identification	117.00 €
M0025	PCR Identification of different Yeast Types	186.00 €
M0026	MALDI-TOF Identification	145.00 €
M0027	PCR-Fingerprint Identification on Strain Level	245.00 €

Additional analyses and consultation available upon request

Microbiological Media

Nutrient Media

CODE	DESCRIPTION	PRICE
N0003	Doemens Yeast Detection Medium (250 ml)	€ 14.50
N0007	Wort agar (250 ml)	€ 14.50
N0009	Doemens Select agar (250 ml)	€ 14.50
N0011	Doemens Select broth (250 ml)	€ 14.50
N0013	Doemens Select concentrate (250 ml)	€ 17.50
N0018	Doemens Bev Select Agar (250 ml)	€ 9.00
N0020	Doemens Bev Select Bouillon (250 ml)	€ 9.00

*Minimum purchase is a sales unit of 16 bottles.
In case of smaller orders, an additional expense fee will be charged at 15.00 €.*

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