

AnimAlt-ZEBET
Verzeichnis der Dokumente im online Zugriff
Version 1, September 2004



- **bewertete Alternativmethoden nach Fachgebieten geordnet**

Animal Production
Cell Biology
Food Hygiene
Immunology
Microbiology
Molecular Biology
Parasitology
Pharmacology
Pharmacy
Physiology
Toxicology

Animal Production

Methodentitel	Methodennummer
The in vitro contracture test and miscellaneous tests to detect malignant hyperthermia susceptibility in pigs as alternatives to the halothane test	31
The malignant hyperthermia genetest for breeding stress-resistant pigs as a replacement for the halothane test	194

Cell Biology

Methodentitel	Methodennummer
Substitutes for fetal calf serum as growth supplement in cell and tissue culture media	234

Food Hygiene

Methodentitel	Methodennummer
Bioassays using cell lines and specific receptor binding assays for the determination of marine algal toxins	177
Immunological methods and enzyme immunoassays for the determination of marine algal toxins	178

Analytical physicochemical methods for the determination of marine algal toxins	179
Specific ligand-receptor binding assays for the determination of marine algal toxins	267
Protein phosphatase inhibition assays for the determination of marine algal toxins causing diarrhetic shellfish poisoning	274

Immunology

Methodentitel	Methodennummer
In vitro production of monoclonal antibodies in fluidized bed reactors	78
In vitro production of monoclonal antibodies in systems based on dialysis tubing cell culture	173
Hollow fiber bioreactors as an alternative to murine ascites production for monoclonal antibody production	180
In vitro production of monoclonal antibodies in various cell culture systems (roller and spin-techniques)	182

Microbiology

Methodentitel	Methodennummer
Methods for the detection and determination of the exotoxins produced by <i>Bacillus cereus</i>	39
In vitro methods for the detection and determination of the exotoxins produced by <i>Aeromonas hydrophila</i> and related species	66
Serological methods and enzyme immunoassays for the detection and identification of <i>Clostridium botulinum</i> toxins and antitoxins	94
In vitro methods for the detection and enumeration of virulent <i>Yersinia enterocolitica</i>	190
Detection of lymphocytic choriomeningitis virus (LCMV) by immunological focus assay (plaque assay)	221
Polymerase Chain Reaction and nucleic acid based methods for the detection and identification of <i>Clostridium botulinum</i> strains and their neurotoxins	243

Assays for the detection and determination of the neurotoxins produced by <i>Clostridium botulinum</i> and <i>Clostridium tetani</i> based on their intrinsic protease activities	246
---	-----

Molecular Biology

Methodentitel	Methodennummer
The use of antisense nucleic acids and antisense oligonucleotides in cultured cells as an alternative to gene targeting by homologous recombination in mice	90
Transactivation assays in transfected cell lines for the pre-screening of the effects of sex steroid hormones and their antagonists (antihormones)	96
RNA interference in cultured mammalian cells as an alternative to gene targeting by homologous recombination in mice ('knockout mice')	114

Parasitology

Methodentitel	Methodennummer
The cultivation of <i>Leishmania</i> species in vitro, including promastigote and amastigote life cycle stages, for research purposes and screening of antimicrobial drug efficacy	137
Artificial feeding and breeding techniques for bloodsucking louse and flea species	154

Pharmacology

Methodentitel	Methodennummer
Cultures of primary spinal cord neuronal cells in epilepsy and anticonvulsant drug research	18
Use of the isolated phrenic nerve hemidiaphragm preparation for the determination of the biological activity of the neurotoxins produced by <i>Clostridium botulinum</i> and <i>Clostridium tetani</i>	17
Quality control of oxytocin by liquid chromatography as an alternative to three bioassays with chickens and rats	15
Radioelectroencephalography (Tele-Stereo-Electroencephalography) to record brain activity in freely moving rats	20

Quality control of lypressin (vasopressin) by liquid chromatography as an alternative to the potency assay with rats	38
Isolated human and non-human brain capillaries as in vitro models of the blood-brain barrier for pharmacokinetic and toxicokinetic examinations of pharmaceuticals and chemicals	44
Cultured human and non-human brain capillary endothelium as in vitro models of the blood-brain barrier for pharmacokinetic and toxicokinetic examinations of pharmaceuticals and chemicals	45
Computer Assisted Drug Design (CADD) for the development and screening of pharmacological compounds	46
Rat hippocampal explant cultures for neurological basic research, for the screening of anti-epileptic drugs and as a neurotoxicological model system supplementary to in vivo testing	52
Spinal cord and dorsal root ganglia neurons of embryonal rats in primary dissociated cell culture for pain research and screening of analgesics supplementary to in vivo testing	74
The isolated perfused bovine udder skin model (BUS) as an in vitro model of percutaneous drug absorption	198
Human and animal hepatocyte cell cultures on an extracellular matrix (biomatrix and collagen gels) for long-term biotransformation and pharmacokinetic studies	222

Pharmacy

Methodentitel	Methodennummer
Application of mutant analysis by polymerase chain reaction and restriction enzyme cleavage (MAPREC) for the safety assessment of oral poliomyelitis vaccine prior to testing for neurovirulence in monkeys (intraspinal monkey neurovirulence test)	27
Cell culture assay using Vero cells for the detection and potency determination of Corynebacterium diphtheriae toxin, antitoxin, anti-diphtheria toxin antibodies and antibodies raised against diphtheria toxoid containing vaccines in human and animal sera	50
An in vitro bioassay for human calcitonin using the human mammary tumour cell line T47D or plasma-membrane preparations thereof as alternative to the rat hypocalcemia bioassay	54
The use of transgenic mice susceptible to poliovirus for the safety assessment of oral poliomyelitis vaccine instead of the WHO intraspinal monkey neurovirulence test	60

Determination of salmon calcitonin by liquid chromatography as an alternative to the rat hypocalcemia bioassay	63
Substitution of the multiple dilution assay by a single dilution assay in the potency testing for tetanus vaccines and diphtheria vaccines	108
Rocket Immuno-electrophoresis for the detection and determination of antitoxin against Clostridium tetani neurotoxin, anti-tetanus antibodies and antibodies raised against tetanus toxoid (anatoxin) containing vaccines	119
Immunochemical and immunobiological detection of endogenous pyrogen/interleukin-1	123
Enzyme-linked immunosorbent assay (ELISA) and toxin binding inhibition (ToBI) test for the detection and determination of antitoxin against Clostridium tetani neurotoxin, anti-tetanus antibodies and antibodies raised against tetanus toxoid (anatoxin) containing vaccines in human sera	132
The Limulus amoebocytes lysate (LAL) test - a replacement for the rabbit pyrogen test	133
Detection of pyrogens using human whole blood (PYROCHECK-Assay) - a replacement of the rabbit pyrogen test	164
Enzyme-linked immunosorbent assays (ELISA) and toxin binding inhibition test (ToBI test) for the detection and determination of antitoxin to Corynebacterium diphtheriae toxin, anti-diphtheria toxin antibodies and antibodies raised against diphtheria toxoid containing vaccines	166
Enzyme-linked immunosorbent assays (ELISA) and toxin binding inhibition (ToBI) test for the detection and determination of antitoxin against Clostridium tetani neurotoxin, anti-tetanus antibodies and antibodies raised against tetanus toxoid (anatoxin) containing vaccines in animal sera	188
Passive haemagglutination for the detection and determination of antitoxin against Clostridium tetani neurotoxin, anti-tetanus antibodies and antibodies raised against tetanus toxoid (anatoxin) containing vaccines	225
Rocket immuno-electrophoresis for the detection and determination of antitoxin to Corynebacterium diphtheriae toxin, anti-diphtheria toxin antibodies and antibodies raised against diphtheria toxoid containing vaccines	233
Passive or indirect Haemagglutination (HA) assay for the detection and determination of antitoxin to Corynebacterium diphtheriae toxin, anti-diphtheria toxin antibodies and antibodies raised against diphtheria toxoid containing vaccines	242

Physiology

Methodentitel	Methodennummer
In vitro methods to study inflammatory bowel disease using primary intestinal cells and organ culture systems	10
Dual in vitro perfusion of isolated human placental lobules	51
In vitro gastrointestinal tract model	175

Toxicology

Methodentitel	Methodennummer
Application of suitable bioassays as alternatives to wastewater toxicity testing in fish	8
Stepwise in vitro testing strategy to assess the neurotoxic potential of pharmaceuticals, drug intermediates, industrial chemicals, biocides and pesticides	9
Bovine sperm cell assay for quantitative (viability, vitality, motion) and qualitative (adenine nucleotide levels, respiration rate) assessments of the cytotoxic action of compounds	21
Rat primary hepatocyte cultures for biotransformation and pharmacokinetic studies with various compounds	22
Primary skeletal muscle cell cultures for the screening of the selective toxicity of compounds to excitable membranes	23
The hen's egg-chorioallantoic membrane test (HET-CAM test) for the assessment of the eye irritation potential of chemical substances	25
The neutral red uptake (NRU) cytotoxicity assay for the in vitro assessment of the eye irritation potential of chemical substances	26
The red blood cell haemolysis and protein denaturation test (RBC test) as an in vitro alternative assay to the in vivo rabbit eye irritation test	30
In vitro screening of organophosphorus compounds for their potential to induce delayed neurotoxicity by using permanent cell lines to complement testing in chicken	36
The Skin2 ZK-1350 corrosivity test: an alternative method for skin irritation testing	37
The luminescent bacteria toxicity test for assessing the eye irritation potential of chemical compounds and formulations in vitro	40

The FRAME-modified phototoxicity assay using human keratinocytes (NHK NRU PT): an in vitro method to evaluate the phototoxicity of chemical substances	47
The application of alveolar macrophages and other primary respiratory tract cell preparations and derived cell lines in the assessment of the toxic potential of airborne substances and particles	53
Determination of the approximative LD50 for testing the acute toxicity of pharmaceutical substances as a replacement of the classic LD50-test	56
CORROSITEX - an in vitro test method for assessing dermal corrosivity potential of chemicals	58
Co-culture of hepatocytes with non-parenchymal cells for long-term biotransformation and pharmacokinetic studies	72
Testing of pulmonary toxicity of aerial pollutants with fetal lung epithelial cells	76
Structure-activity relationships and their integration into in vitro approaches for predicting and screening the toxic potential of compounds	84
The Chicken Embryotoxicity Screening Test (CHEST) for the screening of the embryotoxic and teratogenic hazard potential associated with chemical substances and drugs	86
Screening for embryotoxic and teratogenic hazard potential of chemical substances and drugs using the midbrain and limb bud micromass test	88
The pollen tube growth (PTG) test as a pre-screening alternative for the determination of cytotoxicity and eye irritation potential of chemical substances	101
The use of bovine corneal opacity and permeability as parameters for the eye irritation potential of chemical substances (BCOP assay)	103
The assessment of the eye irritation potential of chemical substances using the isolated rabbit eye test (IRE test)	105
The assessment of the eye irritation potential of chemical substances with the chicken enucleated eye test (CEET)	107
The optical function of the bovine lens in culture as indicator of eye irritation potential of chemical substances	109
Mouse Ear Swelling Test protocols (MEST) for the assessment of the skin sensitisation potential of chemical substances	110
The murine Local Lymph Node Assay for the assessment of the skin sensitisation potential of chemical substances	126

Up-and-down procedure for testing the acute oral toxicity of chemicals with a significantly reduced number of solely female rats as a replacement of the classical LD50 test	144
The in vitro 3T3 Neutral Red Uptake Phototoxicity Test (3T3 NRU PT) - an in vitro method to assess the phototoxic potential of chemicals	146
The Candida Albicans Phototoxicity Assay: an alternative method for skin phototoxicity testing	152
The Red Blood Cell (RBC)-Photo Assay (photohemolysis and hemoglobin photo-oxidation): an alternative method for skin phototoxicity testing	153
SOLATEX PI assay, an alternative method to evaluate chemical-phototoxicity	157
The Frog Embryo Teratogenesis Assay - Xenopus (FETAX) for the screening of the embryotoxic and teratogenic hazard potential associated with chemical substances and drugs	167
Screening for embryotoxic and teratogenic hazard potential of chemical substances using the Embryonic Stem Cell Test	169
The use of adenoid, tracheal and lung explants in culture to determine mucociliary clearance and toxic potential of airborne particulate matter and gaseous substances	181
Fixed Dose Procedure for testing the acute oral toxicity of chemical substances as a replacement of the classical LD50 test	185
Acute Toxic Class Method for testing the acute oral toxicity of chemicals as a replacement of the classical LD50 test	186
Prediction of approximate oral and intravenous LD50 values of drugs and chemicals in rodents from the "Register of Cytotoxicity data" as part of the assessment of acute toxicity	211
Testing acute toxicity of chemical substances and aquatic pollutants using tropical zebrafish Brachydanio rerio embryo	212
The in vivo low volume eye test as a refinement of the Draize eye test to assess the eye irritation potential of chemical substances	236
Human skin cell multilayer cultures for assessing the eye irritation potential of chemical substances and formulations in vitro	237
The assessment of the eye irritation potential of chemical substances using the silicon microphysiometer	245
The transcutaneous electrical resistance (TER) assay: an alternative in vitro method for testing skin corrosion	251

The EPISKIN model - an alternative in vitro method for testing skin corrosion	252
Prescreening for embryotoxic and teratogenic hazard potential of chemical substances using the Hydra attenuata assay (Hydra test)	257
The neutral red release assay for the in vitro assessment of the eye irritation potential of chemical substances	265
The Skin2 ZK 1351 test: an alternative method for phototoxicity testing	268
The EpiDerm (ED-PT)-test - an in vitro method to evaluate the phototoxicity of chemical substances	269
The assessment of the eye irritation potential of chemical substances with the fluorescence leakage test	270
The EYTEX assay system as an in vitro alternative to the Draize rabbit eye irritation test	271
The chicken egg chorioallantoic membrane vascular assay (CAMVA) as an alternative to the rabbit eye irritation test	272
Screening for embryotoxic and teratogenic hazard potential of chemical substances and drugs using rodent whole embryo culture	273
EpiDerm skin corrosivity test (EPI-200): an alternative in vitro method for testing skin corrosion	276