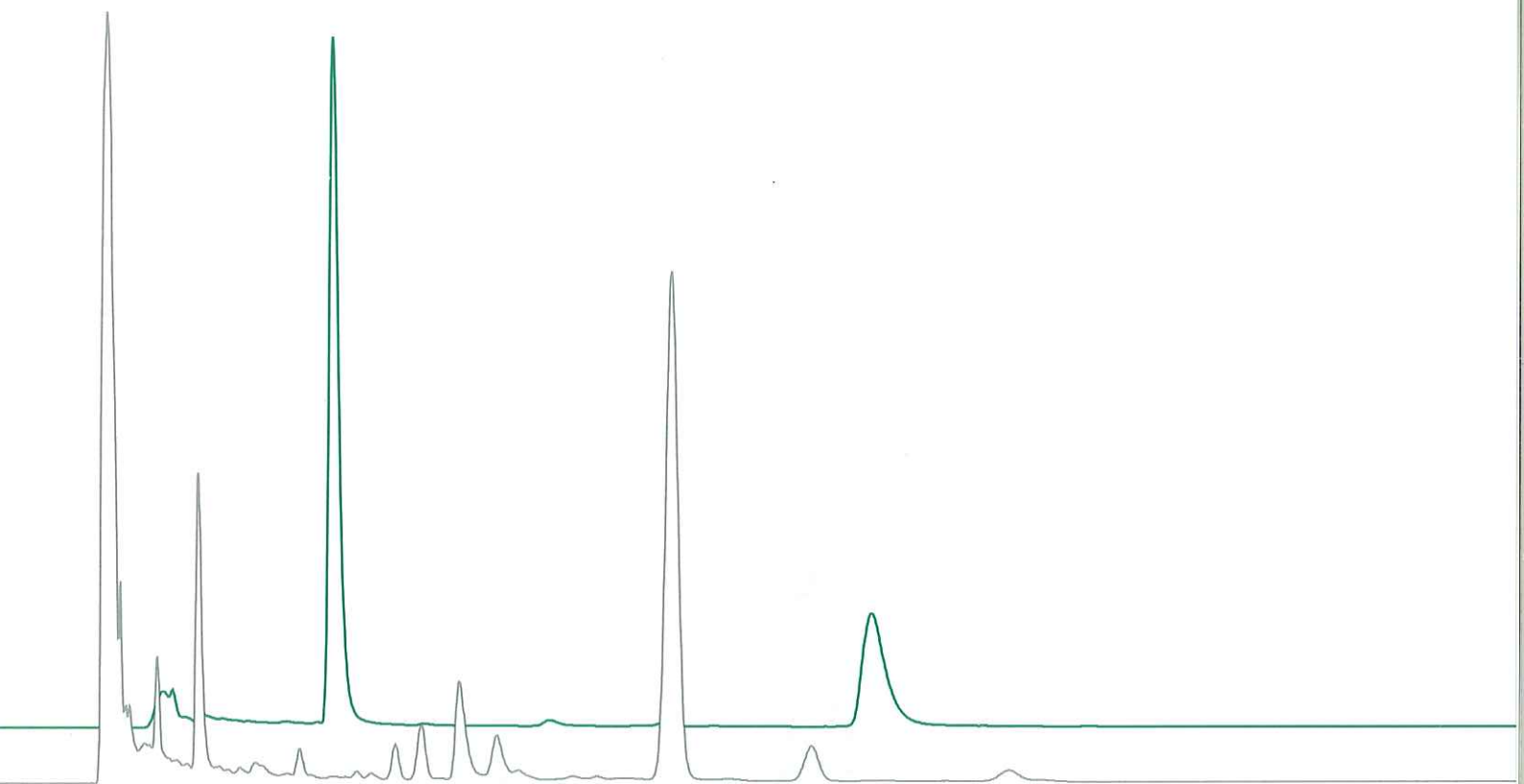




List of Services



Our contribution - to your success

Table of contents

Why should we co-operate.....	2
The Team/Memberships.....	3
The technical resources.....	4
Accredited sections and tests.....	5
Overall view of our services.....	7
Identity tests.....	9
General Test methods.....	10
Quantitative analysis.....	11
Microbiological tests.....	17
Mycotoxins/Heavy metals.....	19
Pesticides.....	20
Fumigants and other contaminants.....	41
Irradiation detection.....	46
Your contact.....	47

PhytoLab GmbH & Co. KG, Vestenbergsgreuth, Germany

Phone: +49 9163 88-216

Fax. +49 9163 88-349

Why should we co-operate?

Today more than ever, there is a growing need for the type of service we offer.

Rising expenditure on staff and laboratory equipment, together with increasingly stringent requirements both of the market and of regulatory authorities, has led to the overall **costs of quality** assuming even greater significance for many companies.

We are the external testing laboratory recognised and approved by the German authorities in accordance with § 14 of the German Law on Medicines (AMG = Arzneimittelgesetz) and accredited according to the Guideline 93/99 EWG.

The challenge we have set ourselves is to provide you

- With a competent service
- At manageable costs
- With precise and independent test results and

We believe we have succeeded.

Whether fast, inexpensive, or highly precise, we tailor our services to your particular requirements.

Even if your needs are unusual or especially demanding, don't hesitate to confront us with them.

We want to contribute to your success.

Make use of our experience and knowledge!

The Team / Memberships

PhytoLab, that's a team of 180 highly qualified employees including 30 graduate scientists, among them pharmacists, food analysts, biologists and chemists with many years of experience in herbal products.

Our scientists are engaged members in committees of pharmaceutical and food industry associations, professional associations as well as of the German Institute for Drugs and Medicinal Devices.

AHPA	American Herbal Products Association
BAH/BPI	Working Group on Extracts
BAH	Committee Phytopharmaceuticals
BAH	Committee Borderline Foods and Drugs
BAH	Working Group on Contaminants
BAH	Working Group PhytoMedia
BfArM	Working Group on Phytomedicines of the Pharmacopoeia Committee
BPI	Committee Regulatory Affairs
BPI	Committee Homeopathy/Anthroposphy
BPI	Committee Drug Safety/Pharmacovigilance
BPI	Association Innovation & Research
DGPharMed	German Society of Pharmaceutical Medicine
DPhG	Expert Group for Pharmaceutical Analytic
DPhG	Working Group Biopharmaceutics/Bioavailability of Phytopharmaka
EHIA	Working Group on Microbiology
FAH	Various working groups for research projects
GA	Society for Medicinal Plant Research
GDCH	Working Group on Pesticides
GDCH	Expert Group for Pharmaceutical Analysis
Ges. Phy.	Society for Phytotherapy
Koop. Phyto	Cooperation Phytopharmaka
VDC	Tea Association Working Group Quality Assurance
WKF	Working Group on Contaminants

In connection with this co-operation we take part in official ring tests and intermediate tests on a regular basis.

The technical resources

Our laboratory equipment:

- ◆ Pharmacopoeial conventional test equipment
- ◆ Microscopic equipment with photo-documentation
- ◆ Thin layer chromatography
 - qualitative and quantitative
 - with scanner techniques
 - with a computerised video-documentation system
- ◆ Gas chromatography
 - with various detectors
 - hyphenated mass spectrometry
- ◆ High performance liquid chromatography (HPLC)
 - isocratic or with gradients
 - with various detectors
 - including photodiode array detection
 - hyphenated mass spectrometry (triple quadrupole)
- ◆ Mass Spectrometry (triple quadrupole with integrated linear ion trap)
- ◆ Atomic absorption spectrometry
 - with microwave pressure-mineralisation
- ◆ ICP-MS
- ◆ UV/VIS-spectrometry
- ◆ IR-/NIR- spectrometry
- ◆ Radioactivity counter
- ◆ Thermoluminescence detector
- ◆ Microbiology laboratory

Accredited sections and tests

Accredited according to the Guideline 93/99/EWG by the Governmental Recognition Office for Food Monitoring (SAL) (Social Department of Hessen).

All the offered analytical procedures are accredited. The whole range can be seen below.

MINISTRY OF ENVIRONMENT, RURAL SPACE AND
CONSUMER PROTECTION OF HESSE
- PUBLIC CERTIFICATION AUTHORITY FOR
FOOD SUPERVISION –
(SAL)

Appendix to Certificate of Accreditation
SAL – BY – G 104-03-09

of
PHYTOLAB GMBH & CO KG
Analytical/Quality Control

Dutendorfer Straße 5 – 7
81487 Vestenbergsgrauth

Period of validity:
16 December 2009 to 15 December 2014

Accredited analytical procedures:

Serial No.	Analytical procedure
1.	Sensory analysis
2.	Conventional chemical analysis (gravimetry, titrimetry, cryoscopy, ebullioscopy, distillation, refractometry etc.)
3.	Colorimetry, photometry, fluorimetry (flame, polarisation, UV and IR photometry)
4.	Electrochemical Analysis (potentiometry, conductometry, polarography, voltametric analysis etc.)
5.	thin layer chromatography, paper chromatography
6.	High pressure liquid chromatography, ion chromatography (Purpose of analysis: constituents, additives)
7.	High pressure liquid chromatography, ion chromatography (Purpose of analysis: residues, contaminants)

Seite 1 von 2

Accredited sections and tests

Appendix to Certificate of Accreditation SAL – BY – G 104-03-09

8.	Gas chromatography (Purpose of analysis: constituents, additives)
9.	Gas chromatography (Purpose of analysis: residues, contaminants)
10.	Mass spectrometry (GC/MS, LC/MS, MS/MS)
14.	Infrared spectrometry, also GC/FID
15.	Atomic absorption spectrometry (flame and without flame), also GC/AED
16.	ICP, also ICP/MS
20.	Chemi-, Thermoluminescence
21.	Alpha, Beta, Gamma Spectrometry
25.	Enzymatical analysis
26.	Microbiology with non pathogenic germs
27.	Microbiology with pathogenic germs
28.	Microscopy (e.g. bacteriums, fungi, parasites, pollen)
37.	Pharmaceutic-technological and other physicochemical analytical procedures of the pharmacopoeia in question (e.g. Dissolution, identification, purity test)
38.	Molecular biology (PCR after accumulation)

Seite 2 von 2

Overall view of our services

◆ Testing for contaminants and harmful substances

- Pesticides/ PCBs and PAHs
- Heavy metals/Metals
- Microbiology
- Radioactivity
- Mycotoxins
- Residual solvents
- Pyrrolizidine alkaloids
- Emodin, Aloeemodin
- Acrylamid by means of HPLC/MS/MS

◆ Quantitative analyses

- Anthraquinone derivates
- Alkaloides
- Amino acids
- Essential Oils, single components
- Fatty acids
- Flavonoids
- Glycosides
- Isoflavones
- Plant specific constituents
- Saponins
- Sterols
- Tannin
- Vitamins

◆ Structure elucidation

- HPLC/MS/MS
- GC/MS

◆ Quality control methods

- Pharmacopoeial monographs
- LMBG (German Law on Foodstuffs and Everyday Necessities) methods
- AOAC methods
- Specific validated methods (developed in-house)
- DFG (German Research Foundation) methods
- Other published methods

Overall view of our services

◆ Consultancy and advisory service

- Consultancy on the design of products
- Literature research by means of international databases
- Co-ordination of product development
- Development of methods for the analysis of raw materials and final products (medical products, food-stuffs, cosmetics)
- Validation of methods
- Stability tests (physical, chemical and microbiological)
- Marketing authorisation applications and dossiers
- Regulatory affairs
- Expert opinions (analytical expertise, bibliographic expertise concerning efficacy and safety, grounds for combination)
- Contract laboratory work, contract research work
- Special investigations of vegetable drugs, extracts, essential oils and of medicinal products, human foodstuffs and animal feeds prepared from them
- GMP advice
- PSUR
- ADR
- Judicial expert reviews
- Health Certificates
- Phytosanitary Certificates

Identity tests

- Tasting
- Sensory tests
- Microscopy
- Pharmacognostic investigations of herbal drugs
- Thin layer chromatography (TLC)
- Gas chromatography (GC)
- High performance liquid chromatography (HPLC)
- Mass spectrometry
- UV/VIS spectrometry
- NIR-spectrometry (NIR)

General Test methods

◆ Assays and Methods in Pharmacognosy

- Sulphated ash
- Ash
- Acid value
- Ester value
- Hydroxyl value
- Iodine value
- Peroxide value
- Measure of rancidity (Hexanal)
- Saponification value
- Unsaponifiable matter
- Determination of water
- Ash insoluble in hydrochloric acid
- Swelling index
- Determination of bitterness value
- Determination of essential oils in vegetable drugs

◆ Pharmaceutical technical procedures

- Disintegration
- Dissolution test
- Sieving analysis
- Bulk volume
- Friability test
- Resistance to crushing

◆ Physical and physiochemical methods

- Determination of pH
- Relative density
- Refractive index
- Dosage of coloration
- Optical rotation
- Melting point
- Loss on drying
- Near-infrared spectroscopy

◆ Determination of nutritive value

- Protein
- Fat
- Carbohydrate
- Crude fibre

Quantitative analysis

Acesulfam	Asiaticoside
Acetone	Atropine
Acetonitrile	Aucubin
Acteine	Azulene
Acteoside	Benzoic acid
Acteoxy valerenic acid	Benzyl alcohol
β -Aescine	Benzyl benzoate
Adenosine	Benzyl cinnamate
Agnuside	Benzyl salicylate
Alkaloids	Berberine
Allantoin	Bergamottin
Allicin	Bergapten
Alliin	Biapigenin
Aloe-Emodin	Bilobalide
Aloin	Biochanin A
Amino acids	Biotin
Amygdalin	α -Bisabolol (Levomenol)
Analysis of essential oils (including chiral)	Bisabolol oxides A + B
Anethole (cis, trans)	Bisabolon oxide
Angelicin	Boldin
Anise alcohol	Borneol
Anisatin	Bornyl acetate
Anthranoids	Boswellic acid (α , β)
Anthraquinones	Acetyl-11-keto boswellic acid
Apigenin glucoside	Keto-boswellic-acid
Apigenine	Brucin
Apiine	1-Butanol
Arbutin	Tert Butyl methyl ether
Aristolochic acid	Byangelicin
β -Asarone (cis-Isoasarone)	Byangelicol
L(+)-Ascorbic acid	Caempferol

Quantitative analysis

Caempferol glucoside	Coenzyme Q10
Caffeic acid	Colchicine
Caffeic malic acid	Condurangin
Caffeine	Coptisine
Camphene	Coumarin
Camphor	Crude fiber
Capsaicin derivates	Cucurbitacine
Carbohydrates	Curcumin
Delta-3-Carene	Cyclohexane
Carotene	p-Cymol
Carvacrol	Cynarine
Trans-Carveol	Cytisine
(+)-Carvone	Daidzein
(-)-Carvone	Daidzin
β -Caryophyllene	Dehydromethysticin
Cascaroside	Deoxyactein
Casticin	27-Deoxyactein
Catechins	Desmosterol
Chaconin	Dichloromethane
Chamazulene	Trans-Dihydrocarvone
Chelidonine	Dihydrokawaine
Cichoric acid	Dihydromethysticine
1,8-Cineole (Eucalyptol)	N,N-Dimethyl formamide
Cinnamic alcohol	Dioxane
Cinnamic aldehyde	Dry matter
Citral a (Geranial)	Echinacoside
Citral b (Neral)	Eleutheroside (B und E)
Citric acid	Emetine
Citronellal	Emodin
Citronellol	(-)-Ephedrine (and -derivates)

Quantitative analysis

Epicatechin	8-Geranyloxypsoralen
Epicatechin gallate	6-Gingerol
Epigallocatechin gallate	8-Gingerol
Epigallocatechine	10-Gingerol
Epoxybergamottin	Ginkgolic acids
Essential oils in herbal drugs	Ginkgolides (A bis C)
Estragole (Methyl chavicol)	Ginsenoside
Ethanol	(Rb1, Rb2, Rc, Rd, Re, Rf, Rg1)
Ethyl acetate	Glucofrangulins
Ethyl vanillin	Glucosamine
Eucalyptol (1,8-Cineole)	Glucotropaeolin
Eugenol	Glycine-Betaine
Extract content	Glycitein
Farnesene	Glycitin
Farnesol	Glycyrrhizinic acid
Fat (lipid) content	Guaiazulene
Fatty acids	Hamamelitannin
Fenchone	Harman
Flavonoids	Harpagoside
Folic acid	Hederacoside C
Formononetin	α -Hederine
Fructose	Helenalin
Furanocoumarines	Heptane
Galangin	Heraclenin
Gallic acid	Hesperidin
Genistein	Hexane
Genistin	Hulupic acid
Gentiopicrin	4-Hydroxybenzoic acid-ethylester
Geranial (Citral a)	4-Hydroxybenzoic acid-methylester
Geraniol	4-Hydroxybenzoic acid-propylester
Geranyl acetate	Hydroxy citric acid

Quantitative analysis

10-Hydroxy-2-decanoic acid	Lupeol
Hydroxy valerenic acid	Luteolin
Hyperforin	Luteolin glucuronid
Hypericin	Luteolin glucoside
Hyperoside	Menthofuran
Imperatorin	(-)-Menthol
Iodine	(+)-Menthol
cis-Isoasarone (β -Asarone)	Menthone
Isobornyl acetate	Menthyl acetate
Isoeugenol	Methanol
Isoflavone	Methyl chavicol (Estragole)
Isoimperatorin	Methylcystisine
Isopimpinellin	Methylephedrine
Isomenthol	Methyl ethyl ketone
Isomenthone	Methyl eugenol
Isopulegol	Methylpseudoephedrine
Isoqercercetin	Methyl salicylat
Isosilibinin	Methylene chloride
Isoverbacosid	Morphine
Isovitexin	Myrcene
Isoxanthohumol	Myristicin
DL-Kawain	(+)-Neomenthol
Khellin	Neoruscogenin
Lavandulol	Neral (Citral b)
Lawson	Nerol
Leiocarposide	Nicotinic acid amide
Levomenol (α -Bisabolol)	Norephedrine
Limonene	Norpseudoephedrine
Linalol	Iso-Octane
Linalyl acetate	1-Octanol
Lipid (fat) content	Oleuropein

Quantitative analysis

Orientin	Quercitrin
Oxypeucedanin	Quinine
Oxypeucedanin hydrate	Reserpine
Pantothenic acid	Resveratrol
Papaverin	Rhamnetin
Pentane	Rhein
α -Phellandrene	Riboflavine
Phellopterin	Rosavin
Phytosterols	Rosmarinic acid
Picrotoxinin	Ruscogenin
(-)- α -Pinene	Rutin
(+)- α -Pinene	Sabinene
β -Pinene	Sabinyll acetate
Piperitone	Saccharin
Polidocanol	Safrole
Preservatives	Salicylic acid-methylester
Primulaverin	Salidroside
Primulic acids	D(-)-Salicin
Primverin	Sanguinarine
Prolin	Santonin
1-Propanol	Sarsasapogenin
2-Propanol	Schisantherin A/B
Protein content	Schisandrol A/B
Protopine	Schisandrin A/B
Pseudoephedrine	Scopolamine
Pseudohypericin	Scopoletin
Psoralen	Senecionine
Pulegone	Senkirkine
Pyridoxine-hydrochloride	Sennidin A
Pyrrolizidine alkaloids	Sennidin B
Quabain	Sennoside A

Quantitative analysis

Sennoside B	Thymol
Sennosides	Tiliroside
Sesquiterpene lactones	DL- α -Tocopherol
Silybin	Toluene
Silychristin	Trifolirhizin
Silydianin	Troxerutin
Sinensetin	(+)-Usnic acid
Sinigrin	Valerenic acid and its derivatives
β -Sitosterol	Verbacoside
Solanin	Verbenalin
Solvents	Vitamins
Sorbinic acid	Vitexin
Sparteine	Vitexin-2"-O-rhamnosid
Starch	Xanthohumol
Stigma sterol	Xanthotoxin
Strychnine	Yangonin
Sucrose	Yohimbine
Sugar	
Sudan red I-IV	
Tannin	
Tartaric acid	
Taxifolin	
α -Terpinene	
γ -Terpinene	
Terpinene-4-ol	
α -Terpineol	
Terpinyl acetate	
Tetrahydrofurane	
Theobromine	
α -Thujone	
β -Thujone	

Microbiological tests

◆ Analytical packages:

Pharmaceutical preparations:

Microbiological tests according to the requirements of the European Pharmacopoeia 2000

- Category 2 (Total viable aerobic count, yeasts and moulds
Enterobacteriaceae, Pseudomonas aeruginosa
Staphylococcus aureus)
- Category 3A (Total viable aerobic count, yeasts and moulds, E. coli)
- Category 3B (Total viable aerobic count, yeasts and moulds;
Enterobacteriaceae, E.coli, Staphylococcus aureus,
Salmonella)
- Category 4A (Total viable aerobic count, yeasts and moulds, E. coli)
- Category 4B (Total viable aerobic count, yeasts and moulds
Enterobacteriaceae, E. coli, Salmonella)

Herbal foodstuffs:

Microbiological tests according to the "Richt- und Warnwerten" of the German Hygiene and Microbiology Society (DGHM), 2003

e.g.:

- Spices: (Staphylococcus aureus, Bacillus cereus, E. coli, Sulfite-reducing clostridia, moulds, Salmonella)
- Products boiled before use, dried soups, dried stews, dried sauces:
(Total viable aerobic count, Staphylococcus aureus, Bacillus cereus, E. coli, sulfite-reducing clostridia, yeasts and moulds, Salmonella)

Microbiological tests according to the recommendations of the EHIA (European Herbal Infusions Association)

- Tea: (Total viable aerobic count, yeasts and moulds, E. Coli, Salmonella)

Water:

- Microbiological test according to the European Pharmacopoeia 2000, monograph „Purified Water“

Microbiological tests

◆ Specified micro-organisms

- Total viable aerobic count
- Yeasts and moulds
- Enterobacteriaceae
- Coliform micro-organisms
- Bacillus cereus
- Staphylococcus aureus
- Sulfit-reducing clostridia
- Clostridium perfringens
- Candida albicans
- Pseudomonas aeruginosa
- Spore formers
- Salmonella
- Escherichia coli
- Enterobacter sakazakii

◆ Micro-organisms tested by PCR-method

- Salmonella spec.
- Enterobacter sakazakii

Mykotoxins / Heavy metals

◆ Mycotoxins

- Aflatoxins B₁, B₂, G₁, G₂ by means of HPLC-FLD (limit of detection 0.01 µg/kg)
- Aflatoxin M₁ by means of HPLC-FLD (limit of detection 0.01 µg/kg)
- Ochratoxin A by means of HPLC-FLD (limit of detection 0.3 µg/kg)
- Patulin by means of HPLC-UV (limit of detection 4 µg/kg) and HPLC-MS/MS (limit of detection 1 µg/kg)
- Zearalenone by means of HPLC-FLD (limit of detection 2 µg/kg)
- Fumonisine B1 and B2 by means HPLC-FLD (limit of detection 10 µg/kg)
- T-2 Toxin by means of HPLC-MS/MS (limit of detection 0.2 µg/kg)
- HT-2 Toxin by means of HPLC-MS/MS (limit of detection 1 µg/kg)
- Deoxynivalenol and Nivalenol by means of HPLC-MS/MS (limit of detection 1 µg/kg)
- HPLC-MS/MS-method for the simultaneous determination of trichothecenes T-2 toxin, HT-2 toxin, Deoxynivalenol (DON) and Nivalenol (NIV)

For these mycotoxins the results can be confirmed by HPLC-MS/MS.

◆ Heavy metals and metals by means of ICP-MS respective AAS

- | | |
|-------------|-------------|
| ▪ Aluminium | ▪ Manganese |
| ▪ Arsenic | ▪ Mercury |
| ▪ Cadmium | ▪ Nickel |
| ▪ Calcium | ▪ Potassium |
| ▪ Chromium | ▪ Sodium |
| ▪ Cobalt | ▪ Selenium |
| ▪ Copper | ▪ Thallium |
| ▪ Iron | ▪ Tin |
| ▪ Lead | ▪ Zinc |
| ▪ Magnesium | |

Other elements by means of ICP-MS on request

Pesticides

◆ Pesticides - recommended tests

Package 1 DFG S19

Determination according to § 64 LFGB method L-00.00-34

- Organophosphorus pesticides by GC-FPD
- Organochlorine pesticides Eluat 1 / 2 by GC-ECD
- Pyrethroids by GC-ECD
- Total pyrethrine by GC-MSD
- N-containing and other pesticides by GC-MSD

Package 2 §64 LFGB extended

Determination according to § 64 LFGB method L-00.00-34

- Package 1 (DFG S19)
- Further pesticides by GC-MSD, GC-MS/MS, LC-MS/MS
- Fungicidal substances („Conazoles“) by GC-MS

Package 3 Herbal tea package (package 1 DFG S19 plus several herbicides) for herbal infusions, herbs , spices and fruits of apiaceae family

- Package 2 (§64 LFGB extended)
- Dithiocarbamates according to §64 LFGB method L-00.00-49/3
- Phenyl ureas by GC-MS (acc. to DFG S 6-1)
- Phenoxyalkane carboxylic acids and related substances by LC-MS/MS
- Carbamates and further substances by LC-MS/MS
- Glyphosate and AMPA by GC-MSD

Package 4 Fruit tea package (package 1 DFG S19 plus several peel treatment agents) for fruit teas, dried fruits and fruit blossoms

- Package 2 (§64 LFGB extended)
- Carbamates and further Substances by LC-MS/MS

Pesticides

Package 5 Tea package

Determination according to § 64 LFGB method L-00.00-34

- Package 1 (DFG S19)
- Glyphosate and AMPA by GC-MSD

Package 6 Babyfood

- Package 2 (§64 LFGB extended)
- Dithiocarbamates according to §64 LFGB method L-00.00-49/3
- Phenyl ureas by GC-MS (acc. to DFG S 6-1)
- Phenoxyalkane carboxylic acids and related substances by LC-MS/MS
- Carbamates and further substances by LC-MS/MS
- Glyphosate and AMPA by GC-MSD
- Halogenated phenols by GC-MSD
- Chlormequat/Mepiquat by LC-MS/MS
- Organophosphorus pesticides by LC-MS/MS
- ETU, PTU by GC-MS
- Organotin compounds by LC-MS/MS

Package 7 Fumigants

- Phosphine by headspace-GC
- Ethylene oxide and 2-Chloro ethanol by GC-ECD
- Methyl bromide (determined as inorganic bromide) by ICP-MS

Pesticides

□ Additional tests:

- Other pesticides by GC-MS/MS
- Other pesticides by LC-MS/MS
- Fungicidal active substances („Conazole“) by GC-MS
- Organophosphorus pesticides by LC-MS/MS
- Fumigants by GC-MS/MS and LC-MS/MS
- Phenyl ureas by GC-MS (accroding DFG S 6-1)
- Phenoxyalkanoic acids and other substances by LC-MS/MS
- Carbamates and similar compounds by LC-MS/MS
- Pesticides according to the Baby food Directives 13/2003 and 14/2003 EG
- Glyphosate and AMPA by GC-MS
- Halogenated phenols by GC-MS

Maximum residue levels depending on intended use

Food:	according to German Maximum residue levels regulation (RHmV), current version
Arzneimittel:	according to Ph.Eur., BVL and RHmV
Babyfood :	according to baby food regulation

following:

◆ = recommended tests

□ = additional tests

Pesticides

§ 64 LFGB method L 00.00.-34

◆ Organophosphorus pesticides (OPP)

Pesticide	Pesticide group	Limit of quantitation for dried herbs
Acephate	OPP	0.011 mg/kg
Azinphos-ethyl	OPP	0.043 mg/kg
Bromophos (-methyl)	OPP	0.020 mg/kg
Bromophos-ethyl	OPP	0.011 mg/kg
Carbofenthion	OPP	0.011 mg/kg
Chlorfenvinphos (cis and trans Isomere)	OPP	0.024 mg/kg
Chlorpyrifos (-ethyl)	OPP	0.011 mg/kg
Chlorpyrifos-methyl	OPP	0.011 mg/kg
Chlorthiophos	OPP	0.020 mg/kg
Coumaphos	OPP	0.134 mg/kg
Cyanofenphos	OPP	0.025 mg/kg
Cyanophos	OPP	0.010 mg/kg
Diazinon	OPP	0.005 mg/kg
Dichlofenthion	OPP	0.010 mg/kg
Dichlorfos	OPP	0.013 mg/kg
Dimethoate	OPP	0.011 mg/kg
Dioxabenzofos (Salithion)	OPP	0.010 mg/kg
Dioxathion	OPP	0.025 mg/kg
Ditalimfos	OPP	0.025 mg/kg
Edifenphos	OPP	0.025 mg/kg

Pesticides

Pesticide	Pesticide group	Limit of quantitation for dried herbs
EPN	OPP	0.013 mg/kg
Ethion	OPP	0.005 mg/kg
Ethoprophos	OPP	0.010 mg/kg
Etrimfos	OPP	0.005 mg/kg
Fenamiphos	OPP	0.020 mg/kg
Fenclorphos	OPP	0.011 mg/kg
Fenitrothion	OPP	0.020 mg/kg
Fensulfothion	OPP	0.027 mg/kg
Fenthion	OPP	0.013 mg/kg
Fonofos	OPP	0.005 mg/kg
Formothion	OPP	0.033 mg/kg
Iprobenfos	OPP	0.013 mg/kg
Isocarbofos	OPP	0.013 mg/kg
Isofenphos	OPP	0.010 mg/kg
Jodfenphos	OPP	0.027 mg/kg
Leptophos	OPP	0.050 mg/kg
Malaoxon	OPP	0.020 mg/kg
Malathion	OPP	0.020 mg/kg
Mecarbam	OPP	0.011 mg/kg
Mephospholan	OPP	0.020 mg/kg
Methacrifos	OPP	0.005 mg/kg
Methamidophos	OPP	0.011 mg/kg
Methidathion	OPP	0.027 mg/kg

Pesticides

Pesticide	Pesticide group	Limit of quantitation for dried herbs
Mevinphos	OPP	0.009 mg/kg
Monocrotophos	OPP	0.067 mg/kg
Omethoate	OPP	0.020 mg/kg
Paraoxon-(ethyl)	OPP	0.013 mg/kg
Paraoxon-methyl	OPP	0.021 mg/kg
Parathion (-ethyl)	OPP	0.011 mg/kg
Parathion-methyl	OPP	0.020 mg/kg
Phenkapton	OPP	0.020 mg/kg
Phenthoate	OPP	0.013 mg/kg
Phorate	OPP	0.010 mg/kg
Phosalone	OPP	0.043 mg/kg
Phosfolan	OPP	0.010 mg/kg
Phosphamidon	OPP	0.015 mg/kg
Pirimiphos-ethyl	OPP	0.005 mg/kg
Pirimiphos-methyl	OPP	0.011 mg/kg
Profenofos	OPP	0.011 mg/kg
Prothiofos	OPP	0.011 mg/kg
Pyrazophos	OPP	0.027 mg/kg
Pyridaphenthion	OPP	0.013 mg/kg
Quinalphos	OPP	0.011 mg/kg
Salithion (Dioxabenzofos)	OPP	0.010 mg/kg
Sulfotep	OPP	0.005 mg/kg

Pesticides

Pesticide	Pesticide group	Limit of quantitation for dried herbs
TEPP	OPP	0.013 mg/kg
Terbufos	OPP	0.010 mg/kg
Tetrachlorvinphos	OPP	0.013 mg/kg
Thionazine (Zinophos)	OPP	0.005 mg/kg
Tolclofos-methyl	OPP	0.010 mg/kg
Triazophos	OPP	0.013 mg/kg
Trichloronate	OPP	0.010 mg/kg
Zinophos (Thionazine)	OPP	0.005 mg/kg

Pesticides

◆ Organochlorine pesticides (OCL)

Pesticide	Pesticide group	Limit of quantitation for dried herbs
Aldrin	OCL 1 / 2	0.005 mg/kg
Benfluralin	OCL 1 / 2	0.005 mg/kg
Binapacryl	OCL 1 / 2	0.010 mg/kg
Bromoxynil-octanoate	OCL 1 / 2	0.005 mg/kg
Camphechlor (Polychlorterpene, Toxaphene)	OCL 1 / 2	0.050 mg/kg
Chlordane-alpha (cis)	OCL 1 / 2	0.005 mg/kg
Chlordane-gamma (trans)	OCL 1 / 2	0.005 mg/kg
Chlorfenapyr	OCL 1 / 2	0.005 mg/kg
Chlorfenson	OCL 1 / 2	0.005 mg/kg
Chlorthaldimethyl (Dacthal)	OCL 1 / 2	0.005 mg/kg
Chlorthion	OCL 1 / 2	0.005 mg/kg
DDD-o,p'	OCL 1 / 2	0.005 mg/kg
DDD-p,p'	OCL 1 / 2	0.005 mg/kg
DDE-o,p'	OCL 1 / 2	0.005 mg/kg
DDE-p,p'	OCL 1 / 2	0.005 mg/kg
DDT-o,p'	OCL 1 / 2	0.005 mg/kg
DDT-p,p'	OCL 1 / 2	0.005 mg/kg
Dichlobenil	OCL 1 / 2	0.005 mg/kg
Dicloran	OCL 1 / 2	0.005 mg/kg
Dicofol	OCL 1 / 2	0.020 mg/kg
Dieldrin	OCL 1 / 2	0.005 mg/kg
Endosulfan-alpha	OCL 1 / 2	0.005 mg/kg

Pesticides

Pesticide	Pesticide group	Limit of quantitation for dried herbs
Endosulfan-beta	OCL 1 / 2	0.005 mg/kg
Endosulfansulfat	OCL 1 / 2	0.005 mg/kg
Endrin	OCL 1 / 2	0.005 mg/kg
Flubenzimine	OCL 1 / 2	0.005 mg/kg
Fluchloralin	OCL 1 / 2	0.005 mg/kg
Flumetralin	OCL 1 / 2	0.010 mg/kg
Halfenprox	OCL 1 / 2	0.010 mg/kg
Heptachlor	OCL 1 / 2	0.005 mg/kg
Heptachlorepoxyd-cis	OCL 1 / 2	0.005 mg/kg
Heptachlorepoxyd-trans	OCL 1 / 2	0.005 mg/kg
Hexachlorbenzol	OCL 1 / 2	0.005 mg/kg
Hexachlorcyclohexan-alpha	OCL 1 / 2	0.005 mg/kg
Hexachlorcyclohexan-beta	OCL 1 / 2	0.005 mg/kg
Hexachlorcyclohexan-delta	OCL 1 / 2	0.005 mg/kg
Hexachlorcyclohexan-epsilon	OCL 1 / 2	0.005 mg/kg
loxynil-octanoate	OCL 1 / 2	0.010 mg/kg
Isobenzan	OCL 1 / 2	0.005 mg/kg
Isodrin	OCL 1 / 2	0.005 mg/kg
Ketoendrin- delta (Endrinketone)	OCL 1 / 2	0.005 mg/kg
Lindane	OCL 1 / 2	0.005 mg/kg
Methoxychlor	OCL 1 / 2	0.005 mg/kg
Methylpentachlorophenylsulfide	OCL 1 / 2	0.005 mg/kg
Mirex	OCL 1 / 2	0.005 mg/kg
Nitrapyrin	OCL 1 / 2	0.005 mg/kg

Pesticides

Pesticide	Pesticide group	Limit of quantitation for dried herbs
Nitrofen	OCL 1 / 2	0.005 mg/kg
Octachlordipropylether (S 421)	OCL 1 / 2	0.005 mg/kg
Octachlorstyrol	OCL 1 / 2	0.005 mg/kg
Oxyfluorfen	OCL 1 / 2	0.010 mg/kg
Oxychlordan (Octachlorepoxyde)	OCL 1 / 2	0.005 mg/kg
Pendimethalin	OCL 1 / 2	0.005 mg/kg
Pentachloroaniline	OCL 1 / 2	0.005 mg/kg
Pentachloroanisol	OCL 1 / 2	0.005 mg/kg
Pentachlorobenzene	OCL 1 / 2	0.005 mg/kg
Polychlorterpene (Toxaphene, Camphechlor)	OCL 1 / 2	0.050 mg/kg
Quintozene	OCL 1 / 2	0.005 mg/kg
S 421 (Octachlordipropylether)	OCL 1 / 2	0.005 mg/kg
Tecnazene	OCL 1 / 2	0.005 mg/kg
Tetrachloraniline-2,3,5,6	OCL 1 / 2	0.005 mg/kg
Tetradifon	OCL 1 / 2	0.005 mg/kg
Toxaphene (Polychlorterpene, Camphechlor)	OCL 1 / 2	0.050 mg/kg
Trifluralin	OCL 1 / 2	0.005 mg/kg
Vinclozolin	OCL 1 / 2	0.005 mg/kg

Pesticides

◆ Pyrethroides

Pesticide	Pesticide group	Limit of quantitation for dried herbs
Bifenthrin	Pyrethroide	0.005 mg/kg
Cyfluthrin	Pyrethroide	0.010 mg/kg
Cyhalothrin-lambda	Pyrethroide	0.005 mg/kg
Cypermethrin	Pyrethroide	0.008 mg/kg
Deltamethrin	Pyrethroide	0.005 mg/kg
Fenpropathrin	Pyrethroide	0.005 mg/kg
Fenvalerate	Pyrethroide	0.008 mg/kg
Fenvalerate RR/SS	Pyrethroide	0.008 mg/kg
Fenvalerate RS/SR	Pyrethroide	0.008 mg/kg
Flucytrinate	Pyrethroide	0.005 mg/kg
Fluvalinate - tau	Pyrethroide	0.005 mg/kg
Permethrin	Pyrethroide	0.016 mg/kg

◆ Pyrethrins by GC-MS

Pyrethrins, total (Cinerin I, Cinerin II , Jasmolin I, Jasmolin II, Pyrethrin I, Pyrethrin II)	Pyrethrins	0.016 mg/kg
--	------------	-------------

Pesticides

◆ Pesticides, N-containing and others by means of GC-MS

Pesticide	Pesticide group	Limit of quantitation for dried herbs
Alachlor	GC-MS	0.020 mg/kg
Allethrin	GC-MS	0.020 mg/kg
Azinphos-methyl	GC-MS	0.100 mg/kg
Bromopropylate	GC-MS	0.013 mg/kg
Buprofezin	GC-MS	0.010 mg/kg
Diflubenzuron	GC-MS	0.020 mg/kg
Fipronil	GC-MS	0.010 mg/kg
Fipronil-desulfinyl	GC-MS	0.010 mg/kg
Phosmet	GC-MS	0.050 mg/kg
Piperonylbutoxide	GC-MS	0.100 mg/kg
Procymidone	GC-MS	0.013 mg/kg
Propargite	GC-MS	0.050 mg/kg
Propiconazole	GC-MS	0.050 mg/kg
Pyridaben	GC-MS	0.010 mg/kg

Pesticides

□ Other Pesticides by GC-MSD2

Substance	Pesticide group	Limit of quantitation for dried herbs
Fenazaquin	GC-MS	0.02 mg/kg
Fenarimol	GC-MS	0.020 mg/kg
Kresoxim-methyl	GC-MS	0.020 mg/kg
Napropamid	GC-MS	0.020 mg/kg
Picoxystrobin	GC-MS	0.020 mg/kg
Pyriproxyfen	GC-MS	0.02 mg/kg
Terbutylazin	GC-MS	0.010 mg/kg
Trifloxystrobin	GC-MS	0.020 mg/kg

□ Other pesticides by GC-MS/MS

Substance	Substance group	Limit of quantification for dried herbs
Aclonifen	GC-MS/MS	0.01 mg/kg
Biphenyl	GC-MS/MS	0.01 mg/kg
Diphenylamin	GC-MS/MS	0.01 mg/kg
Imazalil	GC-MS/MS	0.05 mg/kg
o-Phenylphenol	GC-MS/MS	0.01 mg/kg
Propyzamid	GC-MS/MS	0.01 mg/kg
Tebuconazol	GC-MS/MS	0.02 mg/kg

Pesticides

□ Fungicidal active substances („Conazole“) by GC-MS

Substance	Substance group	Limit of quantification for dried herbs
Cyproconazol	GC-MS	0.01 mg/kg
Diclobutrazol	GC-MS	0.01 mg/kg
Difenconazol	GC-MS	0.05 mg/kg
Epoxyconazol	GC-MS	0.01 mg/kg
Etaconazol	GC-MS	0.01 mg/kg
Fluquinconazol	GC-MS	0.01 mg/kg
Flusilazol	GC-MS	0.01 mg/kg
Flutriafol	GC-MS	0.01 mg/kg
Hexaconazol	GC-MS	0.05 mg/kg
Metconazol	GC-MS	0.03 mg/kg
Myclobutanil	GC-MS	0.01 mg/kg
Penconazol	GC-MS	0.01 mg/kg
Propiconazol	GC-MS	0.05 mg/kg
Tebuconazol	GC-MS	0.01 mg/kg
Tetraconazol	GC-MS	0.01 mg/kg
Triadimefon	GC-MS	0.01 mg/kg
Triadimenol	GC-MS	0.03 mg/kg
Triflumizol	GC-MS	0.05 mg/kg
Uniconazol	GC-MS	0.01 mg/kg

Pesticides

□ Other pesticides by LC-MS/MS

Substance	Substance group	Limit of quantification for dried herbs
Acetamipride	LC-OPP	0.005 mg/kg
Azoxystrobin	LC-OPP	0.005 mg/kg
Bromuconazol	LC-OPP	0.005 mg/kg
Carbaryl	LC-OPP	0.001 mg/kg
Clomazon	LC-OPP	0.005 mg/kg
Fenoxycarb	LC-OPP	0.005 mg/kg
Fenpropimorph	LC-OPP	0.005 mg/kg
Hexythiazox	LC-OPP	0.003 mg/kg
Imidacloprid	LC-OPP	0.005 mg/kg
Metamitron	LC-OPP	0.01 mg/kg
Metosulfam	LC-OPP	0.005 mg/kg
Phoxim	LC-OPP	0.005 mg/kg
Quinoxifen	LC-OPP	0.005 mg/kg
Thiametoxam	LC-OPP	0.005 mg/kg

Pesticides

◆ Dithiocarbamates according to method DFG S 15

Total Dithiocarbamates calculated as CS₂ 0.1 mg/kg *

Ferbam, Mancozeb, Maneb, Nabam, Propineb, Thiram, Zineb

*The limit of quantitation depends on the material of the sample

□ OPP-pesticides by LC-MS/MS

Substance	Substance group	Limit of quantification for dried herbs
Cadusafos	LC-OPP	0.003 mg/kg
Carbosulfan	LC-OPP	0.003 mg/kg
Demeton-S-methyl	LC-OPP	0.003 mg/kg
Demeton-S-methylsulfon	LC-OPP	0.003 mg/kg
Oxydemeton-methyl	LC-OPP	0.003 mg/kg
Disulfoton	LC-OPP	0.003 mg/kg
Disulfoton-sulfoxide	LC-OPP	0.003 mg/kg
Disulfoton-sulfon	LC-OPP	0.003 mg/kg
Ethoprophos	LC-OPP	0.003 mg/kg
Fensulfothion	LC-OPP	0.003 mg/kg
Fensulfothion-oxon	LC-OPP	0.003 mg/kg
Fensulfothion-sulfon	LC-OPP	0.003 mg/kg
Fensulfothion-oxon-sulfon	LC-OPP	0.003 mg/kg
Omethoate	LC-OPP	0.003 mg/kg
Terbufossulfon	LC-OPP	0.003 mg/kg
Terbufos-sulfoxide	LC-OPP	0.003 mg/kg

Pesticides

◆ Pesticides according to the Baby food Directives 13/2003 and 14/2003 EC

Substance	Substance group	Limit of quantification for dried herbs
Aldrin und Dieldrin	Baby food	0.003 mg/kg
Cadusafos	Baby food	0.003 mg/kg
Demeton-S-methyl, total	Baby food	0.003 mg/kg
Disulfoton, total	Baby food	0.003 mg/kg
Endrin	Baby food	0.003 mg/kg
Ethoprophos	Baby food	0.003 mg/kg
Fensulfothion, total	Baby food	0.003 mg/kg
Fentin	Baby food	0.003 mg/kg
Fipronil, total	Baby food	0.004 mg/kg
Haloxifop, total	Baby food	0.003 mg/kg
Heptachlor und Heptachlorepoide	Baby food	0.003 mg/kg
Hexachlorbenzene	Baby food	0.003 mg/kg
Nitrofen	Baby food	0.003 mg/kg
Omethoate	Baby food	0.003 mg/kg
Propineb	Baby food	0.003 mg/kg
PTU (Propylene thiourea)	Baby food	0.006 mg/kg
Terbufos, total	Baby food	0.003 mg/kg

Pesticides

□ Surface treatment means by GC-MS/MS or LC-MS/MS

Fungicides by GC-MS/MS

Pesticides	Pesticide group	Limit of quantitation for dried herbs
Biphenyl	Surface treat.	0.01 mg/kg
Diphenylamin	Surface treat.	0.01 mg/kg
Imazalil	Surface treat.	0.05 mg/kg
o-Phenylphenol	Surface treat.	0.01 mg/kg

Fungicides by LC-MS/MS

Benomyl	Surface treat.	0.05 mg/kg
Carbendazim	Surface treat.	0.05 mg/kg
Pirimicarb	Surface treat.	0.001 mg/kg
Pirimicarb-desmethyl	Surface treat.	0.001 mg/kg
Pirimicarb-desmethyl-formamido	Surface treat.	0.001 mg/kg
Thiabendazole	Surface treat.	0.02 mg/kg
Thiophanat-methyl	Surface treat.	0.005 mg/kg

Pesticides

▣ Carbamates and similar compounds by LC-MS/MS

Pesticides	Pesticide group	Limit of quantitation for dried herbs
Benomyl	Carbamate	0.001 mg/kg
Bifenazat	Carbamate	0.005 mg/kg
Carbendazim	Carbamate	0.001 mg/kg
Fludioxonil	Carbamate	0.005 mg/kg
Flurochloridon	Carbamate	0.005 mg/kg
Methomyl	Carbamate	0.005 mg/kg
Napropamid	Carbamate	0.005 mg/kg
Phenmedipham	Carbamate	0.003 mg/kg
Pirimicarb	Carbamate	0.001 mg/kg
Pirimicarb-desmethyl	Carbamate	0.001 mg/kg
Pirimicarb-desmethyl-formamido	Carbamate	0.001 mg/kg
Prosulfocarb	Carbamate	0.005 mg/kg
Pyrimethanil	Carbamate	0.005 mg/kg
Tebufenozid	Carbamate	0.005 mg/kg
Thiabendazol	Carbamate	0.001 mg/kg
Thiodicarb	Carbamate	0.005 mg/kg
Thiophanat-methyl	Carbamate	0.005 mg/kg
Triflumuron	Carbamate	0.005 mg/kg

Pesticides

◆ Phenyl ureas by GC-MS (according DFG S 6-1)

Substance	Substance group	Limit of quantitation for dried herbs
Barban/Chlorbufam/Chlorpropham	Phenyl ureas	0.05 mg/kg
Buturon/Monolinuron/Monuron	Phenyl ureas	0.05 mg/kg
Chlorbromuron	Phenyl ureas	0.05 mg/kg
Chlorotoluron	Phenyl ureas	0.05 mg/kg
Diuron/Linuron/Neburon	Phenyl ureas	0.05 mg/kg
Isoproturon	Phenyl ureas	0.05 mg/kg
Metobromuron	Phenyl ureas	0.05 mg/kg
Metoxuron	Phenyl ureas	0.01 mg/kg
Phenmedipham	Phenyl ureas	0.05 mg/kg
Procymidone/Vinclozolin/Iprodione	Phenyl ureas	0.05 mg/kg

◆ Phenoxyalkanoic acids and other substances by LC-MS/MS

Substance	Substance group	Limit of quantitation for dried herbs
2,4,5-T	Phenoxy	0.002 mg/kg
2,4-D	Phenoxy	0.005 mg/kg
2,4-DB	Phenoxy	0.003 mg/kg
α -naphthaleneacetic acid	Phenoxy	0.003 mg/kg
Azaconazol	Phenoxy	0.005 mg/kg

Pesticides

Substance	Substance group	Limit of quantitation for dried herbs
Bentazone	Phenoxy	0.001 mg/kg
Clopyralid	Phenoxy	0.002 mg/kg
Diclofop	Phenoxy	0.002 mg/kg
Dichlorprop	Phenoxy	0.005 mg/kg
Fenbuconazol	Phenoxy	0.005 mg/kg
Fluazifop	Phenoxy	0.003 mg/kg
Fluazifop-butyl	Phenoxy	0.001 mg/kg
Fenoprop	Phenoxy	0.003 mg/kg
Fluroxypyr	Phenoxy	0.005 mg/kg
Haloxyfop	Phenoxy	0.002 mg/kg
Haloxyfop-methyl	Phenoxy	0.001 mg/kg
Haloxyfop-ethoxyethyl	Phenoxy	0.001 mg/kg
loxynil	Phenoxy	0.001 mg/kg
Mecoprop	Phenoxy	0.005 mg/kg
Quinmerac	Phenoxy	0.001 mg/kg
MCPA	Phenoxy	0.003 mg/kg
MCPB	Phenoxy	0.003 mg/kg
Quizalofop	Phenoxy	0.003 mg/kg
Quizalofop-ethyl	Phenoxy	0.001 mg/kg
Quizalofop-tefuryl	Phenoxy	0.002 mg/kg
Triclopyr	Phenoxy	0.003 mg/kg

Fumigants and other contaminants

□ Halogenated Phenols

GC-MS method PhytoLab

Substance	Substance group	Limit of quantitation for dried herbs
Pentachlorophenol (PCP)	Halog. Phenols	0.005 mg/kg
2,3,4,6 -Tetrachlorophenol	Halog. Phenols	0.005 mg/kg
2,4,6 - Tribromophenol	Halog. Phenols	0.005 mg/kg
2,4,5 – Trichlorophenol	Halog. Phenols	0.005 mg/kg
2,4,6 –Trichlorophenol	Halog. Phenols	0.005 mg/kg

Further halogenated phenols on request

□ Glyphosate, AMPA

GC-MS method PhytoLab

Substance	Substance group	Limit of quantitation for dried herbs
Glyphosate	Glyphosate	0.03 mg/kg
AMPA	Glyphosate	0.03 mg/kg

□ Paraquat, Diquat

LC-MS method PhytoLab

Substance	Substance group	Limit of quantitation for dried herbs
Paraquat	Bipyridylum	0,06 mg/kg
Diquat	Bipyridylum	0,02 mg/kg

Fumigants and other contaminants

□ Pyridate, Pyridat-Metabolite, Pyridate-conjugate

LC-MS/MS method PhytoLab

Substance	Substance group	Limit of quantitation for dried herbs
Pyridat	--	0,01 mg/kg

□ Fumigants

- Phosphin (PH₃)
- Ethylene oxide and 2-Chlorethanol
- Methyl bromide (as inorganic bromide)

Fumigants and other contaminants

Other contaminants

- PCB (Polychlorinated biphenyls) (detailed list above)
- PAH (Polyaromatic hydrocarbons) (detailed list page 31)
- Radioactivity
- Nitrate, Nitrite
- Sulfite
- Acrylamide
- Other contaminants on request

◆ PCB (Polychlorinated Biphenyls - Environment contaminants)

Determination according to § 64 LFGB method L 00.00.-34

Substance	Substance group	Limit of quantitation for dried herbs
PCB 28	PCB	0.005 mg/kg
PCB 52	PCB	0.005 mg/kg
PCB 101	PCB	0.005 mg/kg
PCB 118	PCB	0.005 mg/kg
PCB 138	PCB	0.005 mg/kg
PCB 153	PCB	0.005 mg/kg
PCB 180	PCB	0.005 mg/kg

Fumigants and other contaminants

◆ PAH (Polycyclic aromatic hydrocarbons)

PAH by HPLC-FLD

Substance	Substance group	Limit of quantitation for dried herbs
Acenaphthene	PAH	0.30 µg/kg
Anthracene	PAH	0.10 µg/kg
Benzo(A)anthracene	PAH	0.18 µg/kg
Benzo(A)pyrene	PAH	0.20 µg/kg
Benzo(B)fluoranthene	PAH	0.19 µg/kg
Benzo(G,H,I)perylene	PAH	0.30 µg/kg
Benzo(J)fluoranthene	PAH	2.24 µg/kg
Benzo(K)fluoranthene	PAH	0.16 µg/kg
Chrysene	PAH	0.17 µg/kg
Dibenzo(A,E)pyrene	PAH	0.08 µg/kg
Dibenzo(A,L)pyrene	PAH	1.95 µg/kg
Dibenzo(A,H)anthracene	PAH	0.32 µg/kg
Fluoranthene	PAH	0.24 µg/kg
Fluorene	PAH	0.19 µg/kg
Indeno(1,2,3-CD)pyrene	PAH	1.29 µg/kg
5-Methylchrysen	PAH	0.10 µg/kg
Naphtalene	PAH	1.94 µg/kg
Phenanthrene	PAH	0.17 µg/kg
Pyrene	PAH	0.11 µg/kg

several Nitro-PAH on request

Fumigants and other contaminants

◆ Azo-pigments

by HPLC-MS/MS

Substance	Substance group	Limit of Quantitation for dried herbs
Sudan I	Azo	10 µg/kg
Sudan II	Azo	10 µg/kg
Sudan III	Azo	10 µg/kg
Sudan IV	Azo	10 µg/kg
Sudanred 7B	Azo	10 µg/kg
Sudanorange G	Azo	10 µg/kg
Parared	Azo	100 µg/kg
Butter yellow	Azo	10 µg/kg
Rhodamine B	Azo	10 µg/kg
Orange II	Azo	10 µg/kg

◆ Radioactivity

Caesium 134/137

◆ Nitrate, Nitrite

◆ Sulfite

◆ Acrylamide (Limit of detection 2 µg/kg)

Irradiation detection

- ◆ Irradiation detection for products containing minerals by thermoluminescence measurement according to § 64 LFGB L 00.00-43

Your contact

Cornelia Höhne, Biologist

Management board

Tel. 09163/88-347

Dr. Hartwig Sievers, Pharmacist

Management board

Tel. 09163/88-154

Dr. Sven Asche, Food Chemist

HPLC, Dissolution, LC-MS

Tel. 09163/88-448

Susanne Günther, Biologist

Customer Service Center

Tel. 09163/88-160

Dr. Bernhard Klier, Pharmacist

Quality control, Contaminants, Pharmacopoeia,
Authorised to test control samples of herbal drugs (§ 65 AMG)
Qualified Person § 14 AMG

Tel. 09163/88-342

Dr. Ivo Pischel, Chemist

Innovation Management

Tel. 09163/88-616

Dr. Klaus Reif, Chemist

Development of Methods
State-appointed and sworn expert

Tel. 09163/88-337

Dr. Robert Schmücker, Pharmacist

Pharmacopoeial Tests
Authorised to test control samples of herbal drugs (§ 65 AMG)
Qualified Person § 14 AMG

Tel. 09163/88-321

Dr. Grit Schulzki, Food Chemist

GC / Element Analysis

Tel. 09163/88-168

Dr. Michael Schwarz, Food Chemist

Reference substances

Tel. 09163-88-327

Anke Steuber, Food Chemist

Regulatory affairs, authorised to test control samples of
plant-based food and raw material according to § 3 (6) GPV
(German regulation on officially approved experts)

Tel. 09163/88-446

Steffi Werth, Team Assistant

Reference substances

Tel. 09163/88-395

e-mail: first name.last name@phytolab.de