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TOXICOMETRIC PARAMETERS OF INDUSTRIAL TOXIC CHEMICALS UNDER SINGLE EXPOSURE

by N.F. Izmerov, I.V. Sanotsky and K.K. Sidorov

UNITED NATIONS ENVIRONMENT PROGRAMME

UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)

INTERNATIONAL REGISTER OF POTENTIALLY TOXIC CHEMICALS (IRPTC)

USSR STATE COMMITTEE FOR SCIENCE AND TECHNOLOGY

USSR COMMISSION FOR UNEP

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CENTRE OF INTERNATIONAL PROJECTS, GKNT

Moscow 1982

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Revision, translation and publication of Handbook «Toxicometric Parameters of Industrial Toxic Chemicals under Single Exposure» has been carried out under the joint USSR/UNEP-IRPTC Project «Control of Hazards posed by Chemicals to Human Health and the Environment». The views expressed are those of the authors and do not necessarily represent the decisions or the stated policy of either the United Nations Environment Programme or its International Register of Potentially Toxic Chemicals which is responsible for the work of the Project.

This book is intended for toxicologists, hygienists and those responsible for evaluation and control of harmful effects of chemicals to human health and the environment.

Translation of a revised text based on the 1977 Russian edition of *Parametry Toksikometrii Promyshlennykh Yadov pri odnokratnom vozdeystvii* by N. F. Izmerov, I. V. Sanotsky and K. K. Sidorov.

Printed in the USSR

PREFACE TO THE ENGLISH EDITION

The translation and publication of this book has been carried out at the Centre of International Projects under the State Committee of the USSR for Science and Technology in cooperation with the Research Institute of Industrial Hygiene and Occupational Diseases within the framework of the USSR—UNEP/IRPTC Project «Control of Hazards posed by Chemicals to Human Health and the Environment».

For those who are insufficiently familiar with the terminology used by Soviet toxicologists, we explain below some terms and concepts in addition to those defined in the preface to the Russian edition. These definitions do not necessarily reflect the views or official policies of UNEP.

A harmful substance is a substance human exposure to which (at work or in everyday life) may cause disease or deviation from a normal state of health detectable by currently available methods of investigation during the period of exposure or in the long term, in this or subsequent generations.

The tentative safe exposure level (TSEL) is a temporary hygienic standard specifying the level of a harmful substance in worksite air, the ambient air of residential areas, or water bodies. It is arrived at by calculation from parameters of toxicometry and physicochemical properties on the basis of regression correlations or by inter- or extrapolation in series of structurally related compounds. TSEL values are subject to approval by the USSR Ministry of Health and remain valid for a limited period of time (2 or 3 years), after which they may be replaced by maximum allowable concentrations, declared valid for another period of time, or abolished depending on prospects for the further use of the substances concerned and the available information regarding their toxic properties.

By the time of publication of this book, the USSR Ministry of Health had approved the following MACs not included in the Russian edition (these are marked by asterisk in the body of the text):

(a) Air of the working zone

Substance	MAC, mg/m³	Predominant physical state	Hazard class
Benzine, solvent (as C)	100	vapour	IV
Hexamethylene diamine	0.1	vapour	I
Hydrogen fluoride	0.05	vapour	I
Nickel (metallic)	0.05	aerosol	I

(b) The atmosphere of residential areas

Substance	MAC, mg/m³		Hazard class
	highest momentary	average daily	
Ammonia	0.2	0.04	IV
Benzene	1.5	0.1	II
Carbon monoxide	5.0	3.0	IV
Carbon tetrachloride	4.0	0.7	II
Nitrogen dioxide	0.085	0.04	II

(c) Water bodies used for watersupply, public, and/or recreational purposes (water bodies of «sanitary-domestic uses»)

Substance	MAC, mg/l
β-Chloroprene	0.01

The Compilers, 1982

PREFACE TO THE RUSSIAN EDITION

This Handbook summarizes the data available in the Soviet literature regarding the toxicity and hazards shown after single exposure by chemicals widely employed in industry. It gives lethal and threshold doses or concentrations of more than 700 industrial toxic chemicals for laboratory animals with various routes of absorption, including inhalation, gastric intubation, intraabdominal injection, skin application, etc. The main actions of the chemicals are specified, as are the detection methods used. Where known, thresholds of irritant action on the mucous membranes of the upper respiratory tract and of the eyes and thresholds of odour for man are also given. The officially approved values of maximum allowable concentrations (MAC) of toxic chemicals for the air of workplaces and residential areas and for water bodies are presented. For a number of chemicals, tentative safe exposure levels (TSEL) are given. References to the literature used in compiling this Handbook are appended.

The Handbook is intended for a wide range of practical and research workers professionally concerned with harmful chemicals (toxicologists, occupational health physicians, hygienists, biochemists, etc.).

CONTENTS

INTRODUCTION

The toxicometric parameters included in this Handbook have been taken from the literature published in the USSR and partly from the material available in the Section on Establishment of Maximum Allowable Concentrations (MAC) for Harmful Substances in the Air of Working Zones of the All—Union Problem Commission on the Scientific Basis of Occupational Health. Unlike most other reference works concerned with lethal doses and concentrations, this Handbook gives also results of determination of thresholds of harmful effects, knowledge of which is considered essential for adequate validation of preventive measures. On the other hand, it was felt that a mere listing of hygienic standards (MAC) without presentation of at least some of the material on the basis of which they were derived, would reduce the usefulness of this reference book.

The Handbook presents values of lethal and threshold concentrations (doses) for more than 700 toxic industrial chemicals when these are administered by various routes — by inhalation, into the stomach, under the skin, into the abdominal cavity, intravenously, and on the skin — to laboratory animals most commonly used in toxicological studies, namely mice, rats, guinea pigs, rabbits, and cats. In most instances, precise lethal doses and concentrations for man have not been established, but the following guidelines will be helpful of extrapolation of animal data to man:

1. If the lethal doses for the four most commonly used species of laboratory rodents differ insignificantly (less than threefold), the probability is high (about 70%) that the lethal dose for man will be of the same order of magnitude (Ulanova et al., 1969).

2. An approximate lethal dose for man can be calculated by plotting a regression line using several data points in the following system of coordinates: (a) the lethal dose for a particular animal species and (b) the body weight of an adult individual of that species (Krasovsky, 1973).

For threshold values, the indices (procedures) on the basis of which these values have been established are given.

For a number of substances, single exposure thresholds for man as estimated from the irritant effect on the mucous membranes

of the uppr respiratory tract and the eyes or from the effect on the organ of smell are presented. Unless otherwise stated, the data for chemicals have been obtained under standard conditions (Annex I).

To facilitate the use of this book, the material is arranged in tabular form. The chemicals are listed in alphabetical order. The names of chemicals are generally presented in accordance with the Geneva Nomenclature. In addition, the more widely used trade names are included and chemical formulas of the substances are shown as well.

The officially approved MAC values in the air of working zones are given where available, with indication of the predominant physical state (state of aggregation) of the substance concerned in the air of industrial premises and the class of hazard posed by the substance to man according to the State Standard GOST 12.1.005—76 entitled «System of Occupational Safety Standards. The air of Working Zones. General Sanitary and Hygienic Requirements». The maximum permissible values of harmful substances in the atmosphere of residential areas and in water bodies used for sanitary, domestic, and recreational purposes are presented in accordance with the Sanitary Standard SN 246—71 entitled «Sanitary Norms for the Design of Industrial Enterprises» and addenda thereto approved by the Chief State Sanitary Physician of the USSR. As regards substances for which no official MAC values exist as yet, tentative safe exposure levels (TSELs) in worksite air, the atmosphere of residential areas, and water are presented.

To make it easier for the reader to appraise the toxicometric parameters, a classification of industrial chemicals by hazard at lethal and threshold exposure levels (State Standard GOST 12.1.007—76: «System of Occupational Safety Standards. Harmful Substances. Classification and General Safety Requirements») is appended (Annex II), as is a classification of substances by toxicity with subcutaneous and intraabdominal administration (Annex III).

There is an index of chemicals included in the book and a complete list of the literature consulted in compiling the latter; this list may also serve as a source of references to the Soviet literature in the field of industrial toxicology. The information relating to toxic propertis of chemical compounds has been prepared in cooperation with Dr. V. S. Pozdniakov and that relating to the detection methods used, in cooperation with Dr L. T. Poddubnaya. The authors wish to express their gratitude to Dr A. I. Khalepo for assistance in manuscript preparation.

In conclusion, we are well aware that this reference work is not devoid of flaws, but these were inevitable because of gaps in our knowledge concerning thresholds of harmful action of substances and experimental conditions. We will appreciate any criticisms and suggestions.

KEY TO ABBREVITATIONS AND SYMBOLS

LD_{50} (LD_{100}) The dose of a given chemical which kills 50% (100%) of the test animals after its single administration into the stomach or abdominal cavity, application to the skin, etc. (with the exception of the inhalational route) under defined conditions and within a specified period (usually 2 weeks)[1]; it is stated in milligrams of the chemical per kilogram of animal body weight (mg/kg).

ND_{50} The dose of a given chemical which produces narcosis in 50% of the test animals, stated in milligrams of the chemical per kilogram of animal body weight (mg/kg).

D The lethal dose of a given chemical[1], stated in milligrams of the chemical per kilogram of animal body weight (mg/kg).

ND The narcotic dose of a given chemical[1], stated in milligrams of the chemical per kilogram of animal body weight (mg/kg).

LT_{50} The time of exposure to a given chemical applied to the skin during which 50% of the test animals die; it is given in minutes in this handbook.

LC_{50} (LC_{100}) The concentration of a given chemical which is lethal to 50% (100%) of the test animals with exposure by inhalation under defined conditions and within a specified period[1]; it is stated in miligrams of the chemical per cubic meter of air (mg/m^3); the exposure time is also indicated.

NC_{50} The concentration of a given chemical producing narcosis in 50% of the test animals, stated in milligrams of the chemical per cubic meter of air (mg/m^3).

LC The lethal concentration of a given chemical[1], stated in milligrams of the chemical per cubic meter of air (mg/m^3).

NC The narcotic concentration of a given substance[1], stated in milligrams of the chemical per cubic meter of air (mg/m^3).

Lim_{ac} The threshold of acute effect, i. e., the lowest concentration (dose) of a given substance that causes such a change in a particular biochemical index in a whole organism which is

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[1] The quantities LC_{100}, LD_{100}, LC, LD, NC, and ND have no statistical significance and are given only for guidance.

beyond the latter's capacity for physiological adaptation. The index on the basis of which this threshold has been established is designated by a figure in parentheses. The figures stand for the following indices[1]:

(1) Summated threshold index
(2) Flexor reflex
(3) Galvanic skin reflex
(4) Conditioned reflexes
(5) Electroencephalogram
(6) Chronaxie of antagonist muscles
(7) Respiratory rate
(8) Oxygen consumption by whole animal
(9) Vital staining of lung tissue
(10) Weight coefficients of internal organs
(11) Rectal temperature
(12) Working capacity
(13) Working capacity as estimated in an error correction test
(14) Working capacity of frog gastrochemius muscle
(15) Spontaneous motor activity
(16) Methemoglobinemia
(17) Blood leukocyte count
(18) Leukocyte formula of the blood
(19) Blood reticulocyte count
(20) Blood catalase activity
(21) Transferrin index of the blood
(22) Acid resistance of erythrocytes
(23) Number of Heinz bodies in the blood
(24) Blood cholinesterase activity
(25) Blood peroxidase activity
(26) Arterial blood pressure
(27) Morphological changes in formed elements of the blood
(28) Hypersalivation
(29) Lacrimation
(30) Urinary excretion of fluorescin
(31) Urinary level of chlorides
(32) Change in spermatogenesis
(33) Morphological changes in internal organs
(34) Blood level of pyruvic acid
(35) Phagocytic index
(36) Blood level of sugar
(37) Blood level of sulfhydryl groups
(38) Urinary level of 17-ketosteroids
(39) Blood phosphatase activity
(40) Blood aldolase activity

[1] Only the names of the indices are listed. The specific procedures used to derive these are described in the cited literature; see also the section «How to Use this Book».

(41) Biliary level of cholic acid
(42) Urinary level of hippuric acid
(43) Activity of glutamic acid decarboxylase in the cerebral hemispheres

Lim_{ir} The threshold of irritant action of a given chemical on the mucous membranes of the upper airways and eyes, stated in milligrams of the chemical per cubic meter of air (mg/m^3). The figures in parentheses denote the same indices as for Lim_{ac}. Values for man are based on subjective sensations for exposures lasting 1 minute unless stated otherwise.

Lim_{olf} The olfactory threshold of action of a given chemical, stated in milligrams of the chemical per cubic meter of air (mg/m^3).

MAC_{wz} The maximum allowable concentration of a harmful substance in the air of the working zone is the concentration that, in the case of daily exposure in work conditions for eight hours daily (with the exception of non-working days) or during another period, but not more than 41 hours per week, throughout the entire working life, will not cause any disease or deviations from a normal state of health detectable by currently available methods of investigation, either during the work itself or in the long term, in this and subsequent generations.

The working zone is defined as the space up to 2 m above the level of the floor or of the site which is the place where the workers are permanently or temporarily employed.

MAC_{hm} The highest momentary (single-occasion) maximum allowable concentration of a given chemical in the atmosphere of residential areas, stated in milligrams of the chemical per cubic meter of air (mg/m^3).

MAC_{ad} The average daily maximum allowable concentration of a given chemical in the atmosphere of residential areas, stated in milligrams of the chemical per cubic meter of air (mg/m^3).

MAC_w The maximum allowable concentration of a given chemical in bodies of water of «sanitary—domestic uses» (i. e., those used for water-supply, public, and/or recreational purposes), stated in milligrams of the chemical per litre of water (mg/l).

$TSEL_{wz}$ The tentative safe exposure level of a given chemical in the air of working zones, stated in milligrams of the chemical per cubic meter of air (mg/m^3).

$TSEL_{hm}$ The highest momentary (single-occasion) tentative safe exposure level of a given chemical in the atmosphere of residential areas, stated in milligrams of the chemical per cubic meter of air (mg/m^3).

$TSEL_{ad}$ The average daily tentative safe exposure level of a given chemical in the atmosphere of residential areas, stated in milligrams of the chemical per cubic meter of air (mg/m^3).

$TSEL_w$ The tentative safe exposure level of a given chemical in bodies of water of «sanitary-domestic uses» (i. e., those used for water-supply, public, and/or recreational purposes), stated in milligrams of the chemical per litre of water (mg/l).

+ The chemical is dangerous when absorbed through intact skin

v Vapour and/or gas

a Aerosol

v+a A mixture of vapour and aerosol

< This sign means that the indicated dose or concentration is not lethal to the animals. For example, in the case of intragastric administration of 4,4-azobenzenedicarboxylic acid, I.D<10,000; this means that the dose of 10,000 mg/kg did not kill the animals with this route of administration.

HOW TO USE THIS HANDBOOK

In the column «Substace, MAC, TSEL, Hazard Class, Reference (s)», the chemicals are ordered alphabetically. References to the References section at the end of the book are designated by figures.

In the column «Toxicometric parameters, Test Conditions, Action(s), Method(s) of Detection» (in air), the figures in parentheses refer to the indices used in establishing threshold concentrations (doses).

Here is an example illustrating the complete description (without abbreviations and symbols) for one of the entries (see also p. 16).

Aniline (aminobenzene, phenylamine)+

The MAC for the air of the working zone is 0.1 mg/m³, vapour, Hazard class II.

The highest momentary MAC for the atmosphere of residential areas is 0.05 mg/m³.

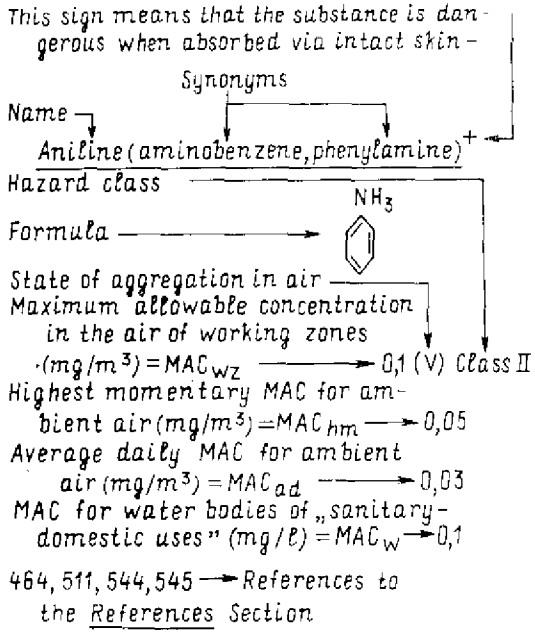
The average daily MAC for the atmosphere of residential areas is 0.03 mg/m³.

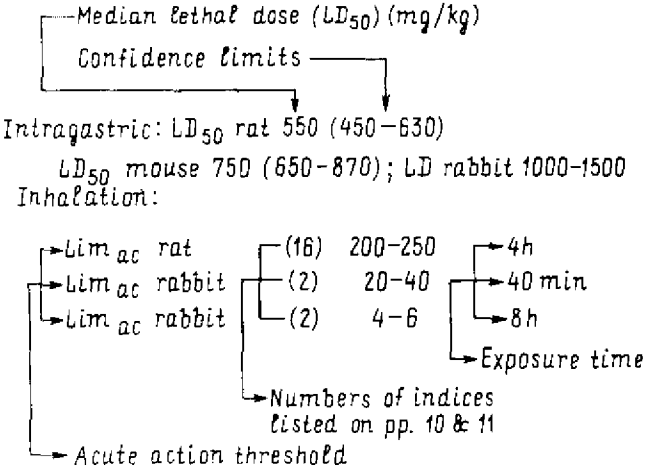
The MAC for water bodies of «sanitary-domestic uses» is 0.1 mg/l.

The figures 464, 511, 544 and 545 denote the references used

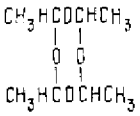
With intragastric administration, the median lethal dose is 550(450—630) mg/kg for rats and 750(650—870) mg/kg for mice; the lethal dose for rabbits is 1000 -1500 mg/kg.

With exposure by inhalation, the threshold for rats is 200—250 mg/m³ with 4-hour exposure as estimated from changes in the blood level of methemoglobin; the threshold for rabbits is 20—40 mg/m³ with 40-min exposure and 4—6 mg/m³ with 8-hour exposure, and both these thresholds were estimated from changes in the flexor reflex.


This sign means that the substance is dangerous when absorbed via intact skin –
Synonyms
Name
Aniline (aminobenzene, phenylamine)+
Hazard class
Formula
NH2
State of aggregation in air
Maximum allowable concentration in the air of working zones (mg/m3) = MAC wz → 0,1 (V) Class II
Highest momentary MAC for ambient air (mg/m3) = MAC hm → 0,05
Average daily MAC for ambient air (mg/m3) = MAC ad → 0,03
MAC for water bodies of „sanitary-domestic uses" (mg/l) = MAC w → 0,1
464, 511, 544, 545 → References to the References Section


Median lethal dose (LD50) (mg/kg)
Confidence limits
Intragastric: LD50 rat 550 (450–630)
LD50 mouse 750 (650–870); LD rabbit 1000–1500
Inhalation:
Lim ac rat
Lim ac rabbit
Lim ac rabbit
(16) 200–250
(2) 20–40
(2) 4–6
4h
40 min
8h
Exposure time
Numbers of indices listed on pp. 10 & 11
Acute action threshold

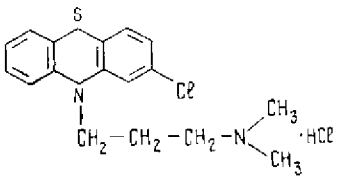
TOXICOMETRIC PARAMETERS

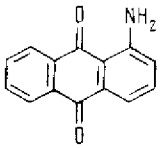
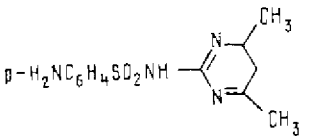
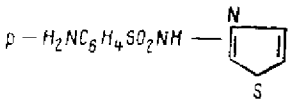
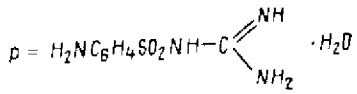
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Methods(s) of Detection
Acetaldehyde (acetic aldehyde, ethanal)  MAC_{wz} 5 (v), Class III MAC_{hm} 0.01 MAC_{ad} 0.2 89,465	Intravenous: ND mouse 350—400, ND rabbit 90—100 Has irritant properties Detection: colorimetry; detection limit 2.5 μg in analytical volume
Acetaldehyde tetramer (metaldehyde)  MAC_{wz} 0.2 (a), Class II MAC_{hm} 0.03 MAC_{ad} 0.003 75	Intragastric: LD_{50} mouse 200 (160—239)[1], LD_{50} rat 227 (149—304)[1], LD_{50} guinea pig 175 (101—248), LD_{50} rabbit 290 (141—438), LD_{50} cat 207 On skin: LD_{50} rat 2275 Inhalation: LC_{50} mouse 348 (182—515) 2 h, LC_{50} rat 203 (139—270) 4 h; Limac rat 10 4 h (6)
Acetone (propanon, dimethylketone) CH_3COCH_3 MAC_{wr} 200 (v), Class IV MAC_{hm} 0.35 MAC_{ad} 0.35 143, 244, 467	Inhalation: LC mouse 150 000 2h; Limac rabbit 1000—2500 40 min (2) Narcotic Detection: gas—liquid chromatography; detection limit 0.1 μg in analytical volume
Acetone cyanohydrin $(CH_3)_2C(OH)CN$ MAC_{wr} 0.9 (v), Class II MAC_w 0.001 17	Intragastric: LD_{50} mouse 30 Inhalation: LC_{30} mouse 70 2h, LC_{40} rat 185 2h Affects respiratory centre Detection: colorimetry; detection limit 0.1 μg in analytical volume

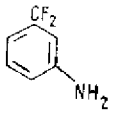
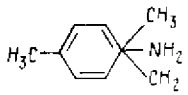
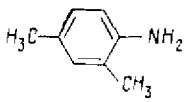
[1] Technical — grade product

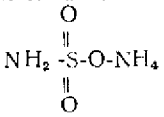
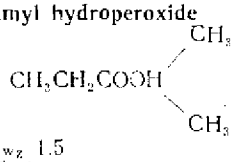
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Acetonitrile (methyl cyanide) H\ H–C≡C≡N N/ MAC_{wz} 10 (v), Class III MAC_w 0.7 312	Intragastric: LD_{50} mouse 1670 (1450—1890), LD_{50} rat 5900 (4580—7220) Subcutaneous: LD_{50} mouse 4480 (3520—5400), LD_{50} rat 3500 (2560—4440) Intraabdominal: LD_{50} mouse (2950—3410), LD_{50} rat 1100 (700—1500) Intravenous: LD_{50} mouse 612 (278—946), LD_{50} rat 2800 (2450—3150) Inhalation: LC_{50} mouse 15 300 (13 900—16 300) 2h, LC_{50} rat 22 000 (20 300—23 700) 4h, LC_{50} cat 18 000 (13 700—22 300); Lim_{ac} rat 340 4h (4) Affects respiratory centre Detection: colorimetry; detection limit 0.003 μg per 10 ml of solution
Acetophenone (methyl phenyl ketone)+ C_6H_5-CO-CH_3 MAC_{wz} 5 (v), Class III MAC_{hm} 0.003 MAC_{ad} 0.003 MAC_w 0.1 222, 264	Intragastric: LD_{50} mouse 1350 (1030—1510), LD_{50} rat 2650 (1850—3780) Inhalation: mouse, LC mouse <250 2h, Lim_{ac} rabbit 100—150 40 min, (2), Lim_{ir} man 35 Has irritant action Detection: colorimetry; detection limit 1 μg in analytical volume
Acetopropyl acetate $CH_3COCH_2CH_2CH_2OCOCH_3$ MAC_{wr} 5 (v), Class III 321, 469	Intragastric: LD_{50} rat 6080 (5333—6931) Inhalation: Lim_{ac} rat 150 4h (1,8) Narcotic Detection: colorimetry; detection limit 10 μg in analytical volume
Acetopropyl alcohol $CH_3COCH_2CH_2CH_2OH$ MAC_{wz} 10 (v), Class III 321	Intragastric: LD_{50} rat 6750 (4410—9280) Inhalation: Lim_{ac} rat 300 4h (8, 11) Narcotic
Acrylic acid CH_2=CHCOOH MAC_{wz} 5 (v), Class III MAC_w 0.5 15, 465	Intragastric: LD_{50} rat 33.5±4 Inhalation: LC_{50} mouse 5300±500 2h; Lim_{ac} mouse 300 40 min (1); Lim_{ir} man 40 Has irritant action Detection: colorimetry; detection limit 1 μg in analytical volume
Acrylonitrile+ CH_2=CHCN MAC_{wz} 0.5 (v), Class II MAC_{ad} 0.003 MAC_w 312, 536	Intragastric: LD_{100} rat 150 Inhalation: LC_{100} mouse 800 1h, LC_{100} rat 5300 1h Blocks respiratory enzyme; paralyses respiratory and vasomotor centres Detection: colorimetry; detection limit 0.3 mg/m³

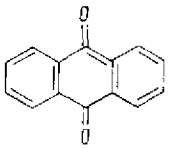
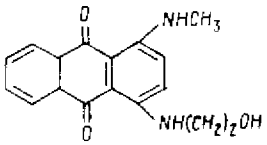
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Acrylyl chloride $CH_2=CHCOCl$ MAC_{wz} 0.3 (v), Class II 14, 465	Inhalation: LC_{50} mouse 92 (83—330) 2 h, LC_{14} rat 70 4 h; Lim_{ac} mouse 3 2 h (1); Lim_{ir} man 2.4 Has irritant action Detection: colorimetry; detection limit 1 μg in analytical volume
Adipodinitrile (1,4-dicyanobutane) $NC(CH_2)_4CN$ MAC_{wz} 20 (a), Class IV MAC_w 0.1 310, 463	Intragastric: LD_{50} rat 1000 On skin: LD rabbit <0.25 ml/kg Inhalation: LC mouse <120 2 h, LC rat <150 4h; Lim_{ac} mouse 93 40 min Detection: colorimetry; detection limit 3 μg in analytical volume
Aerosil-175 MAC_{wz} 1 (a), Class III 446	Inhalation: LC rat <1000 4 h; Lim_{ac} rat 300 4 h (7, 8, 33) Causes fibrosis of pulmonary tissue Detection: weighing method
Alipur (mixture of N-cyclooctyl-N-N-dinethylurea and 1-methylpropyl-2,2-il-m-chlorophenylcarbamate) MAC_{wz} 1 (a), Class II 267, 469	Intragastric: LD_{50} mouse 696, LD_{50} rat 1125 On skin: LD rat and rabbit <2000 Inhalation: LC rat and cat <220; Lim_{ac} rat and cat 25 Detection: thin-layer chromatography; detection limit 5 μg in analytical volume
Alkyl ferrocene (AF-1) (composition: 5% ferrocene, 65% monotertiary butyl ferrocene, 30% ditertiary butyl ferrocene) 400	Intragastric: LD_{50} mouse 2390 (1731—3298), LD_{50} rat 3958 (2946—4960); Lim_{ac} mouse (15) 100
Alkyl ferrocene (AF-2) (composition: 5% ferrocene, 65% ditertiary butyl ferrocene, 20% diisooctyl ferrocene)	Intragastric: LD_{50} mouse 11 000 (7345—12 340), LD_{50} rat 12 229 (10 577—13 881); Lim_{ac} mouse (15) 500
Allyl alcohol $CH_2=CH-CH_2OH$ MAC_{wz} 2 (v), Class III MAC_w 0.1 316, 399, 465	Intragastric: LD_{50} rat 66 (58—75) Inhalation: LC_{50} mouse 750—500 2 h; Lim_{ac} cat 100 1—2 h (28) Has irritant properties Detection: colorimetry; detection limit 0.5 μg in analytical volume
Allylamine $CH_2=CHCH_2NH_2$ MAC_{wz} 0.5 (v), Class II 200, 469	Intragastric: LD_{50} mouse 78 (52—102), LD_{50} rat 102 (64—108) Inhalation: LC_{50} rat 320 (120—320) 4h; Lim_{ac} rat 8 4 h (1.7); Lim_{ir} man 5 Has irritant properties; causes convulsions Detection: colorimetry

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Allyl chloride (3-chloropropene) $CH_2=CHCH_2Cl$ MAC_{wz} 0.3 (v), Class II MAC_w 0.3 343, 465	Intragastric: LD_{50} mouse 1150, LD_{50} rat 860 Inhalation: LC_{50} mouse 10 700 2 h; Lim_{ir} rabbit (7) 400 40 min, Lim_{ac} rabbit (2) 340 40 min Has irritant properties Detection: burning in a special torch; detection limit 5 μg in analytical volume
Allyl cyanide (vinyl acetonitrile)+ $CH_2=CHCH_2CN$ MAC_{wz} 0.3 (v), Class II MAC_w 0.1 73	Intragastric: LD_{50} mouse 50 Subcutaneous: LD_{50} rat 150 Inhalation: LC_{50} mouse 900 2 h, LC_{50} rat 2000 4 h; Lim_{ac} mouse and rabbit (1.7), 5—10 40 min Detection: photometry; detection limit 8 μg in analytical volume
Allyl formate+ $HCOOC_5H_{11}$ MAC_{wz} 10 (v), Class III 217, 461	Intragastric: LD_{50} mouse 6300±380 Inhalation: LC_{50} mouse 14 000±820 2h; Lim_{ac} rat 250 4 h (1), Lim_{ir} rabbit 500 40 min (7), Lim_{ir} man 130 Has irritant properties Detection: colorimetry: detection limit 10 μg in analytical volume
Aminazine [N-(3-dimethylaminopropyl)-2-chlorophenothiazine hydrochloride]+  MAC_{wz} 0.3 (a), Class II 465, 538	Intragastric: LD_{50} mouse 150 Inhalation: LC_{30} mouse 80 2 h, LC_{30} rat 70 2 h, LC mouse and rat <20 2 h Tranquilizer; affects central nervous system Detection: photometry; detection limit 5 μg in analytical volume
Amines, aliphatic, higher $C_{16}—C_{20}$ RNH_2 MAC_{wz} 1 (v+a), Class II MAC_{hm} 0.003 MAC_{ad} 0.003 MAC_w 0.03 45,69	Intragastric: LD_{50} mouse 730±32, LD_{50} rat 4125±52 Inhalation: Lim_{ac} rat 0 4 h (1); LC rat 200 4 h; Lim_{olf} man 10.4 Has irritant action Detection: colorimetry; detection limit 0.01 μg in analytical volume
Amines, aliphatic, primary $C_7—C_9$ (mixture of 80% heptylamine $C_7H_{15}NH_2$ and octylamine $C_8H_{17}NH_2$ and 20% lower and higher amines)	Intragastric: LD_{50} mouse 190±6.9 Inhalation: LC_{50} mouse 280±20 2 h; Lim_{ac} rat 10 4 h (1) Has irritant action

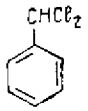
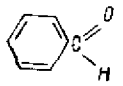
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
RNH_2 MAC_{wz} 1 (v), Class II MAC_w 0.1 463,470	Detection: photometry; detection limit 1 μg in analytical volume
α-Aminoanthraquinone (anthraquinonyl amine)  MAC_{wz} 5 (a), Class III 247,467	Intragastric: LD mouse $<10\,000$ Intraabdominal: LD_{50} mouse 5026 (5474—6578) Detection: polarography; detection limit 2.5 μg per 1 ml of analytical volume
p-Aminobenzenesulfamide (streptocid) $p\text{-}H_2NC_6H_4SO_2NH_2$ MAC_{wz} 1 (a), Class II MAC_w 0.5 90,469	Intragastric: LD_{50} mouse 6000 ± 800, LD_{50} rat $10\,500\pm500$, LD_{50} rabbit 1300 ± 375 Inhalation: LC rat <375 2 h Has systemic toxicity; affects kidneys and hematopoietic system Detection: weighing method
2-(p-Aminobenzenesulfonamido-4,6-dimethylpyrimidine (sulfadimesine)  MAC_{wz} 1 (a), Class II MAC_w 1 90,469	Intragastric: LD_{50} mouse 20 000 Inhalation: LC mouse <1765 2 h Causes acute renal insufficiency; affects hematopoietic system
2-(p-Aminobenzenesulfonamido)-thiazole (**norsulfasole**)  MAC_{wz} 1 (a), Class II MAC_w 90	Inhalation: LC rat <60 2 h Causes acute renal insufficiency, affects hematopoietic system
p-Aminobenzenesulfonylguanidine monohydrate (sulfaguine) 	Intragastric: LD mouse $<20\,000$ Inhalation: LC mouse <1000 2 h Has systemic toxicity; affects kidneys and hematopoietic system Detection: wighing method

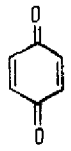
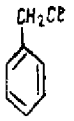
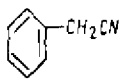
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 1(a), Class II MAC_w 0.01 90.469	
m-Aminobenzotrifluoride 	Intragastric: LD_{50} mouse 220 (151—319), LD rat 480 (331—696), LD_{50} rabbit 615 (572—661) Inhalation: LC_{50} mouse 690 (600—790) 2 h, LC_{50} rat 440 (400—490); 4 h; Lim_{ac} rat (1, 11) 22 4 h Has irritant action; methemoglobin former Detection: photometry; detection limit 1.1 μg in analytical volume
MAC_{wz} 0.5 (v), Class II 150.469	
Aminoenanthic acid $NH_2(CH_2)_6COOH$ MAC_{wz} 8 (a), Class III 312	Intragastric: LD_{50} rat 9000 Inhalation: $LC < 3000$ 2 h Detection: colorimetry; detection limit 8 μg in analytical volume
5-Amino-8-hydroxy-3,7-dibromo-1,4-naphthoquinone imine $C_{10}H_5O_2N_2Br_2$ MAC_{wz} 1 (a), Class II 220, 509	Intragastric: LD_{50} rat 2400 (1900—3200) Subcutaneous: LD rat <30 Inhalation: Lim_{ir} rabbit 2 15 min (7)
m-Aminophenol 	Intragastric: LD_{50} mouse 420 (250—590) Inhalation: LC mouse and rat <24 6 h Detection: colorimetry; detection limit 0.5 μg in analytical volume
$TSEL_{wz}$ 5 273, 422	
2-Amino-1,3,5-trimethylbenzene (mezidine)+ 	Intragastric: LD_{50} mouse 590±28 Inhalation: LC_{50} mouse 290 2 h; Lim_{ir} rabbit 20 40 min (7); Lim_{ac} rabbit 10 40 min (2) Detection: colorimetry; detection limit 3 μg in analytical volume
MAC_{wz} 1 (v), Class II MAC_{nm} 0.003 MAC_{sd} 0.003 MAC_w 0.01 93, 464	
4-Amino-m-xylene (m-xylidine)+ 	On skin: Lim_{ir} rabbit 4—5 (2) Inhalation: Lim_{ac} rabbit 40 40 min (2) Has systemic toxicity Detection: colorimetry; detection limit 1 μg in analytical volume

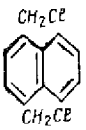
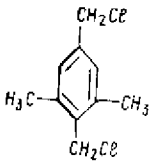
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 3 (v), Class III 461, 545	
Ammonia NH_3 MAC_{wz} 20 (v), Class IV MAC_{hm} 0.2 MAC_{ad} 0.2 MAC_z 2 4, 329, 464	Inhalation: LC_{50} rat 18 620±690 5 min, LC_{50} rat 12 120±1440 15 min, LC_{50} rat 7040±940 30 min, LC_{50} rat 7870±790 1 h, LC_{50} rat 7600 2 h, LC_{50} mouse 8800 (3300—4300) 2 h; Lim_{ac} rat 85 2 h (1), Lim_{ir} rat 25 2 h (7); Lim_{ir} man 20 15 min (3, 7) Has irritant action Detection: colorimetry; detection limit 1 μg in analytical volume
Ammonium sulfamate  MAC_{wz} 10 (a), Class III 45, 518	Intragastric: LD_{50} 3000 (2600—3400), LD_{50} rat 4520 (4070—5020) Inhalation: LC rat <400—500 2 h; Lim_{ir} rat 200—250 2 h
Ammophos (mixture of ammonium phosphate, diammonium phosphate, ammonium sulphate and ammonium silicofluoride) MAC_{wz} 6 (a), Class IV 63	Intragastric: LD_{50} mouse 1930 (1480—2380), LD_{50} rat 4900 (4110—5690), LD_{50} rabbit 3800 (2860—4730) Inhalation: LC rat <2000 4 h; Lim_{ac} rat 600 4 h (6,24), Lim_{ir} rat 400 4 h (7)
Amyl alcohol (1-pentanol) $CH_3(CH_2)_3CH_2OH$ MAC_{wz} 10 (v), Class III 172, 462	Intragastric: LD_{50} mouse 3000±200 LD_{50} rat 4500±370 Has narcotic and irritant actions Detection: colorimetry; detection limit 2 μg in analytical volume
tert-Amyl hydroperoxide  $TSEL_{wz}$ 1.5 44, 45, 344	Intragastric: LD_{50} mouse 450 (388—518), LD_{50} rat 863 (789—937) Intraabdominal: LD_{50} mouse 275 (250—300), LD_{50} rat 225 (200—250) Detection: colorimetry and chromatography; detection limit 0.5 μg per 4.5 ml of analytical volume
Amyl iodide (1-iodopentane) $CH_3(CH_2)_3CH_2I$ 312, 450	Intraabdominal: LD_{50} mouse 489 (442—536), LD_{50} rat 948 (862—1034) Detection: colorimetry; detection limit 5 μg per 6 ml of analytical volume
Aniline (aminobenzene, phenylamine)[+] 	Intragastric: LD_{50} rat 550 (450—630), LD_{50} mouse 750 (650—870), LD rabbit 1000—1500 Inhalation: Lim_{ac} rat 200—250 4 h (16), Lim_{ac} rabbit 20—40 40 min (2), Lim_{ac} rabbit 4—6 8 h (2)

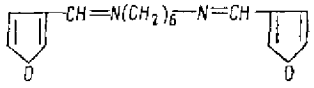
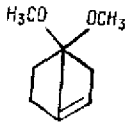
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 0.1 (v), Class II MAC_{hm} 0.05 MAC_{ad} 0.03 MAC_{w} 0.1 464, 511, 544, 545	Methemoglobin former; causes convulsions Detection: colorimetry; detection limit 1 μg in analytical volume
p-Anisidine (p-aminoanisole, p-methoxyaniline) $p\text{-}CH_3OC_6H_4NH_2$ MAC_{wz} 1 (v), Class II $TSEL_{hm}$ 0.08 467, 541	Intragastric: LD_{100} mouse 1000, LD mouse <250 Inhalation: LC mouse ≤10—30 2 h Has systemic toxicity; methemoglobin former; causes convulsions Detection: polarography; detection limit 1 μg per 1 ml of solution
9,10-Anthraquinone  MAC_{wz} 5 (a), Class III 464,529	Intragastric: LD rat 15 000 Intraabdominal: LD_{50} rat 3500±600 Inhalation: LC rat <12 6 h Detection: colorimetry; detection limit 3 μg in analytical volume
Anthraquinone, disperse blue dye «K»  MAC_{wz} 5 (a), Class III 476	Inhalation: LC rat <10 4 h Affects liver and hematopoietic system
Antimony, metallic Sb MAC_{wz} 0.5 (a), Class II 45, 124	Intragastric: LD rat <1000 Intraabdominal: LD_{50} rat 100 (80—120), LD_{50} mouse 90 (70—110) Inhalation: LC rat <50 2 h; Lim_{ir} man 13,5 Affects nervous system, kidneys and liver Detection: colorimetry; detection limit 5 μg per 7 ml of solution
Antimony pentachloride $SbCl_5$ MAC_{wz} 0.3 (v+a), Class II 57, 466	Inhalation: LC_{50} mouse 620±40 2 h, LC_{50} rat 720±60 2 h Affects kidneys, liver and nervous system; has irritant properties Detection: colorimetry; detection limit 2 μg in analytical volume

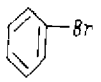
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Antimony pentafluoride SbF_5 MAC_{wz} 0.3 (v+a), Class II 45, 58	Inhalation: LC_{50} mouse 270 2 h Affects kidneys, liver and nervous system; has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Antimony pentasulfide Sb_2S_5 MAC_{wz} 2 (a), Class III 45, 124	Intraabdominal: LD_{50} mouse 458 (241—675) Affects kidneys, liver and nervous system; has irritant properties Detection: colorimetry; detection limit 5 μg per 7 ml solution
Antimony pentoxide Sb_2O_5 MAC_{wz} 2 (a), Class III 45, 124	Intraabdominal: LD_{50} mouse 978 (708—1248)
Antimony trichloride $SbCl_3$ MAC_{wz} 0.3 (v+a), Class II 45, 124	Intraabdominal: LD_{50} mouse 13 (8—18) Detection: photocolorimetry; detection limit 2 μg in analytical volume
Antimony trifluoride SbF_3 MAC_{wz} 0.3 (v+a), Class II 227, 466	Subcutaneous: LD_{50} mouse 15 Detection: photometry; detection limit 2 μg in analytical volume
Antimony trioxide Sb_2O_3 MAC_{wz} 1 (a), Class II 45, 124	Intraabdominal: LD_{50} mouse 172 (90—254) Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Antimony trisulfide Sb_2S_3 MAC_{wz} 1 (a), Class II 45, 124	Intraabdominal: LD_{50} mouse 209 (110—308) Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Ashes of oil shales MAC_{wz} 4 (a), Class IV 468	Intragastric: LD_{33} mouse 20 000 Intraabdominal: LD_{50} mouse 8250 Detection: weighing method
4,4-Azobenzenedicarboxylic acid $C_{14}N_2H_{10}O_4$ MAC_{wz} 3 (a), Class III 163	Intragastric: LD mouse and rat $<10\,000$
Barium caprylate $Ba[CH_3(CH_2)_6COO]_2$ 275	Intragastric: LD_{50} mouse 1100 (802—1398), LD_{50} rat 1000 (1443—1557), LD_{50} guinea pig 1250 (994—1606)
Barium carbonate $BaCO_3$	Intragastric: LD_{50} mouse 200, LD_{50} rat 418

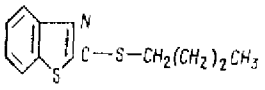
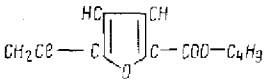
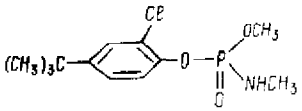
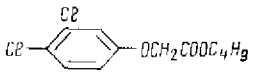
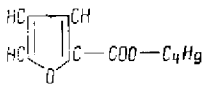
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 0.5 (a), Class I 330	Intraabdominal: LD_{50} mouse 50 Inhalation: LC rat <33 4 h Has systemic toxicity and affects nervous system and liver
Barium stearate $Ba(C_{18}H_{35}O_2)_2$ 275	Intragastric: LD_{50} mouse 3500 (2645—4355), LD_{50} rat 4000 (3249—4750), LD_{50} guinea pig 3600 (3089—4111)
Benzal chloride  MAC_{wz} 0.5 (v), Class I 271, 462	Intragastric: LD_{50} mouse 1400 Inhalation: LC_{50} mouse 210 2 h, LC_{50} rat 400 (230—700) 2 h Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Benzaldehyde  MAC_{wz} 5 (v), Class III 45, 315	Intragastric: LD_{50} mouse 2020±188, LD_{50} rat 2400±167 Detection: colorimetry; detection limit 2.5 μg in analytical volume
Benzene+  MAC_{wz} 5 (v), Class II MAC_{hm} 1.5 MAC_{ad} 0.8 MAC_w 0.5 22, 91, 104, 467	Intragastric: LD_{50} mouse 4600±685, LD_{50} rat 6400 (5300—7740) Inhalation: LC_{50} mouse 45 000±9350 2 h, LC_{50} rat 65 000 (50 800—83 000) 4 h, LC_{50} mouse 15 000 2 h; Lim_{ac} rat 1100 4 h (17), Lim_{ac} rabbit 1000 40 min (2) Narcotic; affects hematopoiesis Detection: gas—liquid chromatography; detection limit 0.001 μg in analytical volume
Benzine (solvent) (as C) MAC_{wz}* 300 (v), Class IV 117, 372, 422	Intragastric: LD_{50} mouse 62 600±1840, LD_{50} rat 92 000±3920 Inhalation: LC mouse 50 000—70 000 2 h; Lim_{ac} rabbit 280 40 min (2) Narcotic Detection: titrimetry; detection limit 0.6 μg in analytical volume
Benzotrichloride (phenylchloroform, α-trichlorotoluene) 	Intragastric: LD_{50} mouse 1300 Inhalation: LC_{50} mouse 60 (40—90) 2 h, LC_{50} rat 150 (110—200) 2 h Has irritant action; damages liver and hematopoietic system

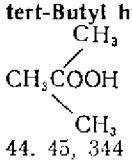
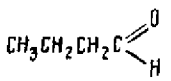
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 0.2 (v), Class II $TSEL_{wz}$ 0.01 271, 464	Detection: colorimetry; detection limit 3 μg in analytical volume
Benzotrifluoride (trifluorotoluene)  MAC_{wz} 100 (v), Class IV 150, 464	Intragastric: LD_{50} mouse 10 000 (7462—13 400), LD_{50} rat 15 000 (11 538—19 500) Inhalation: LC_{50} mouse 92 240 (69 450—129 630) 2 h, LC_{50} rat 70 810 (54 530—91 970) 4 h; Lim_{ac} rat 2170 4 h (1) Narcotic Detection: colorimetry; detection limit 1.4 μg in analytical volume
p-Benzoquinone (p-quinone)  MAC_{wz} 0.05 (v), Class I 413, 467	Subcutaneous: LD_{50} 296 Has irritant properties Detection: polarography; detection limit 2.5 μg per 1 ml of solution
Benzoylchloride C_6H_5COCl MAC_{wz} 5 (v), Class III 294, 312	Intragastric: LD rat 1900; LC_{50} rat 1870 2 h Inhalation: Lim_{ac} rabbit 440 40 min (2), Lim_{ac} mouse 380 (1), Lim_{ir} rabbit 80 (7) Has irritant properties Detection: colorimetry; detection limit 5 mg/m³
Benzyl chloride (α-chlorotoluene)  MAC_{wz} 0.5 (v), Class I 271, 462	Intragastric: LD_{50} mouse 1500 Inhalation: LC_{50} mouse 390 (260—580) 2 h, LC_{50} rat 740 (500—1100) 2 h; Lim_{ir} rat 10—50 2 h, Lim_{ir} man 0.8 15—20 min Has irritant properties Detection: colorimetry; detection limit 2 μg in analytical volume
Benzyl cyanide (cyanotoluene)+  MAC_{wz} 0.8 (v), Class II 106, 469	Intragastric: LD_{50} mouse 78, LD_{50} rat 270 Inhalation: LC_{50} rat 430 2 h, LC_{50} mouse 100 2 h; Lim_{ac} mouse 3—6 1 h (15), Lim_{ac} rat 6—8 2 h (7) Damages respiratory centre Detection: colorimetry; detection limit 1.5 μg in analytical volume

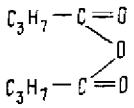
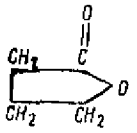
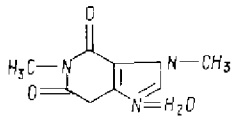
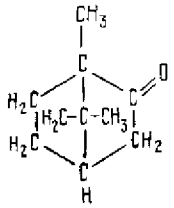
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Beryllium chloride (as Be) $BeCl_2$ MAC_{wz} 0.001 (a), Class 1 373, 464	Intragastric: LD_{50} mouse 92±7, LD_{50} rat 86±10 Has irritant properties and damages lungs Detection: fluorescence measurement; detection limit 0.05 μg in analytical volume
Beryllium sulfate (as Be) $BeSO_4$ MAC_{wz} 0.001 (a), Class 1 MAC_w 0.0002 373, 464	Intragastric: LD_{50} 80±5.6 mouse, LD_{50} rat 82±9.7 Has irritant properties and damages lungs Detection: fluorescence measurement; detection limit 0.05 μg in analytical volume
Bis(chloromethyl)benzene  MAC_{wz} I (v), Class II 343, 464	Intragastric: LD_{50} mouse 470, LD_{50} rat 1000 Inhalation: LC_{75} mouse 75—110 2 h, LC_{50} rat 200 4 h Narcotic; has irritant properties and affects hematopoiesis Detection: titrimetry, detection limit 4 μg in analytical volume; colorimetry, detection limit 0.5 μg in analytical volume; photometry, detection limit 0.1 μg in analytical volume
Bis(chloromethyl)naphthalene  MAC_{wz} 0.5 (a), Class II 343, 464	Intragastric: LD_{50} mouse 1300, LD_{50} rat 2000 Inhalation: LC_{50} rat 150 4 h Detection: colorimetry; detection limit 0.5 μg in analytical volume
Bis(chloromethyl)xylene  MAC_{wz} 1 (v), Class II $TSEL_{wz}$ 0.004 434, 464	Intragastric: LD_{50} mouse 670, LD_{50} rat 1600 Inhalation: LC_{50} rat 250 4 h Affects hematopoiesis Detection: titrimetry, detection limit 4 μg in analytical volume; colorimetry, detection limit 0.5 μg in analytical volume; photometry, detection limit 0.1 μg in analytical volume
Bis(dimethylamino)isopropylmethacrylate ester	Intragastric: LD_{50} rat 1605 (1446—1763) Inhalation: LC_{50} mouse 220 (182—266)

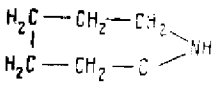
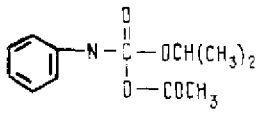
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Cl_2-$C(CH_3)COOCH[CH_2N(CH_3)_2]_2$ TSEL 15 461, 462	2 h, LC_{50} rat 110 (90—133) 4 h Detection: colorimetry; detection limit 10 μg in analytical volume
Bisfurfurylidenhexamethylene diamine (bifurgin)  MAC$_{wz}$ 0.2 (v+a), Class II 445	Intragastric: LD_{50} rat 490 (450—540), LD_{50} mouse 1380 (1060—1790) Inhalation: LC rat 500 4 h; Lim_{ac} rat 30 4 h (1,7, 15)
1,1-Bis(hydroxymethyl)-3-cyclohexene  MAC$_{wz}$ 5 (a), Class III 274, 469	Intragastric: LD_{50} rat 1750±42, LD_{50} mouse 1750, LD_{50} guinea pig 2150, LD_{50} rabbit 3400 Detection: colorimetry; detection limit 5 μg in analytical volume
Boric acid (orthoboric acid) H_3BO_3 MAC$_{wz}$ 10 (v+a), Class III 45, 145	Intragastric: LD_{50} 3450±160; LD_{50} rat 2660±200 Inhalation: LC rat 28 4 h Has systemic toxicity and gonadotropic action Detection: colorimetry
Bornyl chloride $C_{10}H_{17}Cl$ TSEL$_{wz}$ 50 20, 289	Intragastric: LD_{50} mouse 1840±54 Detection: photometry; detection limit 2 μg per 2 ml of solution
Boron fluoride BF_3 MAC$_{wz}$ 1 (v), Class II 145, 157	Inhalation: LC_{50} mouse 3460 (2900—4350) 2 h, LC_{50} rat 1180 (959—1451) 4 h, LC_{50} guinea pig 109 (815—146.3) Has irritant action
Boron oxide (boric anhydride) B_2O_3 MAC$_{wz}$ 5 (a), Class III 145, 468	Intragastric: LD_{50} mouse 3163±270 Intraabdominal: LD_{50} mouse 1868±109 Detection: weighing method
Bromoacetopropyl acetate $BrCH_2COCH_2CH_2OCOCH_3CH_2$ MAC$_{wz}$ 0.5 (v), Class II 321, 469	Intragastric: LD_{50} rat 600 (480—750) Inhalation: LC_{50} rat 149±11 4 h; Lim_{ac} rat 13 4 h (1,8); Lim_{ir} rat 4,3 4 h (9), Lim_{ir} man 2,2 Has irritant properties Detection: colorimetry, detection limit 10 μg in analytical volume

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Bromobenzene  MAC_{wz} 3 (v), Class II 379, 466	Intragastric: LD_{50} mouse 2700 (2061—3537), LD_{50} rat 3200 (2742—3744), LD_{50} guinea pig 1700±238, LD_{50} rabbit 3300±892 Inhalation: LC_{50} mouse 21 000 (16 000—27 000) 2 h, LC_{50} rat 42 000 (33 000—54 000) 4 h; Lim_{ac} 250 4 h (1,18) Narcotic; affects hematopoiesis Detection: colorimetry; detection limit 0.25 μg in analytical volume
Bromoform $CHBr_3$ MAC_{wz} 5 (v), Class III 463, 526	Inhalation: LC_{120} rat 45 000 4 h Narcotic; damages liver and kidneys Detection; photometry; detection limit 0.3 μg in analytical volume
Butyl acetate $CH_3COOCH_2CH_2CH_2CH_3$ MAC_{wz} 200 (v), Class IV MAC_{hm} 0.1 MAC_{ad} 0.1 MAC_w 0.1 47, 293, 461	Intragastric: LD_{50} mouse 7700 (5900—9500); LD_{50} rat 13 100 (10 200—16 000), LD_{50} guinea pig 4700, LD_{50} rabbit 3200 Has irritant properties Detection: colorimetry; detection limit 10 μg in analytical volume
Butyl acrylate $CH_2=CHCOOC_4H_9$ MAC_{wz} 10 (v), Class III MAC_w 0.01 18, 464	Intragastric: LD_{50} rat 900 Inhalation: LC_{50} mouse 7800 2 h, LC_{50} rat 35 000 2 h Has irritant properties Detection: photometry; detection limit 1 μg in analytical volume
Butyl alcohol (butanol) $CH_3CH_2CH_2CH_2OH$ MAC_{wz} 10 (v), Class III MAC_{hw} 0.1 MAC_{ad} 0.1 MAC_w 1 121, 393, 467	Intraabdominal: LD_{50} mouse 603 (478—729) Inhalation: NC mouse 80 000 2 h; Lim_{ac} rabbit 4000 40 min (2) Narcotic; has irritant properties Detection: chromatography; detection limit 1 μg in analytical volume
Butylamine $CH_3(CH_2)_3NH_2$ MAC_{wz} 10 (v), Class III $TSEL_w$ 8 312, 412, 475	Intragastric: LD_{50} mouse, rat and guinea pig 430—450 Inhalation: LC_{50} mouse 800 2 h; Lim_{ir} cat 500 30 min (28), Lim_{ir} rabbit 400 40 min (7), Lim_{ir} man 100; Lim_{olr} 2.5 Has irritant action Detection: photometry; detection limit 0.002 mg per 10 ml of solution
Butyl bromide $CH_3CH_2CH_2CH_2Br$ 174	Intraabdominal: LD_{50} mouse 6680, LD_{50} rat 4450 Narcotic; has irritant properties Detection: colorimetry

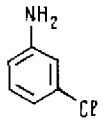
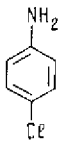
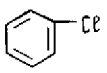
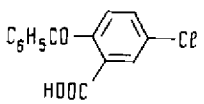
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
tert-Butyl bromide $(CH_3)_3CBr$ 174	Intraabdominal: LD_{50} mouse 4400, LD_{50} rat 1250 Narcotic; has irritant action Detection colorimetry
Butylcaptax (2-butylthiobenzothiazole)  MAC_{wz} 2 (v), Class III 164	Intragastric: LD_{50} mouse 1610 (1247—1973), LD_{50} rat 1270 (977—1647), LD_{50} rabbit 2344 (2140—2547) On skin: LD rat<200, LD rabbit<1000 Inhalation: LC rat and rabbit<197 4 h; Lim_{ac} rat and rabbit 42 4 h (20) Detection: colorimetry; detection limit 25 μg in analytical volume
Butyl 5-chloromethyl-2-furancarboxylate  MAC_{wz} 0.5 (a), Class II 444	Intragastric: LD_{50} mouse 2000 Inhalation: LC rat<20 2 h
O-(4-tert-Butyl-2-chlorophenyl-o-methyl-N-methylamido phosphate (amidophos) †  MAC_{wz} 0.5 (a), Class II 300, 464	Intragastric: LD_{50} rat 954±69, LD_{50} rabbit 550; Lim_{ac} rat and rabbit 50 (24) On skin: LD rabbit <1000 Inhalation: LC rat 12 4 h, LC rabbit <32 4 h; Lim_{ac} rat 3 4 h (24) Detection: colorimetry; detection limit 0.5 μg in analytical volume
Butyl 2,4-dichlorophenoxyacetate  MAC_{wz} 0.5 (v+a), Class II MAC_w 0.5 2, 166, 468	Intragastric: LD_{50} mouse 425 (340—518), LD_{50} rat 995 (783—1265), LD_{50} cat 780 (634—956) On skin: LD rabbit <2000 Inhalation: Lim_{ac} rat 190 4 h (1) Has embryotropic action Detection: photometry; detection limit 100 μg in analytical volume
Butyl 2-furancarboxylate  MAC_{wz} 0.5 (a), Class II	Intragastric: LD_{50} mouse 1500 Inhalation: LC rat <20-2 h

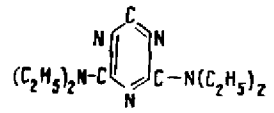
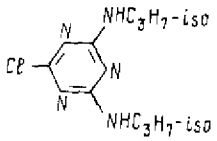
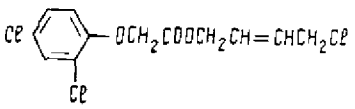
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
tert-Butyl hydroperoxide  44. 45, 344	Intragastric: LD_{50} mouse 800 (689—911), LD_{50} rat 800 (688—912) Intraabdominal: LD_{50} mouse 246 (234—255), LD_{50} rat 200 (176—224) Detection: chromatography and colorimetry; detection limit 0.5 μg per 4.5 ml of analytical volume
Butyl iodide (1-iodobutane) $CH_3(CH_2)_2CH_2I$	Intraabdominal: LD_{50} mouse 101 (100—103), LD_{50} rat 692 (652—731) Narcotic; has irritant action Detection: colorimetry; detection limit 5 μg per 6 ml of analytical volume
tert-Butyl peracetate CH_3-CO-OO-$C(CH_3)_3$ MAC_{wz} 0.1 (v), Class I 45, 388	Intragastric: LD_{50} mouse 632±74, LD_{50} rat 675 Inhalation: LC_{33} rat 8200 4 h, LC_{33} mouse 6000 2 h; Lim_{ac} rat 150 4 h (4), Lim_{ac} rat 20 4 h (32) Detection: photometry; detection limit 2 μg in analytical volume
tert-Butyl perbenzoate $(CH_3)_3C$-OO-COC_6H_5 MAC_{wz} 1 (v), Class II 387	Intragastric: LD_{50} mouse 914±90, LD_{50} rat 1012 Inhalation: LC rat and mouse <57 4 h
Butylthioethyl methacrylate $CH_2{=}C(CH_3)COOCH_2CH_2SC_4H_9$ 399	Intragastric: LD_{50} mouse 6300 (5478—7245), LD_{50} rat 5300 (4711—6545)
1,4-Butynediol $HOCH_2$-C≡C-CH_2OH MAC_{wz} 1 (v+a), Class II MAC_w 5 441	Intragastric: LD_{50} mouse 100, LD_{70} rat 150 Inhalation: LC mouse and rat 150—280 2 h Narcotic; has irritant properties
Butyric acid CH_3-CH_2-CH_2-COOH MAC_{wz} 10 (v), Class III MAC_{hm} 0.015 437, 464	Intragastric: LD_{50} mouse 1000, LD_{50} rat 2000 Inhalation: LC mouse and rat <500—700 2 h Has irritant properties Detection: colorimetry; detection limit 10 μg in analytical volume
Butyric aldehyde (butanal, butaldehyde, butylaldehyde)  MAC_{wz} 5 (v), Class III 111, 467	Inhalation: LC_{50} mouse 44 610 (41 590—47 630) 2 h; NC_{50} mouse 30 900 (28 600—33 640) 15—20 min; Lim_{ac} rabbit 100 40 min (2); Lim_{ir} man 7,5; Lim_{oil} 2 Has irritant properties Detection: photometry; detection limit 1 μg per 1 ml of solution

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Butyric anhydride  MAC_{wz} 1 (v), Class II 438, 464	Intragastric: LD_{50} mouse 2000, LD rat <5000 Inhalation: LC mouse and rat <50 2 h Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
γ-Butyrolactone  $TSEL_{wz}$ 2 184	Intragastric: LD_{50} rat 1800
Cadmium oxide CdO MAC_{wz} 0.1 (a), Class I MAC_{w} 0.01 45, 267	Intragastric: LD_{50} mouse 72 (41—113) Inhalation: LC rat <60 1 h Has irritant properties Detection: colorimetry; detection limit 0.02 μg in analytical volume
Cadmium stearate $Cd(C_{17}H_{35}COO)_2$ MAC_{wz} 0.1 (a), Class I 378	Intragastric: LD_{50} mouse 590 (556—624), LD_{50} rat 1225 (876—1574) Inhalation: LC rat <3 4 h
Caffeine (base)  MAC_{wz} 0.5 (a), Class I 287, 469	Intragastric: LD_{50} mouse 310±20, LD_{50} rat 310±33 Inhalation: LC rat <55 4 h; Lim_{ac} rat 13 4 h (4) Damages central nervous system Detection: colorimetry, detection limit 5 μg in analytical volume
Caffeine sodium benzoate MAC_{wz} 0.5 (a), Class II 287	Intragastric: LD_{50} mouse 800±41, LD_{50} rat 860±62 Damages central nervous system
Camphor (2-camphanone) 	Inhalation: LC mouse 400—1760 3 h Damages central nervous system

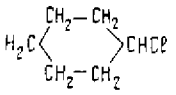
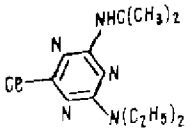
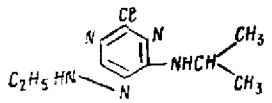
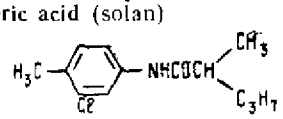
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 3 (v), Class III 285, 464	Detection: photometry; detection limit 20 μg in analytical volume
Caproic acid $CH_3(CH_2)_4COOH$ MAC_{wz} 5 (v), Class III MAC_{hm} 0.01 MAC_{ad} 0.005 45, 83	Intragastric: LD_{50} mouse 5000 Inhalation: LC_{50} mouse 4100 2 h Has irritant properties Detection: colorimetry; detection limit 2 mg/m³
Caprolactam  MAC_{wz} 10 (a), Class III MAC_{hw} 0.06 MAC_{ad} 0.006 MAC_w 1 236, 464	Intragastric: LD_{50} rat 2000—4000 Inhalation: LD_{50} rat 300 2 h; Lim_{ac} rat 140 2 h (4) Damages central nervous system Detection: colorimetry; detection limit 50 μg in analytical volume
Carboethoxymethyl acrylate $CH_2=CHCOOCH_2COOC_2H_5$ 398	Intragastric: LD_{50} rat 215 (185—244)
Carboethoxymethyl methacrylate $CH_2=C(CH_3)COOCH_2COOC_2H_5$ 398	Intragastric: LD_{50} rat 7885 (6855—8915)
N-Carboisopropoxy-o-acetyl-N-phenyl carbamate (acylate)  MAC_{wz} 2 (v+a), Class III 177	Intragastric: LD_{50} mouse 2075±141, LD_{50} rat 3400±180 On skin: LD rabbit <5000 Inhalation: LC_{50} rat 1170 6 h; Lim_{ac} rat 38 6 h (8, 16)
Carboisopropoxymethyl methacrylate $CH_2=C(CH_3)COOCH_2COOC_3H_7$-iso 398	Intragastric: LD_{50} rat 9000 (8086—10 017)
Carbon disulfide CS_4 MAC_{wz} 1 (v), Class II MAC_{hw} 0.03 MAC_{ad} 0.005 MAC_w 1 246, 458, 516	Intragastric: LD_{50} mouse 2780, LD_{50} rat 3188, LD_{50} guinea pig 2125, LD_{50} rabbit 2550 Inhalation: LC_{50} mouse 10 000 2 h, LS_{50} rat 25 000 2 h; Lim_{ac} rat 1000 1 h (4) Narcotic; causes organic lesions in nervous system Detection: colorimetry; detection limit 0.5 μg in analytical volume

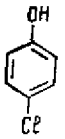
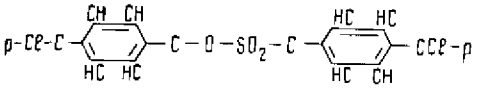
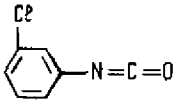
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Carbon monoxide CO MAC_{wz} 20 (v), Class IV MAC_{hw} 3 MAC_{ad} 1 464, 474	Inhalation: LC_{50} mouse 3600 (3200—4000) 2 h; LC_{100} rat 18 000 15 min; CL rabbit 20 000 1 h; Lim_{ac} mouse 2500 5 min (4), Lim_{ac} mouse 2000 15 min (4), Lim_{ac} mouse 100 2 h (4), Lim_{ac} rat 3000 15 min (4) Forms carboxyhemoglobin and causes anoxemia Detection: titrimetry; detection limit 14 μg in analytical volume
Carbon tetrachloride+ CCl_4 MAC_{wz} 20 (v), Class II MAC_{hm}* 4 MAC_{ad}* 2 MAC_w 0.3 214, 462, 497	Intragastric: LD_{50} mouse 9066 (7749—10 607), LD_{50} rat 6200 (5082—7564), LD_{50} guinea pig 5760, LD_{50} rabbit 5760 Inhalation: LC_{50} mouse 34 500±7100 2 h; Lim_{ac} rat 1200 4 h (1) Narcotic; damages liver and kidneys Detection: colorimetry; detection limit 2 μg in analytical volume
Cerous chloride $CeCl_3$ 387, 461	Intraabdominal: LD_{50} mouse 215 (198—230) Detection: weighing method
Cerous oxide Ce_2O_3 387, 461	Intraabdominal: LD_{50} mouse 475 (402—538) Detection: weighing method
Chlorinated naphtalenes (higher)+ MAC_{wz} 0.5 (v), Class II 380, 469	Inhalation: LC mouse <50—200 2 h Detection: photometry; detection limit 0.1 μg in analytical volume
Chlorine Cl_2 MAC_{wz} 1 (v), Class II MAC_{hw} 0.1 MAC_{ac} 0.03 98, 453	Inhalation: LC dog 1900 30 min Has irritant properties; causes edema of lungs Detection: nephelometry; detection limit 3 μg in analytical volume
Chlorine dioxide ClO_2 MAC_{wz} 0.1 (v), Class I 99, 468	Intragastric: LD_{50} rat 140 Has irritant properties; damages upper and lower respiratory tracts Detection: photometry; detection limits 0.4 μg in analytical volume
Chloroacetic acid+ $CH_2ClCOOH$ MAC_{wz} 1 (v+a), Class II 249	Intragastric: LD_{50} rat 580 (513—655) On skin: LT_{50} mouse 35 (31—39) Inhalation: LC_{50} rat 180 (146—221) 4 h; Lim_{ac} rat 93 4 h (1, 8, 11); Lim_{ir} rat 25 4 h (7,9), Lim_{ir} man 5.7 Detection: photometry; detection limit 10 μg in analytical volume; gas liquid chromatography

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Chloroacetopropyl acetate $CH_3COCHClCH_2CH_2OCOCH_3$ MAC_{wz} 2 (v), Class III 321	Intragastric: LD_{50} rat 2049 (1694—2479) Inhalation: Lim_{ac} rat 60 4 h (1,11); Lim_{ir} rat 20 4 h (9), Lim_{ir} man 7 Has irritant properties Detection: colorimetry; detection limit 10 μg in analytical volume
m-Chloroaniline+  MAC_{wz} 0.05 (v), Class I MAC_{ad} 0.01 MAC_w 0.2 164, 250, 312, 557	Intragastric: LD_{50} mouse 368±27, LD_{50} rat 256±41, LD_{50} guinea pig 250 On skin: LD_{50} rat 250 Inhalation: LC mouse <550 2 h; LC_{50} mouse 550 4 h, LC_{50} mouse 550 6 h; Lim_{ac} mouse 38 4 h (19) Detection: colorimetry; detection limit 0.2 μg in analytical volume
p-Chloroaniline+  MAC_{wz} 0.3 (v), Class II MAC_{hw} 0.04 MAC_{ad} 0.01 MAC_w 0.2 152, 164, 312	Intragastric: LD_{50} mouse 228 (198—262), LD_{50} rat 371, LD_{50} guinea pig 350 On skin: LD_{50} cat 239 (167—311) Inhalation: LC mouse <250 4 h; LC_{12} mouse 250 6 h; Lim_{ac} rat 40 4 h (19), Lim_{ac} rat 21 4 h (19), Lim_{ac} mouse 10 4 h Methemoglobin former; affects nervous system Detection: photoelectrocolorimetry; detection limit 0.3 μg in analytical volume
Chlorobenzene+  MAC_{wz} 50 (v), Class III MAC_{hw} 0.1 MAC_{ad} 0.1 MAC_w 0.02 51, 143, 379, 466	Intragastric: LD_{50} mouse 2300 (1825—2898), LD_{50} rat 3300±625, LD_{50} rabbit 2800±561, LD_{50} quinea pig 2250 Inhalation: LC mouse 15 000; Lim_{ac} rabbit 700 40 min (2) Narcotic; damages hematopoietic organs Detection: colorimetry; detection limit 0.25 μg in analytical volume
4-Chlorobenzophenone-2-carboxylic acid  MAC_{wz} 1 (a), Class II 5, 468	Intragastric: LD_{50} mouse 570 (338—957), LD_{50} rat 3700 (3189—4292) Inhalation: Lim_{ir} man 4 Detection: colorimetry; detection limit 0.5 μg in analytical volume

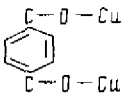
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
2-Chloro-4,6-bis(diethylamino)-sym-triazine (chlorazine)  MAC_{wz} 2 (a), Class III 463, 519	Intragastric: LD_{50} mouse 743; LD_{50} rat 980 Inhalation: LC rat <800—1100 4 h Affects central nervous system and blood Detection: colorimetry; detection limit 0.5 μg in analytical volume
2-Chloro-4,6-bis(isopropylamino)-sym-triazine (propazine)  MAC_{wz} 5 (a), Class III MAC_w 1 383, 466	Intragastric: LD_{50} mouse 3180 (2971—3402), LD_{50} rat 3840 (2953—4992), LD_{50} guinea pig 1200, LD_{50} rat 5000 On skin: LD rat <1000, LD rabbit <500 Inhalation: LC mouse and rat <7000 2—4 h; Lim_{ac} mouse and rat 1200—1500 4 h (1,25) Affects nervous system Detection: photometry; detection limit 0.5 μg in analytical volume
1,3-Chlorobrompropane Cl-CH_2-CH_2-CH_2-Br MAC_{wz} 3 (v), Class I 84, 406	Intragastric: LD_{50} mouse 1290, LD_{50} rat 930 Inhalation: LC mouse 7270 2 h; LC_{50} rat 7270 (7000—7550) 4 h; Lim_{ac} rat 410 4 h (10) Detection: photometry; detection limit 3 μg in analytical volume
4-Chloro-2-butinyl-N-(4-chlorophenyl)carbamate (carbyne)  MAC_{wz} 0.5 (a), Class II 463, 522	Intragastric: LD_{50} mouse 630, LD_{50} rat 527 On skin: LD rabbit <1000 Inhalation: Lim_{ac} rat 80 4 h (24) Affects nervous system; has irritant properties Detection: titrimetry; detection limit 5 μg in analytical volume; photometry; detection limit 0.1 μg in analytical volume
γ-Chlorocrotyl 2,4-dichlorophenoxyacetate (crotylin)  MAC_{wz} 1 (v+a), Class II MAC_w 0.02 108, 468	Intragastric: LD_{50} mouse 489±50[1], LD_{50} rat 547±86, LD_{50} rat 662±101[1], LD_{50} rabbit 784±120[1]; Lim_{ac} mouse 20 (1) On skin: LD rabbit <300 Inhalation: LC_{50} mouse 2190 2 h; LC rat <5840 4 h Affects nervous system; has irritant properties Detection: colorimetry; detection limit 100 μg in analytical volume

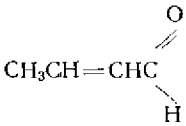
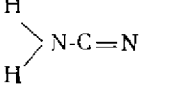
[1] Technical — grade product

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Chlorocyclohexane (cyclohexyl chloride)  MAC_{wz} 80 (v), Class IV 291, 164, 524	Intragastric: LD_{50} rat 3000 Inhalation: LC mouse 31 000 2 h, LC rat 40 000—75 000 2 h Affects central nervous system Detection: burning in special torch; detection limit 5 μg in analytical volume
2-Chloro-4-diethylamino-6-isopropylamino-sym-triazine (ipazine)  MAC_{wz} 2 (a), Class III 487	Intragastric: LD_{50} mouse 2300 (1500—3000), LD_{50} rat 1700 (1200—2200), LD_{50} cat 1300 On skin: LD rat <1000, LD rabbit <500 Affects nervous system
2-Chloroethanesulfonylchloride+ $ClCH_2CH_2SO_2Cl$ MAC_{wz} 0.3 (v), Class II 108, 466	Intragastric: LD_{50} rat 240 (157—365) Inhalation: LC_{50} mouse 250 (190—330) 2 h, LC_{50} rat 420 (210—840) 4 h; Lim_{ac} rat 97 4 h (1); Lim_{ir} 12 (9), Lim_{ir} man 5 Has irritant properties Detection: photometry; detection limit 3 μg in analytical volume
2-Chloro-4-ethylamino-6-isopropylamino-sym-triazine (atrazine)  MAC_{wz} 2 (a), Class III MAC_w 0.5 179, 464	Intragastric: LD_{50} mouse 850 (521—1129), LD_{50} rat 1410 (728—2092) On skin: LD rat <1000 Inhalation: LC rat <2200—2400 2 h Affects liver Detection: titrimetry; detection limit 5 μg in analytical volume; photometry; detection limit 0.1 μg in analytical volume
Chloroethyl methacrylate $CH_2{=}C(CH_3)COOCH_2CH_2Cl$ $TSEL_{wz}$ 10 398, 461	Intragastric: LD_{50} rat 200 (166—240) Inhalation: LC_{50} mouse 700 (530—920) 2 h, LC_{50} rat 550 (460—660) 4 h Detection: colorimetry; detection limit 10 μg in analytical volume
3-Chloro-4-methylanilide-α-methylvaleric acid (solan) 	Intragastric: LD_{50} mouse 1800 (1522—2078), LD_{50} rat 5100 (4519—5681) On skin: LD rat and rabbit <2000 Inhalation: LC rat <52 4 h; Lim_{ac} rat 28 4 h (16)

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 1 (a), Class II 302, 469	Methemoglobin former; affects nervous system Detection: thin-layer chromatography; detection limit 5 μg
Chloromethyltrichlorosilane $ClCH_2SiCl_3$ MAC_{wz} 1 (v), Class II 201, 464	Intragastric: LD_{100} mouse 100 On skin: LD_{100} mouse 100 Intraabdominal: LD_{100} mouse 100 Inhalation: LC_{50} mouse 30—60 2 h; LC rat 5 h Has irritant properties Detection: photocolorimetry; detection limit 15 μg in analytical volume
Chloropelargonic acid $Cl(CH_2CH_2)_4COOH$ MAC_{wz} 5 (v), Class III MAC_w 0.3 462, 500	Intragastric: LD_{50} mouse 2000 Inhalation: LC mouse and rat <100—50 2 h; Lim_{ir} cat 20 1 h (28) Has irritant properties; affects parenchymatous organs
p-Chlorophenol+  MAC_{wz} 1 (v), Class II $TSEL_{wz}$ 0.01 125	Intragastric: LD_{50} rat 500 (400—600) On skin: LD_{50} rat 1000 (700—1300) Inhalation LC_{50} mouse 11 (9—13) 2 h, LC_{50} rat 135 (100—170) 2 h; Lim_{ac} rat 13 2 h (1,8) Affects nervous system; has irritant properties
p-Chlorophenyl-p-chlorobenzenesulfonate (ester sulfonate, ovotran)  MAC_{wz} 2 (v+a), Class III 521	Intragastric: LD_{50} mouse 1475, LD_{50} rat 2650 On skin: LD rabbit <500 Affects nervous system and liver
m-Chlorophenyl isocyanate  MAC_{wz} 0.5 (v), Class II MAC_{hw} 0.005 MAC_{sd} 0.005 100, 289	On skin: LD rabbit <60 Inhalation: Lim_{ir} rabbit 0.8—1 40 min (7), Lim_{ir} man 1 30 sec Has irritant properties Detection: colorimetry; detection limit 0.5 μg per 1 ml

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
p-Chlorophenyl isocyanate  MAC_{wz} 0.5 (v), Class II MAC_{hw} 0.0015 MAC_{ad} 0.0015 189, 290	Intragastric: LD_{50} mouse 450 On skin: LD rabbit <300 Inhalation: LC_{50} mouse 53±3; Lim_{ir} rabbit 1.8—2 40 min (7), Lim_{ir} man 0.8 Has irritant properties
N-o-Chlorophenylmaleimide 148	Intragastric: LD_{50} mouse 350, LD_{50} rat 520
N-(p-Chlorophenyl)maleimide 148	Intragastric: LD_{50} mouse 310, LD_{50} rat 440
Chloroprene (2-chlorobutadiene-1,3-β-chlorobutadiene) CH_2-CClCH-CH_2 MAC_{wz} 0.05 (v), Class 1 MAC_w 0.1 112, 465	Intragastric: LD_{50} mouse 146 (119—180), LD_{50} rat 450 (369—550) On skin: LT_{50} mouse 78 (57—106), LT_{50} rat 330 (268—406) Inhalation: LC_{50} mouse 3480 (3000—4000), 2 h, LC_{50} rat 11 800 (10 500—13 200) 4 h Narcotic; affects internal organs and irritates upper respiratory tract Detection: burning in special torch; detection limit 5 μg in analytical volume; chromatography
Chlorothene (strobane) (mixture of chlorinated bicyclic compounds) MAC_{wz} 0.2 (v+a), Class II 464, 520	Intragastric: LD_{50} mouse 180, LD_{50} rat 500 On skin: LD_{100} rabbit 1000—1500 Inhalation: LC_{100} cat 600 4 h; $Lim_{a.c}$ cat 4—6 4 h (4) Affects central nervous system Detection: photometry; detection limit 0.1 μg in analytical volume
p-Chlorotoluene  $TSEL_{wz}$ 40 $TSEL_{hw}$ 0.01 152, 464	Intragastric: LD_{50} mouse 1900; LD_{50} rat 3600 Inhalation: LC_{50} mouse 34 000 2 h Detection: colorimetry; detection limit 0.1 μg in analytical volume
Chromic ammonium sulfate (ammonium chrome alums)	Intragastric: LD_{50} rat 720±170 Intramuscular: LD_{50} mouse 115±23

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
$Cr_2(SO_4)_3 \cdot (NH_4)_2SO_4 \cdot 24H_2O$ MAC_{wz} 0.02 (a), Class I 422	On skin: LD_{50} mouse 110±14; LD rat 2000, LD rabbit 1000 Inhalation: LC_{50} mouse 51±13 2 h; Lim_{ac} mouse 4 2 h (1,8)
Chromic chloride $CrCl_3$ MAC_{wz} 0.01 (a), Class I 422	Intragastric: LD_{50} rat 44±46 Intramuscular: LD_{50} mouse 40±6 On skin: LD rat <2000, LD rabbit <1000 Inhalation: LC_{50} mouse 31.5±6.1 2 h; Lim_{ac} mouse 1.5 2 h (1,8) Detection: photometry; detection limit 1 μg in analytical volume
Chromo-alumino-potassium catalyst A-30 (composition: 21% Cr_2O_3, 76.5% Al_2O_3, 2.5% K_2O) 403, 468	Intragastric: LD_{50} mouse 450±69, LD_{50} rat 792±84 Detection: weighing method
Cobalt hydrocarbonyl $Co(CO)_4H$ MAC_{wz} 0.01 (v), Class I 465, 531	Inhalation: LC_{50} rat 46.2 (31.7—64.2) 2 h, LC_{50} mouse 17.5 (12.4—24.6) 2 h; Lim_{ac} rat 2 h (10), Lim_{ac} rat 2 h (10) Detection: photometry; detection limit 0.5 μg in analytical volume
Cobalt tetracarbonyl $Co(CO_4)_2$ 426	Intragastric: LD_{50} mouse 378 (288—474), LD_{50} rat 754 (675—832) Has irritant action on skin and ocular mucosa
Copper-chromium-barium catalyst $BaCrO_4 \cdot CuO \cdot C_4CrO_4$ MAC_{wz} 0.01 (a), Class I 192	Intragastric: LD_{50} rat 17 500 Inhalation: LC rat <200 4 h
Copper hydroquinonate  $TSEL_{wz}$ 0.5 247	Intragastric: LD_{50} mouse 850±98, LD_{50} rat 2880±370 Intratracheal: LD_{100} rat 50
Copper-nickel ore MAC_{wz} 4 (a), Class IV 464, 468	Intragastric: LD_{33} mouse 15 000 Intraabdominal: LD_{50} mouse 3846 Detection: weighing method
Copper oxychloride $3CuO \cdot CuCl_2 \cdot 4H_2O$ 453	Intragastric: LD_{50} rat 812±16
Copper sulfide ore (dust) MAC_{wz} 4 (a), Class IV 240, 468	Intraabdominal: LD_{50} mouse 2015±285, LD_{50} rat 3584±400 Inhalation: LC rat and rabbit <217 4 h Detection: weighing method

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters. Test Conditions. Action(s). Method(s) of Detection
Copper 2,4,5-trichlorophenolate $(C_6H_2Cl_3O)_2Cu$ MAC_{wz} 0.1 (a), Class I 457	Intragastric: LD_{50} 3333 (3094—3572), LD_{50} rat 5500 (4163—6836), LD_{50} rabbit 1537 (1324—1750) Inhalation: LC guinea pig 200—300 1 h Affects parenchymatous organs and blood vessels
m-Cresol (m-oxytoluene) m-$CH_3C_6H_4OH$ MAC_w 0.004 $TSEL_{wz}$ 0.02 45, 504	Intragastric: LD_{50} mouse 344 (270—436), LD_{50} rat 1470 (1170—1830) On skin: LD_{50} mouse 1100 (800—1400) Detection: colorimetry; detection limit 10 mg/m³
o-Creosol (o-oxytoluene) o-$CH_3C_6H_4OH$ $TSEL_{wz}$ 0.028 289, 504	Intragastric: LD_{50} mouse 436 (311—610) On skin: LD_{50} mouse 620 (370—1110) Inhalation: LC_{50} mouse 179 2 h Detection: thin-layer chromatography; detection limit 2 μg per 3 ml of solution
p-Creosol (p-oxytoluene) p-$CH_3C_6H_4OH$ MAC_w 0.004 $TSEL_{wz}$ 0.02 45, 504	Intragastric: LD_{50} mouse 828 (695—935) On skin: LD_{50} mouse 750 (510—1100) Detection: colorimetry; detection limit 10 mg/m³
Crotonic aldehyde (β-methylacrolein)  MAC_{wz} 0.5 (v), Class II 463, 480	Inhalation: LC_{50} mouse 1510 2 h; Lim_{ir} cat 50 30 min (28), Lim_{ir} rabbit 9 40 min (7); Lim_{ac} rabbit 7—11 40 min (2); Lim_{ir} man 0,5—1 Has irritant properties Detection: colorimetry; detection limit 20 μg in analytical volume
Cuprozin (mixture of zinc and copper salts of ethylene-bis-dithiocarbamic acid) MAC_{wz} 0.5 (a), Class II 428, 469	Intragastric: LD_{50} mouse 1550 (1438—1660); LD rat 5000, LD rabbit <1000 Inhalation: LC cat <90 4 h; Lim_{ac} rat and cat 8 4 h (27, 40) Detection: colorimetry; detection limit 25 μg in analytical volume
Cyanamide (free)+  MAC_{wz} 0.5 (v+a), Class II 45, 131	Intragastric LD_{50} mouse 388 (355—441), LD_{50} rat 210 (154—266), LD_{50} rabbit 150 (101—199), LD_{50} cat 100 (49—150) Intravenous: LD_{50} rat 56 (36—76) On skin: LD_{50} rat 84 (64—103) Inhalation: LC rat 86 4 h; Lim_{ac} rat 19 4 h (1,37) Detection: nephelometry; detection limit 0.5 μg per 4 ml of solution

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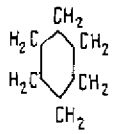
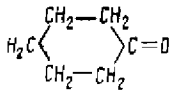
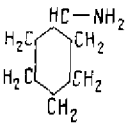
Cyanoethyl methacrylate $CH_3{=}C(CH_3)COOCH_2CH_2CN$ 398	Intragastric: LD_{50} rat 7333 (6600—8066)
Cyclohexane (hexahydrobenzene, hexamethylene)  MAC_{wz} 8 (v), Class IV MAC_{hw} 1.4 MAC_{ad} 1.4 MAC_w 0.1 210, 468	Inhalation: LC mouse 70 000 2 h, LC mouse <60 000 2 h; NC mouse 5000 2 h Narcotic Detection: colorimetry; detection limit 10 μg in analytical volume
Cyclohexanone (ketohexamethylene, hexanone)  MAC_{wz} 10 (v), Class III MAC_{hm} 0.04 MAC_w 0.2 462, 532	Inhalation: NC_{50} mouse 25 000; NC mouse 10 000 4 h, NC mouse 5000 6 h; Lim_{ac} rabbit 1000—2000 40 min (7), Lim_{ac} rabbit 4000 40 min (2), Lim_{ac} rabbit 50 8 h (2), Lim_{ac} rabbit 40 min (4); Lim_{ir} man 500; Lim_{olf} man 15 Narcotic Detection: photocalorimetry; detection limit 0.5 μg in analytical volume
Cyclohexylamine  MAC_{wz} 1 (v), Class II 232, 468	Intragastric: LD_{50} mouse 224±17; LD_{50} rat 228±24 On skin: LD rat <1500, LD rabbit <1000 Inhalation: LC_{50} rat 1000, LC_{50} mouse 7500; Lim_{ac} mouse 10 (1) Has irritant properties; inhibits oxidative processes Detection: colorimetry; detection limit 10 μg in analytical volume
Cyclopentadiene  MAC_{wz} 5 (v), Class III 381, 462	Inhalation: LC_{50} mouse 14 000 (11 600—16 800) 2 h, LC_{50} rat 39 000 (35 900—42 500) 2 h; Lim_{ac} rat 3000—4000 2 h (1,11); Lim_{ir} man 35—41; Lim_{olf} man 3—7 Narcotic Detection: colorimetry; detection limit 0.5 μg in analytical volume

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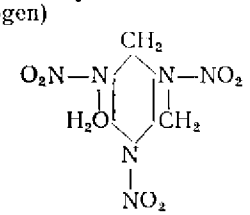
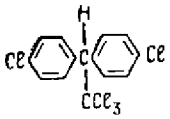
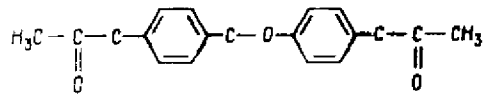
Cyclotetramethylenetetranitramine (octogen) $C_4H_8(N\text{-}NO_2)_4$ $TSEL_w$ 0.2 137	Intragastric: LD_{50} mouse 1500; LD rat <5000; LD_{50} guinea pig 300
Cyclotrimethylenetrinitroamine (hexogen)  MAC_{wz} 1 (v+a), Class II MAC_w 0.1 410, 461, 478	Intragastric: LD_{60} mouse 500; LD rabbit 500, LD cat 100—250 Inhalation: LC rat <14 000—1700 1—6 h Detection: colorimetry; detection limit 0.2 μg in analytical volume
DD (mixture of 50% dichloride propane and 50% dichloride propylene) $CH_2ClCHClCH_2+CH_2ClCH=CHCl$ MAC_w 0.4 85, 464	Intragastric: LD_{50} mouse 1270±38, LD_{50} rat 760±163, LD_{50} guinea pig 417, LD_{50} rabbit 500 Detection: colorimetry; detection limit 0.1 μg in analytical volume
DDB (mixture of 50% isobutane and 50% isobutylene) MAC_w 0.4 85	Intragastric: LD_{50} mouse 302±11, LD_{50} rat 1500±118, LD_{50} guinea pig 390, LD_{50} rabbit 265
DDT+  MAC_{wz} 0.1 (v+a), Class I MAC_w 0.1 51, 464	Intragastric: LD_{50} mouse 200, LD_{50} rat 300; LD_{100} cat 300; LD_{50} dog 500; LD_{100} rabbit 600 On skin: LD rabbit 1700 Inhalation: LC cat <80 6 h Detection: colorimetry; detection limit 0.1 μg in analytical volume
Decyl alcohol (1-decanol) $CH_3(CH_2)_9OH$ MAC_{wz} 10 (v+a), Class III 82, 464	Intragastric: LD_{50} mouse 27 000±3000 Inhalation: LC_{50} mouse 4000±200 2 h Detection: chromatography; detection limit 1 μg in analytical volume
4,4-Diacetyldiphenyl oxide  $TSEL_{wz}$ 7 158	Intragastric: LD_{50} mouse 9000; LD rat <20 000

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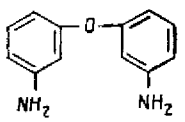
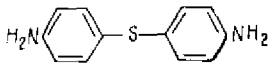
Diallylamine+ $(CH_2=CHCH_2)_2NH$ MAC_{wz} 1 (v), Class II 200, 312	Intragastric: LD_{50} rat 645 (545—712). LD_{50} mouse 355 (236—533) Inhalation: LC_{50} rat 2100 (1420—2700) 4 h Has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
4,4-Diaminodiphenyl oxide  MAC_{wz} 5 (a), Class III 133, 469	Intragastric: LD_{50} rat 813 (730—896), LD_{50} mouse 685±22, LD_{50} guinea pig 650, LD_{50} rabbit 700 Detection: colorimetry; detection limit 0.5 μg in analytical volume
4,4-Diaminodiphenyl sulfide  MAC_{wz} 1 (a), Class II 129	Intragastric: LD_{50} mouse 620, LD_{50} rat 900 Inhalation: Lim_{ac} rat 30 4 h (1)
1,2-Dibromopropane $Br\text{-}CH_2\text{-}CH\text{-}Br\text{-}CH_3$ MAC_{wz} 5 (v), Class III MAC_w 0.1 84, 466	Intragastric: LD_{50} rat 1070 (946—1209) Inhalation: LC_{50} rat 12 000 (9090—15 840) 4 h Detection: photometry; detection limit 3 μg in analytical volume
1,2-Dibromotetrafluoroethane (freon 114B2) CF_2BrCF_2Br MAC_{wz} 1000 (v), Class IV 83, 169	Intragastric: LD rat <16 000 Inhalation: LC_{50} mouse 582 000 (506 000—669 000) 2 h; Lim_{ac} rabbit 14 000 40 min (2) Narcotic Detection: thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume
Dibutylamine $TSEL_w$ 6 484	Intragastric: LD_{50} mouse 290, LD_{50} rat 300, LD_{50} guinea pig 230
Di-tret-butyl peroxide (tributyl) peroxide, di-tret-butyl peroxide, tret-butyl peroxide) $(CH_3)_3C\text{-}O\text{-}O\text{-}C(CH_3)_3$ MAC_{wz} 100 (v), Class IV 312, 366	Intragastric: LD_{50} mouse 4572±477, LD_{50} rat 6750 Inhalation: LC rat <30 000 4 h; Lim_{ac} rat 5000 4 h (1) Detection: photometry; detection limit 1 mg/m³

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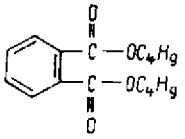
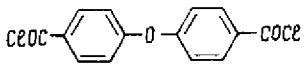
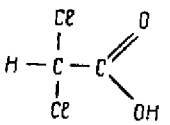
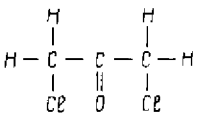
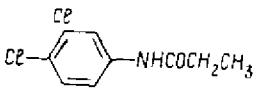
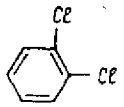
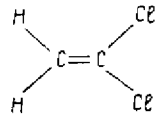
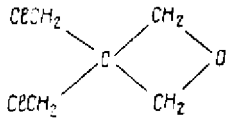
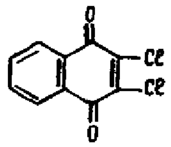
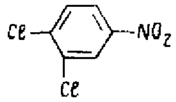
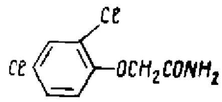
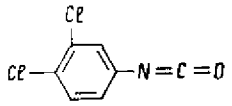
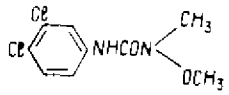
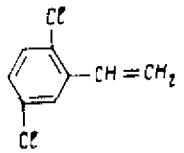
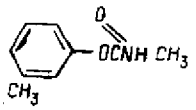
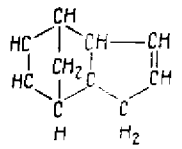
Dibutyl phthalate  MAC_{wz} 0.5 (v+a), Class II MAC_w 0.2 9, 289, 533	Intragastric: LD_{50} mouse 5280 (4840—5720), LD_{50} rat 10 100 (8920—11 280); LD guinea pig 20 000 On skin: LD rat 6000 Inhalation: LC_{50} mouse 25 000 2 h; Lim_{ac} rat 200 4 h (1) Narcotic; has irritant properties Detection: colorimetry; detection limit 2.5 μg in analytical volume
Dibutyl sebacate $C_{18}H_{34}O_4$ $TSEL_{wz}$ 20 195, 461	Intragastric: LD_{50} rat 27 650 Detection: colorimetry; detection limit 10 μg in analytical volume
S-S-S-Dibutyltrithiophosphate (butyphos)+ $(C_4H_9S)_3PO$ MAC_{wz} 0.2 (v+a), Class II MAC_w 0.0003 MAC_{hm} 0.01 MAC_{ad} 0.01 422, 547	Intragastric: LD_{50} mouse 179 (158—200), LD_{50} rat 217 (164—270), LD_{50} guinea pig 140 (120—160), LD_{50} rabbit 242 (210—258) On skin: LD_{50} rabbit 97 (48—146) Inhalation: LC rabbit <13 4 h; Lim_{ac} rat and rabbit 3 4 h (24) Affects nervous system Detection: colorimetry; detection limit 2 μg in analytical volume Intragastric: LD_{50} rat 8700
4,4-Dicarboxylic acid diphenyl oxide dichloroanhydride  $TSEL_{wz}$ 7 63	
Dichloroacetic acid+  MAC_{wz} 4 (v+a), Class III 249	Intragastric: LD_{50} rat 17 000 (15 400—18 700) On skin: LT_{50} mouse 50 (34—72) Inhalation: Lim_{ac} rat >34 4 h (1, 8, 11); Lim_{ir} rat 34 4 h (7, 9); Lim_{ir} man 4—5
1,3-Dichloroacetone  MAC_{wz} 0.05 (v), Class I 296, 469	Inhalation: LC_{50} mouse 27±1.4 2 h, LC_{50} rat 29 2 h; Lim_{ir} mouse 6 40 min (1), Lim_{ir} man 0.5 Has irritant properties Detection: colorimetry; detection limit 0.25 μg in analytical volume

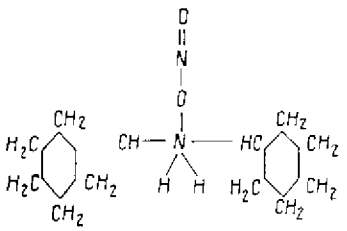
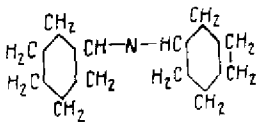
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
3,4-Dichloroanilide of propionic acid (propanide)  MAC_{wz} 0.1 (a), Class I 303	Intragastric: LD_{50} mouse 675 (478—872), LD_{50} rat 2500 (2130—2870) On skin: LD rat and rabbit >2000 Inhalation: LC rat and cat <25; Lim_{ac} rat and cat 15 4 h (16, 27) Detection: chromatography; detection limit 5 μg in analytical volume
3,4-Dichloroaniline+ $Cl_2C_6H_3NH_2$ MAC_{wz} 0.5 (v), Class II $TSEL_{hm}$ 0.01 557	Subcutaneous: LD rat <100 Inhalation: LC rat <1 4 h
o-Dichlorobenzene+  MAC_{wz} 20 (v), Class IV $TSEL_{hm}$ 0.03 469, 507	Inhalation: LC_{100} rat 9500 4 h; NC rat 7300 4 h; Lim_{ac} rat 350 4 h (4) Affects central nervous system; has irritant properties Detection: colorimetry; detection limit 0.5 μg per 0.1 ml of solution
1,3-Dichloro-2-butene $CH_3CCl=CHCH_2Cl$ MAC_{wz} 1 (v), Class II MAC_w 0.05 28, 469	Inhalation: LC_{50} mouse 4400 (3942—4850) 2 h, LC_{50} rat 3930 (3650—4225) 4 h; NC_{50} mouse 10 600 (8981—11 448) 2 h; Lim_{ac} rat 500 2 h (1), Lim_{ac} rabbit 800 40 min (7); Lim_{ir} man 20; Lim_{olf} man 10 Narcotic; has irritant properties
β,β′-Dichlorodiethyl ether (chlorex)+ $ClCH_2CH_2\text{-}O\text{-}CH_2CH_2Cl$ MAC_{wz} 2 (v), Class III 298, 465	Intragastric: LD_{50} mouse 112 (102—122), LD_{50} rat 132 (116—151) Inhalation: LC_{50} rat 330 (135—528) 4 h, LC_{50} mouse 650 (540—780) 2 h; Lim_{ac} rat 80 4 h (1); Lim_{ir} rat 17 4 h (9), Lim_{ir} rabbit 19 5 min (7), Lim_{ir} man 15 2 min Has irritant properties Detection: photometry; detection limit 5 μg in analytical volume
3,3-Dichloro-4-diphenylmethanedimaleimide 148	Intragastric: LD rat <5000
1,2-Dichloroethane (ethylene chloride, ethylene dichloride)+ MAC_{wz} 10 (v), Class II MAC_{hm} 3	Intragastric: LD_{50} mouse 625±50, LD_{50} rat 1120±192 Inhalation: LC mouse 5000—10 000 2 h; Lim_{ac} rabbit 500 400 min (2)

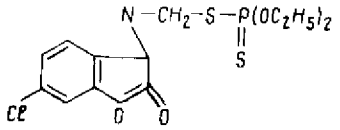
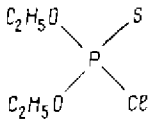
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{ad} 1 MAC_w 2 312, 412	Narcotic; affects liver, kidneys and cardiovascular system Detection: colorimetry; detection limit 10 mg/m^3
1,1-Dichloroethylene (vinylidene chloride)  MAC_{wz} 50 (v), Class IV 312, 352	Inhalation: LC mouse 15 000 2 h; Lim_{ac} rabbit 1000 40 min (2); Lim_{ir} man 100 Narcotic Detection: colorimetry
1,1-Dichloro-1-fluoroethane (freon 141) CCl_2FCH_3 MAC_{wz} 1000 (v), Class IV 169	Inhalation: LC_{50} mouse 151 400 (130 510—175 600) 2 h, LC_{50} rat 239 900 (221 100 - 260 200); Lim_{ac} mouse and rat 15 000—18 000 2—4 h (1, 4) Narcotic Detection: thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume
α_1-β-Dichloro-β-formylacrylic acid (mucochloric acid, aldehydodichloromaleic acid, 3,4-dichloro-2-hydroxycrotonolactonic acid, 3,4-dichloro-2-hydroxycrotonolactone) $C_4H_2O_3Cl_2$ MAC_{wz} 0.1 (a), Class II 256, 468	Intragastric: LD_{50} mouse 84 (59—119), LD_{50} rat 190 (162—222) Inhalation: Lim_{ir} 3.8 4 h (1), Lim_{ir} rabbit 3 (7), Lim_{ir} man 0.2 Detection: photometry; detection limit 0.1 μg in analytical volume
Dichlorohydrin (1,3-dichloropropanol-2) $CH_2Cl\text{-}CHOH\text{-}CH_2Cl$ MAC_{wz} 5 (v), Class III MAC_w 1 187, 469	Intragastric: LD rat 400; LD_{50} mouse 100—125 Inhalation: LC mouse and rat <300 2 h Has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
1,2-Dichloroisobutane $(CH_3)_2CClCH_2Cl$ MAC_{wz} 20 (v), Class IV MAC_w 0.4 86, 469	Inhalation: LC_{50} mouse 39 000±7600 2 h; Lim_{ac} rabbit 2600±70 40 min (2), Lim_{ac} rabbit 3400±1500 40 min (7) Detection: photometry; detection limit 0.1 μg in analytical volume
1,3-Dichloroisobutylene $CH_3ClC{=}CHCl$ | CH_3 MAC_{wz} 0.5 (v), Class II MAC_w 0.4 86, 469	Inhalation: LC_{50} mouse 4400±5002 h; Lim_{ac} rabbit 300 40 min (2), Lim_{ac} rabbit 10 40 min (7) Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
3,3-Dichloroisobutylene $CHCl_2C(CH_3)=CH_2$ MAC_{wz} 0.3 (v), Class II MAC_w 0.4	Inhalation: LC_{50} mouse 1500±250 2 h; Lim_{ac} rabbit 300±30 40 min (2), Lim_{ac} rabbit 200±20 40 min (7) Has irritant properties Detection: photometry; detection limit 5 μg in analytical volume
3,3-Dichloromethyloxycyclobutane  MAC_{wz} 0.5 (v), Class II 162, 468	Intragastric: LD_{50} mouse 420 Inhalation: LC_{50} mouse 200 2 h; NC mouse 100 2 h; LC cat < 250 1 h; Lim_{ac} cat 8 40 min (2) Detection: photometry; detection limit 0.1 μg in analytical volume
2,3-Dichloro-1,4-naphthoquinone  MAC_{wz} 0.5 (a), Class II MAC_{hm} 0.05 MAC_{ad} 0.05 MAC_w 0.25 221, 230, 509	Intragastric: LD_{50} mouse 440±128, LD_{50} rat 560±248 Subcutaneous: LD rat <30 Inhalation: Lim_{ir} rabbit 1 15 min (7) Detection: photometry; detection limit 10 μg in analytical volume
3,4-Dichloronitrobenzene+  MAC_{wz} 1 (v), Class II $TSEL_{hm}$ 0.004 MAC_w 0.1 35	Intragastric: LD_{50} mouse 1384±57, LD_{50} rat 1568±90 On skin: LD_{50} cat 790±48 Inhalation LC rat <35 2 h, LC rat <35 4 h; Lim_{ac} rat 10 4 h (19, 20, 23); Lim_{olf} man 2
2,4-Dichlorophenoxyacetic acid, amine salt (2,4-DA)  MAC_{wz} 1 (a), Class II MAC_w 0.2 355, 464	Intragastric: LD_{50} mouse 300, LD_{50} rat 1200 Inhalation: LC rat <8000—10 000 2 h Detection: photometry; detection limit 13.4 μg in analytical volume

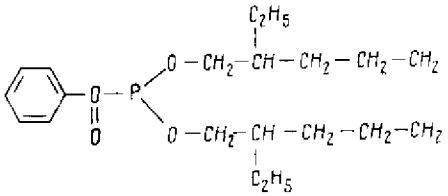
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
3,4-Dichlorophenylisocyanate (3,4-dichlorophenylcarbonimide)  MAC_{wz} 0.3 (v), Class II 233	Inhalation: LC_{12} mouse 1442 h, LC_{33} rat 140 4 h; Lim_{ac} mouse 40 2 h (1), Lim_{ac} rabbit 0.4—1 40 min (7); Lim_{ir} man 0.66 Has irritant properties Detection: photometry; detection limit 1 μg in analytical volume
N,3,4-Dichlorophenyl-N-methoxyurea (linuron)  MAC_{wz} 1 (a), Class II 21	Intragastric: LD_{50} mouse 2400±129, LD_{50} rat 2175±231 On skin: LD rat >2000 Inhalation: LC rat 48 4 h; Lim_{ac} rat 29 (27, 38) 4 h
Dichlorophenyltrichlorosilane $Cl_2C_6H_3Si\text{-}Cl_3$ MAC_{wz} 1 (v), Class II 202, 468	Intragastric: LD mouse 100 Subcutaneous: LD_{100} mouse 100 Intraabdominal: LD_{100} mouse 100, LD_{100} rat 100 Inhalation: LC mouse 80—100 2 h, LC mouse <30—40 2 h Detection: photometry; detection limit 0.1 μg in analytical volume
1,3-Dichloropropylene $CHCl=CH—CH_2Cl$ MAC_{wz} 5 (v), Class III MAC_w 0.4 317	Inhalation: LC_{50} mouse 4650 (3220—6080) 2 h; Lim_{ac} rabbit 450±45 40 min (2); Lim_{ir} rabbit 1000 40 min (7); Lim_{olf} man 8 Inhibits central nervous system; has irritant action on mucous membranes of upper and lower respiratory tract
2,3-Dichloropropylene $CH_2=CCl—CH_2Cl$ MAC_{wz} 3 (v), Class III 86	Inhalation: LC_{50} mouse 3100±500 2 h; Lim_{ac} rabbit 300 40 min (2), Lim_{ac} rabbit 100 40 min (7) Inhibits central nervous system; has irritant action on mucous membrane of upper and lower respiratory tract
2,5-Dichlorostyrene (2,5-dichlorovinylbenzene)  MAC_{wz} 50 (v), Class IV 347, 468	Inhalation: Lim_{ac} rabbit 1250—2500 40 min (2); Lim_{ir} rabbit 310—620, Lim_{ir} man 500 Has irritant properties Detection: photometry; detection limit 0.1 μg in analytical volume

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
1,2-Dichlorotetrafluoroethane (freon 114) $CClF_2$ $CClF_2$ MAC_{wz} 3000 (v), Class IV 169	Inhalation: LC mouse and rat 3 000 000 2—4 h; Lim_{ac} mouse and rat 90 000 (1, 7, 8) Narcotic Detection: thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume
Dicobalt octacarbonyl $[Co(CO)_4]_2$ MAC_{wz} 0.01 (v+a), Class I 423, 465	Inhalation: LC_{50} mouse 26.9±5.3 2 h, LC_{16} rat 15.2 2 h, LC_{33} rat 19.7 4 h; Lim_{ac} rat 8.1 30 min (27) Detection: photometry; detection limit 0.5 μg in analytical volume
Dicresyl N-methylcarbamate (dicresyl)  MAC_{wz} 0.5 (v+a), Class II 52	Intragastric: LD_{50} mouse 271 (221—320), LD_{50} rat 471 (289—661) On skin: LD_{50} rat 896 (568—1223) Inhalation: LC rat and cat 45 6 h; Lim_{ac} rat and cat 11 6 h (24) Detection: light absorption; detection limit 5 μg per 1 ml of solution
Dicyclopentadiene+  MAC_{wz} 1 (v), Class II 381, 462	Inhalation: LC_{50} mouse 740 (690—790) 2 h, LC_{50} rat 1520 (1370—1690) 2 h; Lim_{ac} rat 100—200 2 h (1, 11); Lim_{ir} man 1—7.5; Lim_{ir} man 16—23 Damages central nervous system Detection: colorimetry; detection limit 5 μg in analytical volume
Didodecyl phthalate $C_6H_4(COOC_{12}H_{25})_2$ $TSEL_{wz}$ 5	Intragastric: LD mouse and rat 1500—15 000
Diethanolamine $(CH_2CH_2OH)_2NH$ MAC_w 0.8 78, 408	Intragastric: LD_{50} mouse 3300; LD_{50} rat 3460; LD_{50} guinea pig 2200; LD_{50} rabbit 2200 Subcutaneous: LD_{50} rat 2200 Intramuscular: LD_{50} rat 1500 Intraabdominal: LD_{50} rat 120 Has cauterizing action Detection: colorimetry
Diethanoldiaminoisopropanol $CH_2NHCH_2CH_2OH$ CHOH $CH_2NHCH_2CH_2OH$ 404	Intragastric: LD_{50} rat 7200 Intravenous: LD_{50} rat 830

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Dicumylmethane+ $(CH_3)_2CHC_6H_4CH_2C_6H_4CH(CH_3)_2$ MAC_{wz} 5 (a), Class III 132, 537	Intragastric: LD_{30} mouse 15 000; LD rat <15 000 Inhalation: LC_{40} mouse 122 2 h; **LC rat** <122 2 h; Lim_{ac} rat 80—90 2 h (7), Lim_{ac} mouse 38—40 1 h (15)
Dicyclohexylamine nitrite (NDA inhibitor)  MAC_{wz} 0.5 (v), Class II MAC_{hm} 0.02 451, 468	Intragastric: LD_{50} mouse 80 (63—99), LD_{50} rat 325 (233—437); LD cat 50 On skin: LD rat 2000 Inhalation: LC rat and mouse <30—90 4 h; Lim_{ac} rat 30 4 h (16) Methemoglobin former; affects nervous system Detection: photometry; detection limit 1 μg in analytical volume
Dicyclohexylamine, oil-soluble salt (MSDA-11)  $HCOOHC_nH_{2n+1}$ MAC_{wz} 1 (a), Class II MAC_{hw} 0.008 MAC_w 0.01 306, 469	Intragastric: LD_{50} rat 940, LD_{50} mouse 980 On skin: LD_{50} rat 1367 (1035—1805) Inhalation: LC_{50} rat 1480 (897—2440) 4 h; Lim_{ac} rat 17 4 h (22, 31) Detection: colorimetry; detection limit 10 μg in analytical volume
Diethylamine $(C_2H_5)NH$ MAC_{wz} 30 (v), Class IV MAC_{hw} 0.05 MAC_{ad} 0.05 MAC_w 2 136, 464, 513	Intragastric: LD_{50} mouse 648 (554—758) Inhalation: LC_{45} mouse 5000 2 h; Lim_{ac} rat 300 1 h (4) Affects nervous system; has irritant properties
β-Diethylaminoethyl mercaptan $(C_2H_5)_2NC_2H_4SH$ MAC_{wz} 1 (v), Class II MAC_{hw} 0.6 MAC_{ad} 0.6 312, 331	Intragastric: LD_{50} mouse 231 (215—248) Inhalation: LC_{50} mouse 42 500 (27 400—65 900) 2 h; Lim_{ac} rat 20 4 h (1) Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
β-Diethylaminoethyl methacrylate $CH_2=C(CH_3)-COOCH_2CH_2N(C_2H_5)_2$ MAC_{wz} 800 (v), Class IV 334, 392	Intragastric: LD_{50} rat 4696 (4249—5142) Inhalation: LC_{50} mouse 12 100 (9640—14 560) 2 h, LC_{50} rat 11 000 (7433—16 280) 4 h; Lim_{ir} man 600 2 min; Lim_{olf} 100 Detection: colorimetry; detection limit 5 μg in analytical volume
Diethylbenzene $(C_2H_5)_2C_6H_4$ MAC_{wz} 10 (v), Class III $TSEL_{hw}$ 0.005 252, 312	Inhalation: NC mouse 3000—4000 2 h; Lim_{ac} rat 50 4 h (1) Detection: colorimetry; detection limit 10 mg/m³
0,0-Diethyl-S-(6-chloro-2-oxobenzoxazolinyl-3-methyl)dithiophosphate (fozalon)  MAC_{wz} 0.5 (v), Class II MAC_w 0.001 MAC_{hw} 0.01 MAC_{ad} 0.01 252, 467	Intragastric: LD_{50} mouse 88 (82—95), LD_{50} rat 108 (90—125), LD_{50} cat 112; Lim_{ac} rat 5 (24) On skin: LD rat <2000, LD rabbit <1000; Lim_{ac} rat 79 (24) Inhalation: LC rat and cat <280 4 h; Lim_{ac} rat 89 4 h (24), Lim_{ac} cat 11 4 h (24) Detection: chromatography; detection limit 5 μg in analytical volume
Diethyl chlorothiophosphate  MAC_{wz} 1 (v), Class II 286	Intragastric: LD_{50} mouse 800±47 On skin: LD rabbit <880 Inhalation: LC_{50} mouse 725±37 2 h; LC rat <260 2 h; Lim_{ac} mouse 210 2 h (1)
Diethylene glycol bis(chloroacrylate) $CH_2C(Cl)COOCH_2CH_2OCH_2OCH_2O(Cl)=CH_2$ 398	Intragastric: LD_{50} mouse 105 (95—115), LD_{50} rat 130 (106—158)
Diethylene glycol diacrylate $CH_2=CHCOOCH_2CH_2OCH_2CH_2OOCCH=CH_2$ 398	Intragastric: LD_{50} rat 400 (276—580)
Diethylene glycol divinyl ether $(CH_2=CHOCH_2CH_2)_2$ $TSEL_{wz}$ 30 160, 346	Intragastric: LD_{50} mouse 2570±129, LD_{50} rat 6390±198

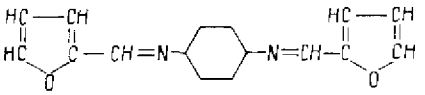
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Diethylene glycol vinyl ether $CH_2{=}CH(OCH_2CH_2)_2OH$ $TSEL_{wz}$ 30 160, 346	Intragastric: LD_{50} mouse 4450±129, LD_{50} rat 4930±193
Diethyl ethanolamine $(C_2H_5)_2NC_2H_4OH$ MAC_{wz} 5 (v), Class III 234	Inhalation: LC_{50} mouse 5000 2h; LC rat 4500 4 h; Lim_{ac} mouse 1100 2 h (1); Lim_{clr} man 4 Irritates skin Detection: photometry; detection limit 10 μg in analytical volume
Diethyl ether (ethyl ether) $C_2H_5\text{-}O\text{-}C_2H_5$ MAC_{wz} 300 (v), Class IV MAC_w 0.3 244, 312	Inhalation: Lim_{ac} rabbit 5000—20 000 40 min (2) Narcotic Detection: colorimetry; detection limit 50 mg/m³
0,0-Diethyl-O-ethylmercaptoethyl-thiophosphate + 0,0-diethyl-S-ethyl-mercaptoethylphosphate (mercapto-phos)+ MAC_{wz} 0,02 (v+a), Class I MAC_w 0.01 139, 464	Intragastric: LD_{50} mouse <8, LD_{50} rat 4 On skin: LD_{100} rabbit 20; Lim_{ac} rabbit 2—5 (24) Inhalation LC rat and cat 15 4 h Detection: photometry; detection limit 0.5 μg in analytical volume
Di(2-ethylhexyl)phenyl phosphate+	Intragastric: LD_{50} mouse 9333±354; LD rat <15 000 Intraabdominal: LD_{50} mouse 473±52, LD_{50} rat 1178±117 On skin: LD rat, rabbit and guinea pig <1870 Inhalation: LC mouse 20 2 h, LC rat 18 4 h

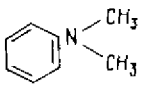


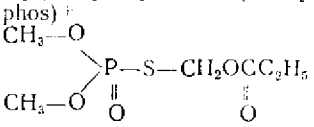
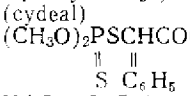
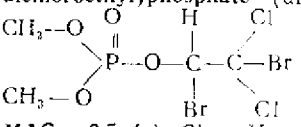
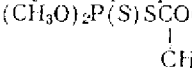
MAC_{wz} 1 (v), Class II
141

Diethylmercury+ $Hg(C_2H_5)_2$ MAC_{wz} 0.005 (v), Class I MAC_w 0.0001 349, 463, 549	Intragastric: LD_{50} mouse 44, LD_{50} rat 51 Inhalation: LC_{50} mouse 91±15 2 h; Lim_{ac} mouse 1 2 h (1); Lim_{clr} man 2 Affects central nervous system Detection: colorimetry; detection limit 0.08 μg in analytical volume
0,0-Diethyl-O-p-nitrophenyl thio-phosphate (thiophos)+	Intragastric: LD_{100} mouse 18, LD_{100} cat 13

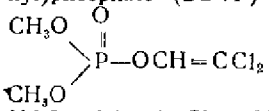
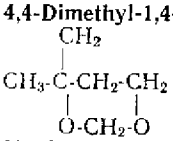
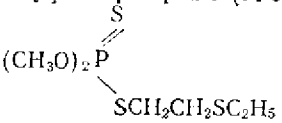
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
$(C_2H_5O)_2POC_6H_4NO_2$, n MAC$_{wz}$ 0.05 (a), Class I MAC$_w$ 0.003 430, 464	Inhalation: LC rat and mouse 15—20; Lim$_{ac}$ rat 10 1 h (4), Lim$_{ac}$ cat 10 4 h (4) Detection: colorimetry; detection limit 2 μg in analytical volume Intragastric: LD rat <8400
Diethyl perfluoroadipate CF_2-CF_2-C-OC_2H_5 CF_2-CF_2-C-OC_2H_5 MAC$_{wz}$ 0.1 (v), Class I 167, 461	Inhalation: LC mouse <1000 2 h, LC rat <1000 4 h; Lim$_{ac}$ rat 30—50 4 h (1, 7, 8) Detection: photometry; detection limit 1.4 μg in analytical volume
Diethyl perfluoroglutarate $C_3F_6(COOC_2H_5)_2$ MAC$_{wz}$ 0.1 (v), Class I 461	Intragastric: LD$_{50}$ rat 5000, LD$_{50}$ mouse 4200 (2950—5960) Inhalation: LC mouse 10 000 2 h; LC$_{50}$ rat 1300 4 h; Lim$_{ac}$ mouse 1250 2 h (4) Detection: photometry; detection limit 1.4 μg in analytical volume
1,1-Difluoro-1-chloroethane (freon 142) CF_2ClCH_3 MAC$_{wz}$ 300 (v), Class IV 169	Inhalation: LC$_{50}$ mouse 1 738 000 (1 540 000—2 004 000) 2 h, LC$_{50}$ rat 2 050 400 (1 801 000—2 159 000) 4 h; Lim$_{ac}$ mouse and rat 70 000 2—4 h (1, 4) Narcotic Detection: thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume
Difluorochloromethane (freon 22) $CHClF_2$ MAC$_{wz}$ 3000 (v), Class IV MAC$_{hw}$ 10 MAC$_w$ 100 MAC$_{sol}$ 10, Class IV 169	Inhalation: LC$_{50}$ mouse 1 000 000 (924 000—1 082 000) 2 h; Lim$_{ac}$ rabbit 54 000 40 min (2) Detection: thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume
Difluorodichloroethylene CF_2CCl_2 MAC$_{wz}$ 1 (v), Class II 460	Inhalation: LC$_{50}$ mouse 610 2 h, LC$_{50}$ rat 580 (470—720) 4 h; Lim$_{ac}$ rat 30 4 h (1, 7, 15) Narcotic Detection: liquid gas chromatography; detection limit 10^{-6} mg. Thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume Intragastric: LD$_{50}$ rat 3600
Difluoro-2,2-dichloroethylmethyl ether (inhalan) $CHC_2F_2OCH_3$ MAC$_{wz}$ 200 (v), Class IV 169	Inhalation: LC mouse 39 800 2 h; LC$_{50}$ rat 33 500 4 h; Lim$_{ac}$ rat 1800 4 h (1)

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Difluoroethane (freon 152) $C_2H_4F_2$ MAC_{wz} 3000 (v), Class IV 144, 169	Inhalation: LC_{50} mouse 977 200 (896 000—1 065 000) 2 h Narcotic Detection: thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume
Difluorodichloromethane (freon 12) CCl_2F_2 MAC_{wz} 3000 (v), Class IV MAC_{hw} 100 MAC_w 10 MAC_{ad} 10, Class IV 144, 169	Inhalation: LC_{50} mouse 3 650 000 2 h; Lim_{ac} rat 170 000—210 000 4 h (7, 15), Lim_{ac} rabbit 120 000 40 min (2) Narcotic Detection: thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume
1,2-Difluorotetrachloroethane (freon 112) $CFCl_2Cl_2F$ MAC_{wz} 1000 (v), Class IV 144, 460	Intragastric: LD_{50} mouse 800 Inhalation: LC_{50} mouse 123 000 (105 120—143 910) 2 h; Lim_{ac} rabbit 30 000 40 min (2) Narcotic Detection: thermal degradation in quartz tube; detection limit 1.4 μg in analytical volume
N,N-Difurfural-n-phenylenediamine  MAC_{wz} 2 (v+a), Class II 469	Intragastric: LD_{50} mouse 400 (380—410), LD_{50} rat 1220 (1180—1260) Inhalation: LC rat 70 4 h; Lim_{ac} rat 53 4 h (1, 8) Detection: colorimetry; detection limit 0.5 μg in analytical volume
Diisopropylamine $(iso\text{-}C_3H_7)_2NH$ MAC_{wz} 5 (v), Class II MAC_w 0.5 45, 127	Intragastric: LD_{50} rat 500 Inhalation: LC_{50} mouse 4200 2 h, LC_{50} rat 4800 2 h; Lim_{ir} rat 10 4 h (7) Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Diisopropylbenzene (mixture of m- and p-isomers) $C_6H_4(C_3H_7\text{-}iso)_2$ MAC_{wz} 50 (v), Class IV MAC_w 0.05 309, 464	Intragastric: LD_{50} mouse 3100±310 (m-isomer), LD_{50} mouse 3400±307 (p-isomer), LD_{50} rat 7400±660 (m-isomer) Intraabdominal: LD_{50} mouse 1650±160 (m-isomer)

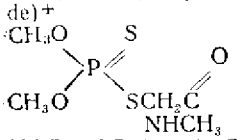
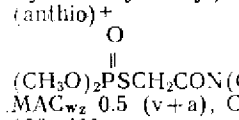
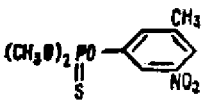
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
	Inhalation: LC mouse and rat 5300 2—4 h; Lim_{ac} mouse and rat 800—1600 40 min (1, 2); Lim_{olf} man 25—50 Narcotic Detection: colorimetry; detection limit 10 μg in analytical volume
m-Diisopropylbenzene dihydroperoxide $C_6H_4(CH_3)_4(COOH)_2$ 130	Intragastric: LD_{50} mouse 700 (466—1050), LD_{50} rat 1500 (1000—2250)
Diisopropyl ether C_3H_7-O-C_3H_7 $TSEL_{wz}$ 100 289, 310	Intragastric: LD_{50} mouse 3600±360, LD_{50} rat 5880±680 Inhalation: NC_{50} mouse 50 000±2470 2 h, NC_{50} rat 91 700±3060, 4 h; LC_{50} mouse 130 800±8500 2 h, LC_{50} rat 161 700±±10 300 4 h; LC_{50} rabbit 120 600±12 400 4 h; Lim_{ac} rat 14 000 4 h (1, 12); Lim_{olf} man 120; Lim_{ir} man 1000 Detection: colorimetry; detection limit 7.5 μg per 4 ml of solution
O,O-Dimethyl-S-2(acetylamino)-ethyldithiophosphate (amiphos)+ S ‖ P $(CH_3O)_2PSCH_2CH_2NHCOCH_3$ MAC_{wz} 0.5 (v—a), Class II 209, 531	Intragastric: LD_{50} mouse 146±18, LD_{50} rat 475±56, LD_{50} cat 410±56; Lim_{ac} rat 40 (24) On skin: LD_{50} rat 375 (354—396) Inhalation: LC rat 40 4 h; Lim_{ac} rat 10 4 h (24) Detection: colorimetry
Dimethylamine $(CH_3)_2NH$ MAC_{wz} 0.005 MAC_{hw} 0.005 MAC_{ad} 0.005 MAC_w 0.1 81, 183, 462	Intragastric: LD_{50} mouse 316, LD_{50} rat 698, LD_{50} guinea pig 240, LD_{50} rabbit 240 Inhalation: LC_{50} mouse 70 2 h; Lim_{ac} mouse 5 2 h (12), Lim_{ac} rat 5 4 h (4) Has irritant properties Detection: colorimetry; detection limit 2 μg in analytical volume
Dimethylaminoethyl methacrylate $CH_2=C(CH_3)COOCH_2CH_2N(CH_3)_2$ $TSEL_{wz}$ 100 398	Intragastric: LD_{50} rat 1751 (1308—2194) Inhalation: LC_{50} mouse 1800 (1600—2010) 2 h, LC_{50} rat 620 (590—650) 4 h Detection: colorimetry; detection limit 10 μg in analytical volume
N-N-Dimethylaniline  MAC_{wz} 0.2 (v), Class II MAC_{hw} 0.0055 MAC_{ad} 0.0055 415	Subcutaneous: LD rat 100 Inhalation: LC_{100} rat 4420; Lim_{ac} rat 250 4 h (16); Lim_{ir} rabbit 10 15 min (7) Methemoglobin former

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Dimethylbenzylamine $C_6H_5CH_2N(CH_3)_2$ MAC_{wz} 5 (v), Class III 439, 467	Inhalation: LC_{50} mouse 1800 2 h Has irritant properties Detection: chromatography; detection limit 0.5 μg in analytical volume
O,O-Dimethyl-S-(carboethoxymethyl)thiophosphate (methylacetophos)+  MAC_{wz} 1 (v+a), Class II MAC_w 0.03 464, 535	Intragastric: LD_{50} mouse 1020 (568—1472), LD_{50} mouse 390 (293—487)[1], LD_{50} rat 241 (176—305)[1] On skin: LD rat <1000; LD_{50} rat 220 (119—321)[1] Inhalation: LC cat <30 4 h, LC rat <20 4 h; LC_{50} rat 30 4 h; Lim_{ac} cat 10 4 h (24) Affects nervous system Detection: colorimetry; detection limit 0.5 μg in analytical volume
O,O-Dimethyl-S-(1-carboethoxy-1-phenylmethyl)dithiophosphate (cydeal)  MAC_{wz} 0.15 (v+a), Class II 556	Intragastric: LD_{50} mouse 138, LD_{50} rat 172 On skin: LD_{50} rat 1850 Inhalation: LC_{50} rat 59 4 h; Lim_{ac} rat 1.5 4 h (24)
Dimethylchlorothiophosphate $(CH_3O)_2PSCl$ MAC_{wz} 0.5 (v), Class II 464	Intragastric: LD_{50} mouse 1800 On skin: LD rabbit <1500 Inhalation: LC_{50} rat 340 4 h, LC_{50} mouse 320 2 h; Lim_{ac} mouse 110 2 h (1) Detection: photometry; detection limit 0.1 μg in analytical volume
O,O-Dimethyl-O(1,2-dibromo-2,2-dichloroethyl)phosphate (dibrom)+  MAC_{wz} 0.5 (v), Class II 301, 469	Intragastric: LD_{50} mouse 440±17, LD_{50} rat 465±16 Intraabdominal: LD_{50} mouse 84±6.5, LD_{50} rat 104±3 On skin: LD_{50} rat 1234±70, LD_{50} rabbit 1200±63 Inhalation: Lim_{ac} rat 3.4 4 h (1, 7, 24); Lim_{orl} man 0.2—0.4 Detection: colorimetry; detection limit 10 μg in analytical volume
O,O-Dimethyl-S-1,2-dicarboethoxyethyldithiophosphate (carbophos)+ 	Intragastric: LD_{50} mouse 200, LD_{50} mouse 190[1], LD_{50} rat 420, LD_{50} rat 290[1] On skin: LD rabbit 5000 Inhalation: LC rat 1.2 4 h, LC cat 10—12 4 h; Lim_{ac} cat 1.3—2 4 h (24) Detection: photometry; detection limit 0.5 μg in analytical volume

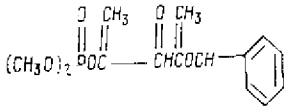
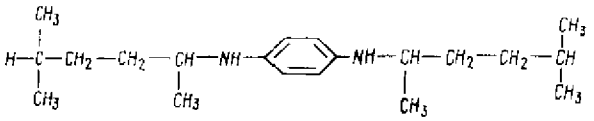
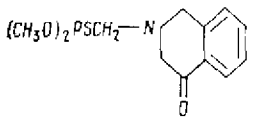
[1] Technical — grade product

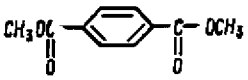
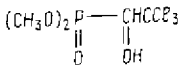
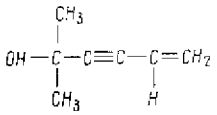
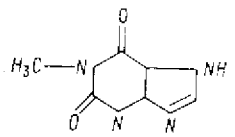
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 0.5 (v+a), Class II MAC_{hw} 0.015 MAC_w 0.05 139, 464	
O,O-Dimethyl-O(2,2-dichlorovinyl)phosphate (DDVP)+  MAC_{wz} 0.2 (v), Class II MAC_w 1 369, 463	Intragastric: LD_{50} mouse 86 (73—99), LD_{50} rat 65 (50—80), LD_{50} rabbit 22 (9—37) On skin: LD_{50} rat 113 (99—127), LD_{50} rabbit 205 (143—266); Lim_{ac} rabbit 10 (24) Inhalation: LC_{50} mouse 13 4 h, LC_{50} rat 15 4 h; Lim_{ac} rat 1 4 h (24) Detection: photometry; detection limit 5 μg in analytical volume
4,4-Dimethyl-1,4-dioxane  MAC_{wz} 10 (v), Class III MAC_w 0.005 MAC_{hw} 0.01 159	Intragastric: LD_{100} mouse 3000; LD mouse <800 Has irritant properties; affects liver and kidneys
N-N-Dimethyldiphenylacetamide (diamide, diphenamide) $C_{16}H_{17}NO$ $TSEL_w$ 6 288	Intragastric: LD_{50} rat 1250
Dimethyl disulfide $CH_3S\text{-}SCH_3$ $TSEL_{wz}$ 1.5 MAC_w 0.04 375	Intragastric: LD_{50} mouse 138 (108—177) Inhalation: LC_{50} 15.8 (12.2—20.6) 2 h
Dimethylethanolamine $(CH_3)_2NC_2H_4OH$ MAC_{wz} 5 (v), Class III 234, 312	Inhalation: LC_{50} mouse 3250±280 2 h; LC rat 4500 4 h; Lim_{ac} mouse 1200 2 h (1); Lim_{olf} man 1.3 Detection: colorimetry; detection limit 5 μg in analytical volume
O,O-Dimethyl-S-[2-(ethylmercapto)-ethyl]dithiophosphate (M-81)+ 	Inhalation: LC_{50} 37[1], LD_{50} rat 53[1]; LD_{100} cat 20[1] On skin: LD_{100} rabbit 100[1]; Lim_{ac} rabbit 10 (24) Inhalation: LC rat 20—25[1] 4 h; Lim_{ac} cat 1—3[1] 4 h (24) Detection: colorimetry; detection limit 0.5 μg in analytical volume

[1] Technical — grade product

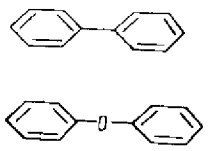
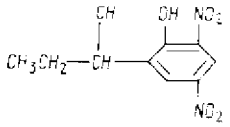
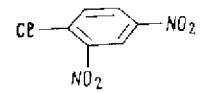
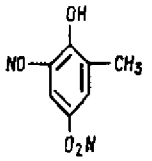
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 0.1 (v+a), Class I MAC_{hw} 0.001 MAC_{ad} 0.001 MAC_{w} 0.001 138, 460	
Dimethyl formamide $HCON(CH_3)_2$ MAC_{wz} 10 (v), Class II MAC_{hw} 0.03 MAC_{ad} 0.03 MAC_{w} 10 436, 464	Intragastric: LD_{50} mouse 4200±800, LD_{50} rat 5800±1200 Inhalation: LC_{50} mouse 10 000±1430 2 h; Lim_{ac} rat 1200 2 h (4) Exerts local irritant and systemic toxic actions Detection: colorimetry; detection limit 5 μg in analytical volume
O,O-Dimethyl-S-methylcarbamidomethyldithiophosphate (phosphamide)+  MAC_{wz} 0.5 (a+v), Class II MAC_{w} 0.03 MAC_{hw} 0.003 MAC_{ad} 0.003 45, 301	Intragastric: LD_{50} mouse 135 (112—158), LD_{50} rat 230 (206—254), LD_{50} cat 100[1] On skin: LD_{50} rat 3320[1] Inhalation: LC cat <80 4 h; Lim_{ac} cat 5 4 h (24) Detection: colorimetry; detection limit 25 μg in analytical volume
O,O-Dimethyl-S-(N-methyl-N-formylcarbamylmethyl)dithiophosphate (anthio)+  MAC_{wz} 0.5 (v+a), Class II 126, 460	Intragastric: LD_{50} mouse 90 (85—95), LD_{50} rat 360, LD_{50} guinea pig 150 On skin: LD_{50} mouse 400 (344—464) Inhalation: LC_{50} mouse 27 (21—35) 2 h; Lim_{ac} mouse 2.5 2 h (1), Lim_{ac} rat 5 4 h (1, 24); Lim_{oir} man 10 Detection: colorimetry; detection limit 0.5 μg in analytical volume
O,O-Dimethyl-(3-methyl-4-nitrophenyl)thiophosphate (methylnitrophos)+  MAC_{wz} 0.1 (v+a), Class I MAC_{w} 0.25 261, 466	Intragastric: LD_{50} mouse 715 (521—898), LD_{50} rat 516 (437—605) On skin: LD_{50} rat 1250 (791—1506) Inhalation: LC cat <70 4 h Detection: photometry; detection limit 6 μg per 5 ml of solution

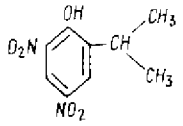
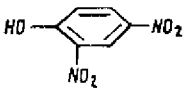
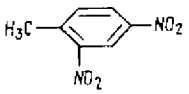
[1] Technical — grade product

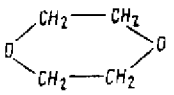
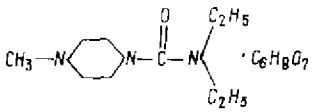
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
O,O-Dimethyl-O-nitrophenylthiophosphate (metaphos)* $(CH_3O)_2POC_6H_4NO_2$-n ‖ S MAC_{wz} 0.1 (v+a), Class I MAC_{hw} 0.008 MAC_w 0.02 42, 464	Intragastric: LD_{50} mouse 18, LD_{50} rat 13 Inhalation: LC cat <24 4 h; Lim_{ac} cat 3.6 4 h (24) Detection: colorimetry; detection limit 2 μg in analytical volume
O,O-Dimethyl-O-1-methyl-2-phenylcarboethoxy)vinyl phosphate ciodrin  $TSEL_{wz}$ 0.05 530	Intragastric: LD_{50} mouse 39±10, LD_{50} rat 33±3, LD_{50} cat 802±9; Lim_{ac} rat 05 (24)
N,N-Di-(1,4-dimethylpentyl)-p-phenylenediamine (santoflex)  MAC_{wz} 5 (v+a), Class III 447, 465	Intragastric: LD_{50} rat 750±200, LD_{50} mouse 1700±500; Lim_{ac} rat 250 (1, 11) Inhalation: LC rat <530 4 h; Lim_{ac} rat 400 4 h (1, 8, 11) Affects central nervous system Detection: colorimetry; detection limit 1 μg in analytical volume
Dimethylphenylcarbinol $C_6H_6C(CH_3)_2OH$ MAC_w 0.05 399	Intragastric: LD_{50} mouse 1950 (1690—2210); LD rat 2250 (1990—2510)
O,O-Dimethyl-S-(phthalimidomethyl)dithiophosphate (phthalophos)  MAC_{wz} 0.3 (v+a), Class II MAC_w 0.2 64, 460	Intragastric: LD_{50} mouse 167 (142—167), LD_{50} rat 92 (75—109) On skin: LD_{50} rat 1326 Inhalation: LC_{50} rat 54 (21—86) 4 h, LC_{50} cat 65 4 h; Lim_{ac} rat 6 4 h (24) Detection: colorimetry; detection limit 0.1 μg in analytical volume

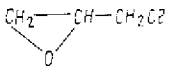
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Dimethyl sulfide+ CH_3-S-CH_3 MAC_{wz} 50 (v), Class IV MAC_{hm} 0.08 MAC_w 0.01 95, 167, 312	Intragastric: LD_{50} mouse 3700 (3140—4270), LD_{50} rat 3300 (2490—4070) Inhalation: LC_{50} mouse 43 000 (40 000—46 000) 2 h; NC_{50} mouse 4000 2 h; Lim_{ac} mouse 2000 2 h (15); Lim_{ir} man 104—110; Lim_{olf} 267 Detection: nephelometry; detection limit 0.002 mg in analytical volume
Dimethyl terephthalate  MAC_{wz} 0.1 (v+a), Class I MAC_w 1.5 289, 362	Intragastric: LD mouse >10 000 Inhalation: LC rat >1000—6000 2 h Has irritant properties; affects kidneys and liver Detection: colorimetry: detection limit 2.5 μg in analytical volume
0,0-Dimethyl-(2,2,2-trichloro-1-hydro-xyethyl)phosphate (chlorophos)+  MAC_{wz} 0.5 (v+a), Class II MAC_{hv} 0.04 MAC_{ad} 0.02 MAC_w 0.05 460, 491	Intragastric: LD_{50} mouse 730 (340—1120), LD_{50} rat 850 (579—1125), LD_{50} cat 97 (68—126)[1] On skin: LD_{50} rabbit 1500[1] Inhalation: LC rat <6—13 4 h; Lim_{ac} rat and cat 2 (24) Affects nervous system Detection: colorimetry; detection limit 5 μg in analytical volume
Dimethylvinylethynylcarbinol  MAC_{wz} 0.05 (v), Class I 312	Intragastric: LD_{50} mouse 590 (450—760), LD_{50} rat 600, LD_{50} guinea pig 600, LD_{50} rabbit 800 Inhalation: LC_{50} mouse 30 2 h; Lim_{ac} rat 1.7 4 h (1) Detection: colorimetry; detection limit 6 mg/m^3
1,3-Dimethylxanthine (theophylline)  MAC_{wz} 0.5 (a), Class II 287	Intragastric: LD_{50} mouse 252±15, LD_{50} rat 244±13 Inhalation: LC rat <36 4 h; Lim_{ac} rat 17 4 h (1) Affects central nervous system

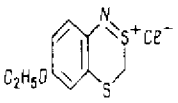
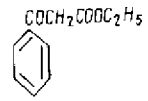
[1] Technical — grade product

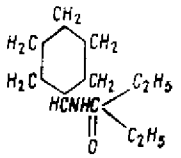
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
3,7-Dimethyl xanthine (theobromine) $C_7H_8N_4O_2$ MAC_{wz} 1 (a), Class 287	Intragastric: LD_{50} mouse 876±175, LD_{50} rat 1265±178 Inhalation: LC rat <120 4 h; Lim_{ac} rat 60 4 h (1)
Dinil (mixture of 25% diphenyl and 75% diphenyloxide  MAC_{wz} 10 (v+a), Class III MAC_{hw} 0.01 MAC_{ad} 0.01 37, 254, 467	Intragastric: LD_{50} mouse 3210 (2623—3884), LD_{50} rat 5480 (4567—6576), LD_{50} guinea pig 3000, LD_{50} rabbit 4200 Inhalation: LC mouse <1000 2 h; Lim_{ir} rabbit 7.9 15 min (7); Lim_{ac} rat 62 4 h (1, 11, 21); Lim_{ir} man 6.1±0.2 Detection: photometry; detection limit 0.1 μg in analytical volume
Dinitrobenzene (mixture of isomers) $C_6H_4(NO_2)_2$ $TSEL_{wz}$ 0.01 MAC_w 0.5 103, 464	Inhalation: LC cat <100 7.5 h Narcotic Detection: colorimetry; detection limit 1 μg in analytical volume
Dinitro-sec-butylphenol+  MAC_{wz} 0.05 (v+a), Class 1 49, 461	Intragastric: LD_{50} mouse 16 (8—24), LD_{50} rat 87 (64—110) On skin: LD_{75} rat 300; LD rabbit 500 Inhalation: LC cat 45 3 h Detection: colorimetry; detection limit 5 μg in analytical volume
Dinitrochlorobenzene+  MAC_{wz} 1 (v), Class II $TSEL_{wz}$ 0.002 68, 289	Intragastric: LD_{50} rat 350 (**ortho** isomer), LD_{50} rat 300 (metaisomer), LD_{50} rat 550 (**para** isomer) Methemoglobin former Has irritant properties Detection: colorimetry; detection limit 0.2 μg per 0.1 ml of solution
Dinitro-o-cresol+ 	Intragastric: LD_{50} mouse 47, LD_{50} rat 85, LD_{50} cat 50 On skin: LD_{50} rabbit 1000

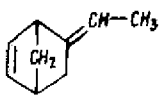
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 0.05 (v+a), Class I $TSEL_{hm}$ 0.002 50, 459	Inhalation: LC_{30} cat 100 4 h Inhibits phosphorylation Detection: colorimetry; detection limit 3 μg in analytical volume
2,4-Dinitro-p-hydroxydiphenylamine $C_6H_5N_3H_2O_5C_6H_5$ 528	Intragastric: LD_{50} mouse 2500 (2610—3800)
4,6-Dinitro-2-isopropylphenol+  MAC_{wz} 0.05 (v+a), Class I $TSEL_{hw}$ 0.002 50, 459	Intragasiric: LD_{50} mouse 45 (37—52), LD_{50} rat 63 (43—83), LD_{66} cat 30 On skin: LD_{60} rabbit 100, LD_{80} rat 300 Inhalation: LC_{33} cat 325 4 h Detection: colorimetry; detection limit 5 μg in analytical volume
2,4-Dinitrophenol+  MAC_{wz} 0.05 (v+a), Class I MAC_w 0.03 $TSEL_{hw}$ 0.004 319, 461	Intragastric: LD_{50} mouse 47 (40—53), LD_{50} rat 32 (25—39), LD_{50} rabbit 30, LD_{50} guinea pig 81, LD_{50} cat 75 Inhalation: LC dog 300—400 30—60 min, LC cat <10 4 h Inhibits phosphorylation Detection: colorimetry; detection limit 5 μg in analytical volume
Dinitrothiocyanobenzene+ $C_6H_3(NO_2)_2(NCS)$ MAC_{wz} 2 (a), Class II MAC_w 0.5 46, 462	Intragastric: LD_{50} mouse 3570±143, LD_{50} guinea pig 1650±45 Detection: colorimetry; detection limit 1 μg in analytical volume
Dinitrotoluene+  MAC_{wz} 1 (v+a), Class II MAC_w 0.5 $TSEL_{hw}$ 0.004 107, 464	Intragastric: LD_{100} mouse 1000; LD mouse <600 Detection: colorimetry; detection limit 5 μg in analytical volume
Dioctyl sebacate $C_{26}H_{50}O_4$ MAC_{wz} 10 (v+a), Class III 54	Intragastric: LD_{50} mouse 9500±98, LD_{50} rat 17 000±60 Inhalation: LC rat <800 4 h; Lim_{ac} rat 600 4 h (1); Lim_{ir} man 60 Detection: colorimetry; detection limit 10 μg in analytical volume

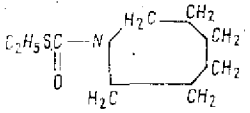
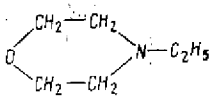
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
1,4-Dioxane (diethylene ether, diethylene dioxide)  MAC_{wz} 10 (v), Class III 197, 465	Inhalation: LC_{50} mouse 37 000 2 h; Lim_{ac} rat 10 2 h (4) Has irritant properties; affects liver and kidneys Detection: colorimetry; detection limit 5 μg in analytical volume
Diphenylamine (anilinobenzene) $C_6H_5NHC_6H_5$ MAC_w 0.05 528	Intragastric: LD_{50} mouse 3200 (2800—3800)
4,4-Diphenylmethane diisocyanate $CH_2(C_6H_4NCO)_2$ $TSEL_{wz}$ 1 479	Intragastric: LD_{50} mouse 2200±100 Inhalation: LC mouse and rat <17 2—4 h Detection: colorimetry
4,4-Diphenylmethane dimaleimide 148	Intragastric: LD mouse and rat <5000
Di-n-propylamine $(CH_3CH_2CH_2)_2NH$ MAC_{wz} 2 (v), Class II MAC_w 0.5 208, 312	Intragastric: LD_{50} rat 460 Inhalation: LC_{50} mouse 3070 2 h, LC_{50} rat 4400 4 h; Lim_{ac} rat (7, 30, 20) 4 h; Lim_{ir} man 2; Lim_{olf} 0.4
Di-thio-bis(N-phenylmaleimide) 148	Intragastric: LD rat and mouse <5000
Ditolyl methane $(CH_3C_6H_4)_2CH_2$ MAC_{wz} 1 (v+a), Class II 132, 463	Intragastric: LD_{50} mouse 500 Inhalation: LC_{50} mouse 12 3 h; Lim_{ac} mouse 4—6 1 h (15) Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Ditrazine citrate (1-methyl-4-diethylcarbamoylpiperazine citrate)  MAC_{wz} 5 (a), Class III 62	Intragastric: LD_{50} mouse 5080 (4490—5740), LD_{50} rat 12 000 (10 160—14 160) Intraabdominal: LD_{50} mouse 819 (700—958) Inhalation: LC_{50} rat 309±57 4 h; Lim_{ac} rat 41 4 h (1, 11)
Divinyl (1,3-butadiene) $CH_2=CH-CH=CH_2$ MAC_{wz} 100 (v), Class IV MAC_{hw} 3 MAC_{nd} 1 31, 45	Inhalation: LC_{50} mouse 259 000±12 000 Narcotic Has irritant properties Detection: burning in a special torch

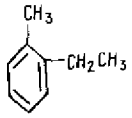
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
N-Dodecylguanidine acetate (melprex) $C_{12}H_{25}NH\text{-}C(=NH)\text{-}NH_3CH_3COO$ MAC_{wz} 0.1 (a), Class II 476	Intragastric: LD_{50} mouse 266, LD_{50} rat 1118, LD_{50} guinea pig 176, LD_{50} rabbit 535 On skin: LD rat <2000, LD guinea pig 2000 Inhalation: LC_{50} mouse 129 2 h; Lim_{ac} cat 4.8 4 h (4)
tert-Dodecyl mercaptan $CH_3(CH_2)_{11}SH$ MAC_{wz} 5 (v), Class III 391	Intragastric: LD rat <5000 Intraabdominal: LD_{50} rat 1833 ± 197 Inhalation: LC mouse <30—50 8 h; Lim_{ac} man 30—50 5 min (13); Lim_{ch} 0.1—0.5 Affects central nervous system
Epichlorohydrin (3-chloro-1,2-epoxypropane)  MAC_{wz} 1 (v), Class II MAC_w 0.01 MAC_{bw} 0.2 MAC_{ad} 0.2 92, 186, 460	Intragastric: LD_{50} mouse 194 ± 17, LD_{50} rat 141 ± 13, LD_{50} guinea pig 280, LD_{50} rabbit 345 ± 10 On skin: LD_{50} mouse 250 Inhalation: LC_{50} mouse 2500—400 2 h Has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
Ethanolamine (calamine) $(CH_2CH_2OH)NH_2$ MAC_{wz} 0.5 (v+a), Class II MAC_w 0.5 370, 408	Intragastric: LD_{50} mouse 1475, LD_{50} rat 2050, LD_{50} guinea pig 620, LD_{50} rabbit 1000 On skin: LD_{50} rat 1500 Intramuscular: LD_{50} rat 1750 Intravenous: LD_{50} rat 225 Intraabdominal: LD_{50} rat 67 Inhalation: LC rat and cat <2420 2 h Detection: colorimetry and thin-layer chromatography; detection limit 0.5 μg in analytical volume
Ethanolethylene diamine $OHCH_2CH_2NHCH_2CH_2NH_2$ MAC_{wz} 3 (v+a), Class III 408	Intragastric: LD_{50} mouse 3550, LD_{50} rat 3600, LD_{50} guinea pig 1500, LD_{50} rabbit 2000 On skin: LD_{50} rat 2250 Intramuscular: LD_{50} rat 2000 Intravenous: LD_{50} rat 417 Intraabdominal: LD_{50} rat 120 Inhalation: LC rat and cat <13 2 h

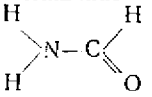
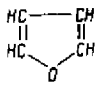
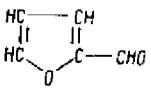
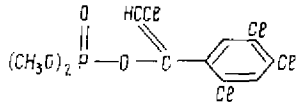
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
5-Ethoxyphenyl-1,2-thiazothionium chloride  MAC_{wz} 0.2 (a), Class II 280, 468	On skin: LD_{50} rat 1750 Inhalation: Lim_{ir} rabbit 400 15 min (7) Detection: photometry; detection limit 5 μg in analytical volume
β-Ethoxypropionitrile $C_2H_5OCH_2CH_2CN$ MAC_{wz} 50 (v), Class IV 340	Intragastric: LD_{50} rat 2865 (2330—3600) Inhalation: LC rat <8000 4 h; Lim_{ac} rat 470 4 h (1)
Ethyl acetate $CH_3COOCH_2CH_3$ MAC_{wz} 200 (v), Class IV MAC_{hw} 0.1 MAC_{ad} 0.1 207, 467	Inhalation: LC_{50} mouse 45 000 2 h; Lim_{ac} rat 500 1 h (4) Narcotic Detection: gas-liquid chromatography; detection limit 0.1 μg in analytical volume
Ethyl alcohol (ethanol) C_2H_5OH MAC_{wz} 1000 (v), Class IV MAC_{hw} 5 MAC_{ad} 5 353, 467	Intragastric: LD_{50} mouse 6500±387 Inhalation: Lim_{ac} rabbit 2000—10 000 4 min (2) Narcotic Detection: gas-liquid chromatography; detection limit 1 μg in analytical volume
Ethyl benzoyl acetate  406	Intragastric: LD_{50} mouse 6800 Inhalation: LC mouse <140 000 2 h
Ethyl bromide (bromoethane) C_2H_5Br MAC_{wz} 5 (v), Class III 142, 289	Intragastric: LD_{50} rat 1350 (1100—1660) Inhalation: LC_{50} mouse 36 000 (28 500—45 400) 2 h, LD_{50} rat 53 000 (48 100—58 300) 2 h; Lim_{ac} rat and rabbit 650—1800 40 min 4 h (1, 2) Narcotic; causes general damage to nervous system Detection: photometry; detection limit 1 μg in analytical volume
Ethyl butyl amine $C_2H_5 \cdot NH \cdot C_4H_9$ 469, 550	Intragastric: LD_{50} mouse 417 (315—514), LD_{50} rat 310 (273—347) Detection: colorimetry

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Ethyl chloride (chloroethane) CH_3-CH_2Cl MAC_{wz} 50 (v), Class IV 23, 289	Inhalation: LD_{50} mouse 145 700 (121 300—153 700) 2 h, LC_{50} rat 160 000 (150 000—169 000) 2 h; Lim_{ac} rat and cat 1200 4 h (4) Narcotic Detection: colorimetry; detection limit 1 μg in analytical volume
Ethylcyclohexylthiocarbamate (ronit)  MAC_{wz} I (v+a), Class II 338, 469	Intragastric: LD_{50} mouse 2285 (1999—2571), LD_{50} rat 2323 (1845—2800) On skin: LD rat and rabbit <3000 Inhalation: LC rat and cat <500; Lim_{ac} rat 70 4 h (39) Affects nervous system and parenchymatous organs Detection: thin-layer chromatography; detection limit 5—10 mg
Ethylene chlorohydrin+ CH_2-Cl-CH_2-OH MAC_{wz} 0.5 (v), Class II 181, 376, 461	Intragastric: LD_{50} mouse 91 (84—98), LD_{50} rat 71 (64—78) Subcutaneous: LD_{50} mouse 98, LD_{50} rat 82, LD_{50} guinea pig 75, LD_{50} rabbit 100 On skin: LD_{50} rabbit 700, LD_{50} rat 84 (78—90), LD_{50} mouse 18—20 Inhalation: LC_{50} mouse 740 2 h, LC_{50} rat 510 4 h, LC_{50} guinea pig 870 4 h; Lim_{ac} rat 30 4 h (1), Lim_{ac} rabbit 20 40 min (2) Affects nervous system, heart, liver and kidneys; has irritant properties Detection: colorimetry; detection limit 0.5 μg in analytical volume
Ethylene cyanohydrin (hydroacrylonitrile) $HOCH_2CH_2CN$ MAC_{wz} 10 (v+a), Class III 16	On skin: LD rabbit <60 Inhalation: LC_{33} mouse 300 2 h, LC rat <332 4 h; Lim_{ac} mouse 98 40 min (1)
Ethylene diacetate $CH_3CH(OCOCH_3)_2$ MAC_{wz} 30 (v), Class IV 194	Inhalation: LC mouse and rat <3600 2 h, LC cat <3600 4 h; Lim_{ac} rabbit 860 40 min (2); Lim_{ir} cat 57 40 min (28), Lim_{ir} man 50 Has irritant properties
Ethylenediamine (1,2-diaminoethane) $(NH_2)_2C_2H_4$ MAC_{wz} 2 (v), Class III 462, 482	Intragastric: LD_{50} rat 500 Subcutaneous: LD_{50} rat 300 Inhalation: LC_{50} mouse 300 Has irritant properties Detection: colorimetry; detection limit 10 μg in analytical volume

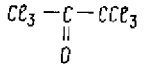
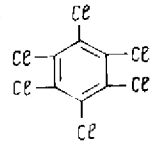
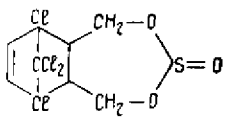
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Ethylene glycol demethacrylate $CH_2=C(CH_3)COOCH_2CH_2OOCC(CH_3)=CH_2$ 398	Intragastric: LD_{50} mouse 8600 (6935—10 664), LD_{50} rat 10 000 (7042—14 200)
Ethylene glycol isopropyl ether (isopropyl cellosolve) $(CH_3)_2CHOC_2H_4OH$ $TSEL_{wz}$ 15 238	Intragastric: LD_{50} mouse 4900 Intraabdominal: LD_{50} mouse 1860±26, LD_{50} rat 800 Inhalation: LC mouse <8000 2 h; LC_{50} rat 3100±350 4 h; Lim_{ac} mouse 1580 2—4 h (1,27)
Ethylene glycol monobutyl ether $C_4H_9OC_2H_4OH$ $TSEL_{wz}$ 5 238	Intragastric: LD_{50} mouse 1500 Intraabdominal: LD_{50} mouse 750±40, LD_{50} rabbit and rat 220 Inhalation: LC mouse <3980 2 h; Lim_{ac} mouse and rat 75—83 2—4 h (1)
Ethylene glycol vinyl ether $CH_2=CHOCH_2CH_2OH$ $TSEL_{wz}$ 30 346	Intragastric: LD_{50} mouse 2900±169, LD_{50} rat 3910±182 Inhalation: LC_{50} mouse 29 000±1600 2 h; Lim_{ca} mouse and rat 5000 2—4 h (1); Lim_{ir} man 600 Detection: chromatography
Ethylene oxide $CH_2—CH_2$ $\backslash O /$ MAC_{wz} 1 (v), Class II MAC_{hw} 0.3 MAC_{ad} 0.03 289, 290	Inhalation: LC_{50} mouse 1500 4 h, LC_{50} rat 2630 4 h, LC_{50} guinea pig 1500 4 h, LC_{50} dog 1730 4 h Narcotic; disturbs cardiac activity and causes acidosis Detection: colorimetry; detection limit 0.25 μg in analytical volume
Ethylene sulfide+ $CH_2—CH_2$ $\backslash S /$ MAC_{wz} 0.1 (v), Class I MAC_{hw} 0.5 332	Intragastric: LD_{50} mouse 35 (28—44) Inhalation: LC_{50} mouse 1400 (980—1990); Lim_{ac} rat 2 4 h (1) Narcotic with convulsive and irritant actions
Ethylenimine+ $H_2C—CH_2$ $\backslash NH /$ MAC_{wz} 0.02 (v), Class I MAC_{hw} 0.001 MAC_{ad} 0.001 312, 542	On skin: LD_{50} rabbit; LD rabbit <10, LD guinea pig <0.6; LT_{50} mouse 7.5 sec Inhalation: LC_{100} rabbit 100 2 h; LC_{50} mouse 400 2 h, LC_{50} rat 100 2 h; Lim_{ac} rat 10—40 4 h (1, 4, 18) Has irritant properties Detection: colorimetry; detection limit 1 mg/m³
Ethylidene norbornene  	Intragastric: LD_{50} mouse 3250 (3040—3460) Intraabdominal: Lim_{ac} mouse 1.13 (0.70—1.82) (1)

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
$TSEL_{wz}$ 20 74	Inhalation: LC_{50} mouse 16 900 (10 900—22 900) 2 h; Lim_{ac} mouse 69±6.3 40 min (1); Lim_{if} man 60; Lim_{olf} 2.3
S-Ethyl-N,N-hexamethylenethiocarbamate (yalan)  MAC_{wz} 0.5 (v+a), Class II 79	Intragastric: LD_{50} mouse 530 (371—683), LD_{50} rat 675 (436—878) On skin: LD_{50} rat 1167 Inhalation: LC rat 200 4 h; LC cat <200 4 h; Lim_{ac} rat and cat 6 4 h (34) Disturbs oxidative processes and damages parenchymatous organs Detection: photometry; detection limit 15μg in analytical volume
2-Ethyl-1-hexane $CH_3CH_2CH_2CH_2C(C_2H_5)-CH_3$ $TSEL_{wz}$ 325 405	Intragastric: LD rat <10 000 Inhalation: NC mouse 70 000 2 h; LD_{50} 250 000 mouse 2 h
Ethyl iodide C_2H_5J 397	Intraabdominal: LD_{50} mouse 560 (459—683), LD_{50} rat 330 (277—392), LD_{50} guinea pig 322 (271—381) Affects central nervous system Detection: colorimetry; detection limit 5 μg per 6 ml of analytical volume
Ethyl mercaptan (thioethyl alcohol) CH_3CH_2SH MAC_{wz} 1 (v), Class II 39, 463	Inhalation: LC_{50} mouse 13 800±610 2 h; Lim_{olf} man 0.03—0.006 Affects nervous system Detection: nephelometry; detection limit 5 μg in analytical volume
Ethyl mercury chloride+ C_2H_5HgCl MAC_{wz} 0.005 (v+a), Class I 463, 549	Intragastric: LD_{50} mouse 56, LD_{50} rat 105 Affects central nervous system, blood vessels and activity of major enzymic systems Detection: colorimetry; detection limit 0.08 μg in analytical volume
N-Ethylmorpholine  MAC_{wz} 5 (v), Class III 269	Intragastric: LD_{50} rat 1200 Inhalation: LC_{50} mouse 18 000 2 h; Lim_{ac} rat 90 4 h (1); Lim_{if} man 220
S-Ethyl-N,N-propyl thiocarbamate (eptam)	Intragastric: LD_{50} mouse 750, LD_{50} rat 1660, LD_{50} cat 112

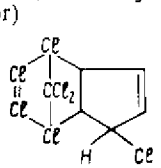
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
$(C_3H_7)NCOSC_2H_5$ MAC_{wz} 2 (v+a), Class III MAC_w 0.1 263, 469	On skin: LD_{50} rat 3200 (2340—4060) Inhalation: LC cat <400 4 h; Lim_{ac} cat 70 4 h (35, 36) Detection: photometry; detection limit 5 μg in analytical volume
Ethylthioethyl acrylate CH_2-$CHCOOCH_2CH_2SC_2H_5$ 398	Intragastric: LD_{50} mouse 1100 (934—1243), LD_{50} rat 2500 (2183—2862)
Ethylthioethyl methacrylate $CH_2=C(CH_3)COOCH_2CH_2SC_2H_5$ 398	Intragastric: LD_{50} mouse 6490 (5210—7770), LD_{50} rat 7400 (6666—8214)
Ethyltoluene (methylethylbenzene)  MAC_{wz} 50 (v), Class IV $TSEL_{hw}$ 0.03 388	Inhalation: LD_{50} mouse 54 000 4 h, LC_{50} cat 50 000 2 h; Lim_{ir} cat 10 000 2 h; Lim_{ac} rabbit 1000—2000 40 min (2); Lim_{ir} man 100 2 min; Lim_{orl} 30 Narcotic; affects hematopoiesis; has irritant properties Detection: chromatography; detection limit 0.2 μg in analytical volume
Euphylline (double salt of theophylline and ethylenediamine) MAC_{wz} 0.5 (a), Class II 287	Intragastric: LD_{50} mouse 307±21, LD_{50} rat 350±19 Has irritant properties; damages blood vessels
Extralin (mixture of 88% methylaniline $C_6H_5NHCH_3$, 7% aniline $C_6H_5NH_2$ and 5% dimethylaniline $C_6H_5N(CH_3)_2$) MAC_{wz} 3 (v), Class III 462, 546	Inhalation: Lim_{ac} rabbit 30—40 40 min (2) On skin: Lim_{ac} rabbit 2—3 40 min (2) Methemoglobin former Detection: colorimetry; detection limit 1 μg in analytical volume
Floromycin (viomycin) $C_{18}H_{31-32}O_8N_9$ MAC_{wz} 0.1 (a), Class II 305	Intragastric: LD_{50} mouse 1637 Subcutaneous: LD_{50} mouse 1183, LD_{50} rat 1750 Intraabdominal: LD_{50} mouse 975, LD_{50} rat 1075 Intravenous: LD_{50} mouse 150 On skin: LD rat and rabbit <2000 Inhalation: LC rat <62 4 h Detection: colorimetry; detection limit 50 μg in analytical volume
Formaldehyde (methanal) 	Inhalation: LC_{50} mouse 400 2 h; LC_{100} cat 400 2 h; Lim_{ir} rabbit 290 40 min (28); Lim_{ac} rabbit 160 40 min (2); Lim_{ir} rabbit 7.5 40 min (7), Lim_{ir} man 1 10 min (3,5); Lim_{orl} 0.07

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 0.5 (v), Class II MAC_{hw} 0.035 MAC_{ad} 0.012 MAC_{w} 0.01 265, 377, 458, 543	Has irritant properties; affects central nervous system, kidneys and liver Detection: colorimetry; detection limit 2 μg in analytical volume
Formal glycol (1,3-dioxalane)+  MAC_{wz} 50 (v), Class IV 449	Intragastric: LD_{50} mouse 3200 (1830—4983), LD_{50} rat 6607 (4931—8853) Inhalation: LC_{50} mouse 10 500 (9000—12 400) 2 h, LC_{50} rat 20650 (18 400—23 120) 4 h; Lim_{ac} rat 3200 4 h (1, 11) Narcotic; has irritant properties
Formamide  MAC_{wz} 3 (v), Class III 312, 540	Intragastric: LD_{50} mouse 3150 (2245—4054), LD_{50} rat 5570 (4790—4054) Intraabdominal: LD_{50} guinea pig 1250 Inhalation: Lim_{ac} rat 70 4 h (1, 4) Affects nervous system, parenchymatous organs and blood vessels Detection: colorimetry; detection limit 2 μg in analytical volume
Furan  MAC_{wz} 0,5 (v), Class II MAC_{w} 0.2 448, 464	Inhalation: LC_{50} mouse 300±240; Lim_{ac} rat 100 4 h (1) Affects central nervous system and liver Detection: photometry; detection limit 5 μg in analytical volume
Furfurol (furfural, 2-formylfuran, 2-furylaldehyde)  MAC_{wz} 10 (v), Class III MAC_{hw} 0.05 MAC_{ad} 0.05 MAC_{w} 1 218, 225, 461	Intragastric: LD_{50} mouse 125±7, LD_{50} rat 126±2 Inhalation: LC 3000—5000 2 h; Lim_{ac} rabbit 200—300 40 min (2); Lim_{ir} cat 50 1—2 min (28) Affects nervous system and has irritant properties Detection: colorimetry; detection limit 0.2 μg in analytical volume
Gardona[trans-isomer-2-chloro-1(2,4,5-trichlorophenyl)vinyl] 	Intragastric: LD_{50} mouse 1865, LD_{50} rat 2955

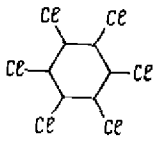
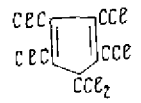
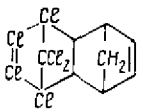
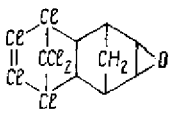
Продолжение

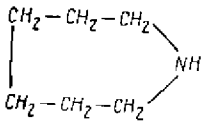
Substance, MAC or TSEL, Hazard Glass Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Heptyl alcohol (1-heptanol) $CH_3(CH_2)_6OH$ MAC_{wz} 10 (v), Class III MAC_w 0.005 82, 467	Intragastric: LD_{50} mouse 4350±1650 Inhalation: LC_{56} mouse 6600±2900 2 h Detection: colorimetry; detection limit 1 μg in analytical volume
Heptyl alcohol, tertiary $CH_3CH_2CH_2C(CH_3)_2OH$ 399	Intragastric: LD_{50} rat 820 (756—890)
γ-Hexachloran (γ-isomer of hexachlorocyclohexane)+ MAC_{wz} 0.05 (v+a), Class I MAC_w 0.02 48	Intragastric: LD_{50} mouse 100, LD_{50} rat 200, LD_{50} cat 25 On skin: LD rat 500, LD rabbit 200 Detection: photometry; detection limit 5 μg per 5 ml of solution
Hexachloroacetone  MAC_{wz} 0.5 (v), Class II 295, 469	Intragastric: LD_{60} rat 240 Inhalation: LC_{50} mouse 920±60 2 h; Lim_{ac} mouse 17—20 2 h (1); Lim_{ir} man 0.9 Narcotic; has irritant properties Detection: photometry; detection limit 0.25 μg in analytical volume
Hexachlorobenzene+  MAC_{wz} 0.9 (v+a), Class II MAC_w 0.05 $TSEL_{hw}$ 0.013 370, 468	Intragastric: LD_{50} mouse 4000, LD_{50} rat 3500, LD_{50} rabbit 2600, LD_{50} cat 1700 Inhalation: LC_{50} mouse 4000, LC_{50} rat 3600, LC_{50} rabbit 1800, LC_{50} cat 1600; Lim_{ac} rabbit and cat 90 Has irritant properties Detection: photometry; detection limit 10 μg in analytical volume
1,2,3,4,7,7-Hexachlorobicyclo(2,-2,1)-2-heptene-5,6-bisoxymethyl sulfite (thiodan)+  MAC_{wz} 0.1 (v+a), Class I 431	Intragastric: LD_{50} mouse 75±10, LD_{50} rat 105±14 On skin: LD_{50} rat 34±3.4 Inhalation: LC_{50} cat 90 4 h; Lim_{ac} cat 8 4 h (4, 27)

Продолжение

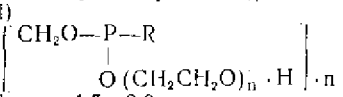
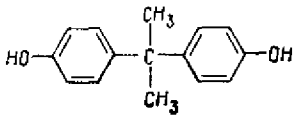
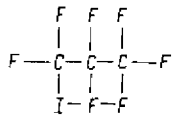
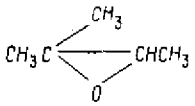
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions Action (s), Method (s) of Detection
MAC_{wz} 1 (a), Class II MAC_w 0.3 40	On skin: LD rat and rabbit <2500 Inhalation: LC mouse, rat and cat <290 4 h; Lim_{ac} rat 38 4 h (24)
Germanium dioxide GeO_2 MAC_{wz} 2 (a), Class III 364, 464	Intragastric: LD_{50} mouse 1250; Lim_{ac} mouse 30 (8) Detection: colorimetry; detection limit 0.25 μg in analytical volume
Germanium hydride GeH_4 MAC_{wz} 5 (v), Class III 128	Intragastric: LD_{50} mouse 1250 Inhalation: LC_{50} mouse 1380 (1110—1730) 2 h; Lim_{ac} rat 225 4 h (31, 41)
Germanium tetrachloride $GeCl_4$ MAC_{wz} 1 (a), Class II 212, 464	Inhalation: LC_{50} mouse 44 000 (32 000—54 000) 2 h Detection; colorimetry; detection limit 0.25 μg in analytical volume
Glass-reinforced plastic (maleic acid polyster-based) (MTU-6-11-50-66) MAC_{wz} 5 (a), Class III 65, 461	Inhalation: Lim_{ir} rabbit 100 15 min (7) Detection: weighing method
Gliftor (mixture of 1,3-difluoro-2-propanol and 1-fluoro-3-chloro-2-propanol) MAC_{wz} 0.05 (v), Class I MAC_w 0.006 469, 475	Intragastric: LD_{50} mouse 165±16, LD_{50} rat 96±13, LD_{50} rabbit 7.6±1.8 On skin: LD_{50} rat 66±10; Lim_{ac} rat 10 (11) Inhalation: LC_{50} mouse 1260±150 2 h, LC_{50} rat 580±65 4 h; Lim_{ac} rat 50 4 h (1, 37) Detection: colorimetry; detection limit 1 μg in analytical volume
Glycidyl methacrylate $CH_2{=}C(CH_3)COOCH_2CH{-}CH_2$ 398	Intragastric: LD_{50} rat 714 (637—792) Detection: colorimetry; detection limit 10 μg in analytical volume
Hafnium chloride $HfCl_4$ 425	Intragastric: LD_{50} rat 2362 Detection: chromatography
1,4,5,6,7,8-Heptachloro-4,7-endo-methylene-3a,7a-tetrahydroindene (heptachlor)  MAC_{wz} 0.01 (v), Class 1 MAC_w 0.05 289, 292	Intragastric: LD_{50} mouse 180, LD_{50} rat 350, LD_{50} cat 67[1] On skin: LD_{50} rabbit 500[1], LD_{50} guinea pig 627[1] Inhalation: LC cat 150 4 h; Lim_{ac} cat 0.5—2 4 h (4, 22) Detection: colorimetry, detection limit 4 μg per 1 ml of analytical volume; gas-liquid chromatography

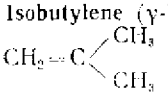
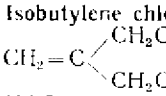
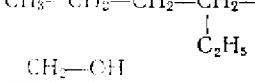
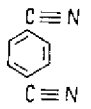
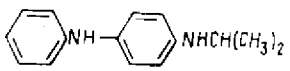
[1] Technical-grade product

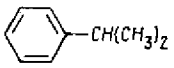
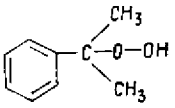
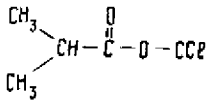
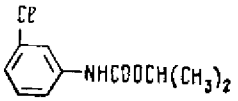
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
1,2,3,4,5,6-Hexachlorocyclohexane (mixture of stereoisomers)+  MAC$_{wz}$ 0.1 (v+a), Class I MAC$_{hw}$ 0.03 MAC$_{ad}$ 0.03 48	Intragastric: LD$_{50}$ mouse 500, LD$_{50}$ rat 400; LD cat 300 On skin: LD rabbit $<$1000, LD rat $<$5000 Inhalation: LC cat 20 6 h Detection: colorimetry; detection limit 0.1 μg in analytical volume
Hexachlorocyclopentadiene+  MAC$_{wz}$ 0.01 (v), Class I MAC$_{w}$ 0.001 296, 464	Intragastric: LD$_{50}$ rat 200 On skin: LD rabbit $<$300 Inhalation: LC$_{50}$ rat 23 2 h; LC$_{100}$ rat 30 4 h Affects nervous system; has irritant properties Detection: colorimetry, detection limit 0.5 μg in analytical volume; photometry, detection limit 0.1 μg in analytical volume
1,2,3,4,10-Hexachloro-1,4,5,8-diendo-methylene-1,4,4a,5,8,8a-hexahydronaphthalene (aldrin)+  MAC$_{wz}$ 0.01 (v+a), Class I MAC$_{w}$ 0.002 431, 464	Intragastric: LD$_{50}$ mouse 18±3, LD$_{50}$ rat 42±3; Lim$_{ac}$ rat 10 Subcutaneous: LD rabbit 100; LD$_{50}$ rat 62±27 Inhalation: LC rat 5.8±2 4 h Affects nervous system, liver and kidneys Detection: colorimetry, detection limit 0.1 μg in analytical volume; gas-liquid chromatography
1,3,4,10,10-Hexachloro-6,7-epoxy-1,4,5,8-di-endomethylene-1,4,4a,5,-8,8a-hexahydronaphthalene (dieldrin)+  MAC$_{wz}$ 0.01 (v+a), Class I 431, 464	Intragastric: LD$_{50}$ mouse 24±3.5, LD$_{50}$ rat 40±3.1 Subcutaneous: LD rabbit 150; LD$_{50}$ rat 49±8 Inhalation: CL$_{50}$ rat 13±5 4 h Detection: colorimetry; detection limit 0.1 μg in analytical volume; gas-liquid chromatography

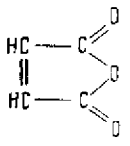
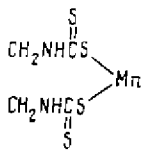
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action (s), Method (s) of Detection
Hexafluoropropylene $CF_2=CFCF_3$ MAC_{wz} 5 (v), Class III 417, 468	Inhalation: LC_{50} mouse 9300 (1600—13 000), 2 h, LC_{50} rat 56 000 (40 400—79 200), 1 h, LC_{50} rat 27 400 (21 400—35 000) 2 h, LC_{50} rat 11 200 (9900—12 600) 4 h; Lim_{ac} rat 920 610—1380) 4 h (I) Detection: photometry; detection limit 1.4 μg in analytical volume
Hexamethylene diamine $NH_2(CH_2)_6NH_2$ MAC_{wz}* 1 (v), Class II MAC_{hw} 0.001 MAC_{ad} 0.001 MAC_w 0.01 254, 464	Subcutaneous: LD_{50} mouse 1300 Inhalation: LC mouse <300 Has irritant properties Detection: colorimetry; detection limit 2.5 μg in analytical volume
Hexamethylene diisocyanate+ $O=C=N(CH_2)_6N=C=O$ MAC_{wz} 0.05 (v), Class I 237, 464	Inhalation: LC_{50} mouse 30 (14—46) Lim_{ir} rabbit 2.9; Lim_{ac} mouse 1 2 h (I) Detection: photometry; detection limit 0.5 μg in analytical volume
N,N-Hexamethylene dimaleimide 148	Intragastric: LD_{50} mouse 215, LD_{50} rat 550
Hexamethylenimine+ 	Intragastric: 18% solution; LD_{50} rat 360 (320—417) On skin: LT_{50} mouse 128 (90—180) Inhalation: LC_{50} mouse 10 800 (6500—17 800) 2 h; Lim_{ac} rat 90 4 h (I); Lim_{ir} man 7 Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Hexanitrodiphenyl sulfide $[(NO_2)_3C_6H_2]_2S$ 473	Intragastric: LD_{50} mouse 470; LD_{50} rat 1200
Hexyl alcohol (1-hexanol) $CH_3(CH_2)_5OH$ MAC_{wz} 10 (v), Class III 467, 539	Intragasric: LD_{50} mouse 4000 Inhalation: LC rat <180—350 2 h Detection: chromatography; detection limit 1 μg in analytical volume
Hexyl alcohol, tertiary $CH_3(CH_2)_3C(CH_3)_2OH$ 399	Intragastric: LD_{50} mouse 350 (280—423), LD_{50} rat 500 (400—625)
Hydrazine+ $H_2N\text{-}NH_2$ MAC_{wz} 0.1 (v), Class I MAC_w 0.01 199, 464	Intragastric: LD_{50} mouse 80 Inhalation: LC_{50} mouse and rat LC 1000—2000 2 h, LC mouse and rat <500—800 2 h Detection: colorimetry; detection limit 0.1 μg in analytical volume

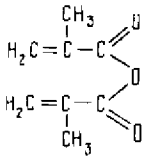
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Hydrogen arsenide (arsine) AsH_3 MAC_{wz} 0.1 (v), Class II 239, 345, 461	Inhalation: LC cat 700 15 min; LC_{100} rabbit and rat 400—500 15 min Detection: colorimetry; detection limit 0.5 μg in analytical volume
Hydrogen bromide HBr 534	Intraabdominal: LD_{50} rat 76 (71—81)
Hydrogen chloride HCl MAC_{wz} 5 (v), Class II 15, 464	Inhalation: LC_{50} mouse 2350 2 h Has irritant properties Detection: colorimetry; detection limit 3 μg in analytical volume
Hydrogen cyanide+ HCN MAC_{wz} 0.3 (v), Class II 456	Inhalation: LC_{100} rabbit 400 4—5 min, LC_{100} cat 200 4—5 min, LC_{100} dog 300 4—5 min, LC man 400—700 2—5 min Blocks tissue respiration
Hydrogen fluoride HF MAC_{wz}* 0.5 (v), Class II 112, 353	Inhalation: Lim_{ir} man 0.52; Lim_{olf} 0.03
Hydrogen phosphide PH_3 MAC_{wz} 0.1 (v), Class I 97, 464	Inhalation: LC mouse 380 2 h 20 min, LC rat, rabbit and guinea pig 140—280 4 h, LC cat 70 1 h 45 min Affects central nervous system, lungs, liver, kidneys and blood vessels Detection: colorimetry; detection limit 0.5 μg in analytical volume
Hydrogen sulfide+ H_2S MAC_{wz} 10 (v), Class II MAC_{hw} 0.008 MAC_{ad} 0.008 96, 458	Inhalation: LC_{50} mouse 1200 (1080—1300) 2 h; Lim_{ac} rabbit 60 40 min (2) Affects central nervous system; has irritant properties Detection: colorimetry detection limit 2 μg in analytical volume
Hydrogen sulfide, mixture with C_1—C_5 hydrocarbons (hydrogen sulfide concentration in the mixture is 700 mg/m³) MAC_{wz} 3 (v), Class III 94, 460	Inhalation of butane: CL_{50} mouse 410 000 (350 000—479 000) 2 h Inhalation of ethylene: LC_{50} mouse 210 000 (139 000—319 000) 2 h Inhalation of propylene: LC_{50} mouse 165 000 (123 000—221 000) 2 h Inhalation of butylene: LC_{50} mouse 145 000 (111 000—188 000) 2 h Detection: colorimetry; detection limit 1 μg in analytical volume
β-Hydrooxyethyl mercaptan+ $SHCH_2CH_2OH$ MAC_{wz} 1 (v), Class II 334	Intragastric: LD_{50} mouse 190 (164—239), LD_{50} rat 224 (185—258) On skin: LT_{50} mouse 18 (15—20) Inhalation: LC_{50} mouse 13 200 (10 800—15 500) 2 h; Lim_{ac} rat 10 4 h (1, 12)

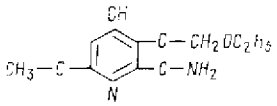
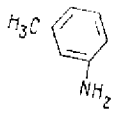
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters. Test Conditions, Action(s), Method(s) of Detection
p-Hydroxydiphenylamine $C_{12}H_9NHOH$ MAC_{wz} 0.5 (v), Class II 467, 527	Intragastric: LD_{50} mouse 2310 (1820—2800), LD_{50} rat 3130 (2880—3880) Inhalation: Lim_{ir} rabbit 10±0.7 15 min (7); Lim_{ac} rat 2.8±0.3 4 h (16) Detection: polarography; detection limit 1 μg/ml
Hydroxyethylated tetraalkylphosphonate pentaerythritol (phosterol)  Where n-1.5—2.0 146	Intragastric: LD_{50} mouse 33 300±3022
2,2-Di(4-hydroxyphenyl)propane (diphenylpropane)  MAC_{wz} 5 (a), Class III 37, 402, 462	Intragastric: LD_{50} mouse 2500 Inhalation: LC mouse <500—1700 2 h Has irritant properties; affects liver and kidneys Detection: colorimetry; detection limit 2 μg in analytical volume
Iodine I_2 MAC_{wz} 1 (v), Class II 36, 45	Inhalation: LC rat 800—1200 1 h Has irritant properties Detection: colorimetry; detection limit 10 μg in analytical volume
1-Iodoheptafluoropropane  MAC_{wz} 1000 (v), Class IV 312	Inhalation: LC_{50} mouse 404 000 2 h; Lim_{ac} mouse and rat 140 000 2 h and 4 h (1) Detection: thermal degradation in a quartz tube; detection limit 0.002 mg per 5 ml of solution
Isoamylene oxide  44	Intragastric: LD_{50} mouse 2600 (2501—2699), LD_{50} rat 2650 (2495—2805) Intraabdominal: LD_{50} mouse 1607 (1508—1706), LD_{50} rat 1400 (1301—1499)
Isoamyl bromide $(CH_3)_2CHCH_2CH_2Br$ 45, 174	Intraabdominal: LD_{50} mouse 13 750, LD_{50} rat 6150 Detection: colorimetry

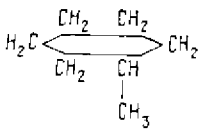
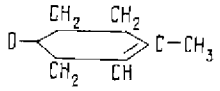
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Isoamyl iodide (4-iodo-2-methylbutane) $(CH_3)_2CHCH_2CH_2I$ 45, 397	Intraabdominal: LD_{50} mouse 503 (414—592) Detection: colorimetry; detection limit 5 μg per 6 ml of analytical volume
Isobutylene (γ-butylene)  MAC_{wz} 100 (v), Class IV MAC_w 0.5 312, 394	Inhalation: LC_{50} mouse 415 000 (546 000—314 000) 2 h, LC_{50} rat 620 000 (550 000—700 000) 4 h; Lim_{ac} rat 2500 4 h (2), Lim_{ac} rabbit 3000—3500 40 min (2); Lim_{ir} man 1235 2 min; Lim_{olf} 111 Narcotic Detection: colorimetry; detection limit 0.003 μg in analytical volume
Isobutylene chloride  MAC_{wz} 0.3 (v), Class II 312, 443	Intragastric: LD_{50} mouse 205±64, LD_{50} rat 1501±45 On skin: LT_{50} mouse 29±8 Inhalation: LC_{50} rat 400±67 4 h Detection: burning in a special torch; detection limit 0.003 mg in analytical volume
Isobutyric aldehyde (2-methylpropanal) $(CH_3)_2CHCHO$ MAC_{wz} 5 (v), Class III 45, 455	Inhalation: LC_{50} mouse 39 500±1987 2 h; Lim_{ac} rat 2500 4 h (1); Lim_{ir} man 10 Detection: colorimetry; detection limit 2 μg in analytical volume
Isooctyl alcohol (2-ethylhexanol)  MAC_{wz} 50 (v+a), Class IV MAC_{hw} 0.15 MAC_{ad} 0.15 257, 289	Intragastric: LD_{50} mouse 1670 (1060—2560), LD_{50} rat 4050 (3350—4900) Inhalation: Lim_{ac} mouse 270—370 2 h (15); Lim_{ir} man 100; Lim_{olf} 1.5
Isophthalodonitrile  105	Intragastric: LD_{50} mouse 548±28, LD_{50} rat 1708±142, LD_{50} guinea pig 370, LD_{50} rabbit 350 Detection: colorimetry; detection limit 0.003 μg per 10 ml of analytical volume
Isopropylaminodiphenylamine  MAC_{wz} 2 (a), Class III 268, 469	Intragastric: LD_{50} mouse 1820, LD_{50} rat 1122 Inhalation: Lim_{ac} mouse and rat 125 4 h (1), Lim_{ac} rat 100 4 h (4), Lim_{ac} rat 80 4 h (11) Detection: photometry; detection limit 5 μg in analytical volume

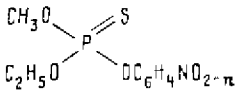
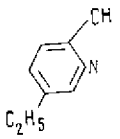
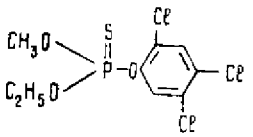
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Isopropylbenzene (cumol)  MAC_{wz} 50 (v), Class IV MAC_{hw} 0.014 MAC_{ad} 0.014 MAC_{w} 0.1 61	Inhalation: LC_{50} mouse 24 700 (15 300—39 500) 2 h; NC_{50} mouse 11 500 (5150—25 600) 2 h; Lim_{ac} rabbit 500—1000 40 min (2) Narcotic Detection: gas chromatography; detection limit 0.1 μg in analytical volume
Isopropylbenzene hydroperoxide  MAC_{wz} 1 (v), Class II MAC_{hw} 0.007 MAC_{ad} 0.007 MAC_{w} 0.5 311, 418, 420	Intragastric: LD_{50} mouse 342 Subcutaneous: LD_{50} mouse 490 Intraabdominal: LD_{50} mouse 270±38, LD_{50} rat 235±30 Inhalation: LC mouse <100 2 h Has irritant properties Detection: photometry; detection limit 0.5 mg/m³
Isopropyl chlorocarbonate (isopropylchloroformate)  MAC_{wz} 0.1 (v), Class I 153, 466	Intragastric: LD_{50} mouse 558 On skin: LD rabbit <20 Inhalation: LC_{50} mouse 230 (190—270); Lim_{ac} mouse 40 min (1) Has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
Isopropyl-N-(3-chlorophenyl)carbamate  MAC_{wz} 2 (v+a), Class III 177, 469	Intragastric: LD_{50} mouse 3200±529, LD_{50} mouse 2925±421, LD_{50} rat 3695±434 Inhalation: LC mouse <64 6 h Detection: colorimetry; detection limit 10 μg in analytical volume
Isopropyl iodide (2-iodopropane) $(CH_3)_2CHI$ 45, 397	Intraabdominal: LD_{50} mouse 1300 (986—1614), LD_{50} rat 1850 (1707—1993) Detection: colorimetry; detection limit 5 μg per 6 ml of analytical volume
Isopropyl nitrate $(CH_3)_2CHONO_2$ MAC_{wz} 5 (v), Class III 363, 462	Inhalation: LC_{50} mouse 65 000 2 h; Lim_{ac} rat 5 2 h (4) Narcotic; has irritant properties Detection: colorimetry; detection limit 20 μg in analytical volume

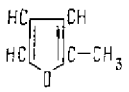
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions. Action(s), Method(s) of Detection
Isopropyl nitrite $(CH_3)_2CHONO$ MAC_{wz} 1 (v), Class II 462, 469	Inhalation: LC_{50} mouse 2800 (2490—3210) 2 h, LC_{50} 2900 (2090—3710) 2 h, LC_{50} rat 1250 (1210—1290) 4 h; Lim_{ac} rat 300 4 h (16)
Isopropyl N-phenylcarbamate $(CH_3)_2CHOCONHC_6H_5$ MAC_{wz} 2 (v+a), Class III MAC_w 0.2 177	Intragastric: LD_{50} mouse 2160±330, LD_{50} rat 2780±313 On skin: LD rabbit <5000 Inhalation: LC rat <55 6 h Detection: chromatography; detection limit 10 μg in analytical volume
Maleic anhydride  MAC_{wz} 1 (v+a), Class II MAC_{hw} 0.2 MAC_{ad} 0.05 55, 465	Intragastric: LD_{50} mouse 465 (428—503), LD_{50} rat 625±53, LD_{50} guinea pig 390, LD_{50} rabbit 875 Intraabdominal: LD_{50} rat 97±7 Inhalation: Lim_{ac} rat 47 4 h (1, 11, 21); Lim_{ir} rabbit 10—12 1 h (7), Lim_{ir} man 5 15 min, Lim_{ir} man 1.2±0.1 Has irritant properties Detection: photometry; detection limit 20 μg in analytical volume
N-Maleimide 148	Intragastric: LD_{50} mouse 80
Manganese, cyclopentadienyl tricarbonyl $C_5H_5Mn(CO)_3$ MAC_{wz} 0.1 (v), Class I 13, 464	Intragastric: LD_{50} rat 80 Inhalation: LC_{80} rat 120 2 h Detection: colorimetry; detection limit 10 μg in analytical volume
Manganese, ethylene-1,2-bis-dithiocarbamate (maneb)  MAC_{wz} 0.5 (a), Class II 258, 469	Intragastric: LD_{50} mouse 2600 (1795—3445), LD_{50} rat 3000 (2063—3937) On skin: LD rat >2000, LD rabbit >2000 Inhalation: LC cat and rat <700; Lim_{ac} rat and cat 15 4 h (27, 35) Affects central nervous system Detection: colorimetry; detection limit 1 μg in analytical volume
β-Mercaptoethylcapronate $C_8H_{15}C_2SH$ $TSEL_{wz}$ 0.5 459	Intraabdominal: LD_{50} rat 180 Inhalation: Lim_{ac} mouse 40 2 h (1); Lim_{olf} man 0.5
Mercuran+ (mixture of ethylmercurochloride C_2H_5Hg and γ-isomer of hexachlorocyclohexane $C_6H_5Cl_6$) MAC_{wz} 0.005 (v+a), Class I 26, 463	Intragastric: LD_{50} mouse 137, LD_{50} rat 207, LD_{50} rabbit 95 Detection: colorimetry; detection limit 0.08 μg in analytical volume

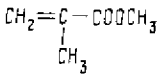
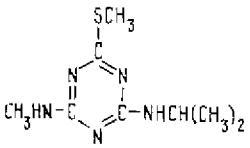
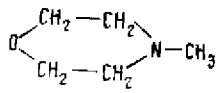
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Mercury bichloride $HgCl_2$ MAC_{wz} 0.1 (a), Class I 372, 463	Intragastric: LD_{50} mouse 17.5±2, LD_{50} rat 80±13.6 Affects kidneys and liver Detection: colorimetry; detection limit 0.5 μg in analytical volume
Mesityl oxide (4-methyl-3-pentene-2-one, iospropylidenacetone)+ CH_3-C(=O)-CH=C(CH_3)-CH_3 MAC_{wz} 1 (v), Class III 465	Intragastric: LD_{50} mouse 710±85 Inhalation: LC_{50} mouse 10 000±270 2 h, LC_{50} rat 9000±600 4 h; Lim_{ac} rabbit 60 40 min (2), Lim_{ac} rabbit 50 40 min (7) Detection: photometry; detection limit 1 μg in analytical volume
Methacryl chloride $CH_2=C(CH_3)COCl$ MAC_{wz} 0.3 (v), Class II 14, 468	Inhalation: LC_{50} mouse 115 (99—133) 2 h, LC_{50} rat 60 4 h; Lim_{ac} mouse 4.1 2 h (1); Lim_{ir} man 3.8 Detection: colorimetry; detection limit 1 μg in analytical volume
Methacrylic acid $CH_2=C(CH_3)-COOH$ MAC_{wz} 10 (v), Class III MAC_w 1 19, 465	Intragastric: LD_{33} rat 60 Inhalation: Lim_{ac} mouse 250 (1); Lim_{ir} cat 170—200 Has local cauterizing action Detection: colorimetry; detection limit 1 μg per 2 ml of analytical volume
Methacrylic acid anhydride  MAC_{wz} 1 (v), Class II 14, 468	Inhalation: LC_{50} mouse 450 (410—490) 2 h; Lim_{ac} mouse 9.8 2 h (1); Lim_{ir} man 6, Lim_{olr} man 2 Has local cauterizing action Detection: photometry; detection limit 2 μg in analytical volume
Methyl acrylate $CH_2=CHCOOCH_3$ MAC_{wz} 20 (v), Class IV MAC_w 0.02 143, 459	Inhalation: LC mouse 9300; Lim_{ir} cat 1300—1500; Lim_{ac} rabbit 130—150 40 min (2); Lim_{ir} man 250—500; Lim_{olr} 130 Narcotic with systemic toxic and strongly marked irritant actions Detection: colorimetry; detection limit 2.5 μg in analytical volume
Methyl alcohol (methanol)+ CH_3OH MAC_{wz} 5 (v), Class III MAC_{hw} 1 MAC_{au} 0.5 MAC_w 3 244, 467	Inhalation: LC mouse 50 000—60 000 2 h; Lim_{ac} rabbit 2500—5000 40 min (2) Affects nervous and vascular systems, optic nerve and retina, as well as respiratory and ocular mucous membranes Detection: chromatography; detection limit 1 μg in analytical volume

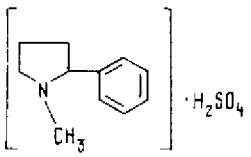
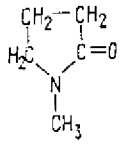
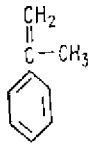
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Methylamine CH_3NH_2 MAC_{wz} 1 (v), Class II MAC_w 1 117, 463	Inhalation: CL_{50} mouse 2400 2 h; Lim_{ir} cat 200 30 min (28), Lim_{ir} rabbit 130 40 min (7), Lim_{ir} man 10; Lim_{elr} 1 Has irritant properties Detection: photometry; detection limit 1 μg in analytical volume
2-Methyl-4-amino-5-ethoxymethyl-pyrimidine (aminopyrimidine)  MAC_{wz} 1 (v+a), Class II 62	Intragastric: LD_{50} mouse 239 (198—279), LD_{50} rat 1450 (1283—1617) Inhalation: LC mouse and rat <77 4 h; Lim_{ac} rat 62 4 h (1), Lim_{ac} rat 22 4 h (32)
m-Methylaniline (m-toluidine)÷  MAC_{wz} 3 (v), Class III MAC_{aw} 0.04 MAC_{ad} 0.04 312, 545	On skin: Lim_{ac} rabbit 2—4 (2) Inhalation: Lim_{ac} rabbit 40 40 min (2) Methemoglobin former Detection: colorimetry; detection limit 2 mg/m³
Methyl bromide (bromomethyl, bromomethane) CH_3Br MAC_{wz} 1 (v), Class I 25, 466	Inhalation: LC_{50} mouse 1540 2 h, LC_{50} rat 2250 2 h; Lim_{ac} rabbit 70 40 min (2) Affects central nervous system; has irritant properties Detection: photometry; detection limit 0.3 μg in analytical volume
2-Methyl-1,3-butadiene (isoprene) $CH_2=C(CH_3)-CH=CH_2$ MAC_{wz} 40 (v), Class IV MAC_w 0.005 120, 465	Inhalation: LC_{50} mouse 150 000 2 h; NC_{50} mouse 100 000 2 h; Lim_{ac} rabbit 4100 40 min (2), Lim_{ac} mouse 2200 40 min (1), Lim_{ac} cat 400 1 h (4), Lim_{ac} rat 300—500 1 h (1), Lim_{ac} rabbit 190—750 40 min (7); Lim_{ir} man 160; Lim_{elr} 10 Narcotic; has irritant properties Detection: photometry; detection limit 3 μg in analytical volume
Methyl butyrate $CH_3-CH_2-CH_2-COOCH_3$ MAC_{wz} 5 (v), Class III 217, 461	Inhalation: LC_{50} mouse 18 000±1600 2 h; Lim_{ac} rat 87 4 h (1); Lim_{ir} man 70 Detection: colorimetry; detection limit 10 μg in analytical volume

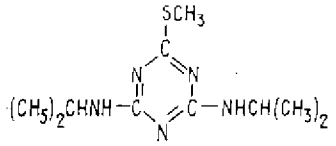
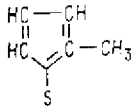
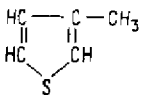
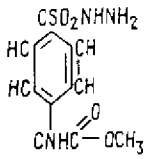
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Methyl caproate+ $C_5H_{11}COOCH_3$ MAC_{wz} 1 (v), Class III 217, 461	Inhalation: LC_{50} mouse 14 000 2 h; Lim_{ac} rat 80 4 h (1) Detection: colorimetry; detection limit 10 μg in analytical volume
Methyl chloride (chloromethane) CH_3Cl MAC_{wz} 5 (v), Class II 88, 466	Inhalation: LC_{50} rat 5300 (4454—6307) 4 h; Lim_{ac} rat 230 4 h (4) Affects central nervous system Detection: colorimetry; detection limit 1 μg in analytical volume
Methyl chloroacetate $CH_2ClCOOCH_3$ MAC_{wz} 5 (v), Class III 461	Intragastric: LD_{50} mouse 240 (220—259) Subcutaneous: LD_{16} rat 560 Inhalation: LC_{50} mouse 1000 (700—1450) 2 h; Lim_{ac} rat 24 4 h (1) Detection: colorimetry; detection limit 10 μg in analytical volume
Methylchloroform (1,1,1-trichloroethane) MAC_{wz} 20 (v), Class IV 340, 492	Intragastric: LD rat >5000, LD mouse >5000 Inhalation: LC_{50} rat 31 000 4 h; LC_{100} mouse 24 000 60 min; Lim_{ac} rat 980 4 h (4) Narcotic; damages internal organs Detection: colorimetry; detection limit 0.5 μg in analytical volume
Methylcyclohexane  MAC_{wz} 50 (v), Class IV 213	Intragastric: LD_{50} mouse 2250 (1200—3900) Inhalation: LC_{50} mouse 41 500 (38 900—45 200) 2 h; Lim_{ac} rat 500 4 h (1) Narcotic; irritates respiratory and ocular mucous membranes
4-Methyl-5,6-dihydro-α-pyran (methyldihydropyran)+  MAC_{wz} (v), Class III 421	Intragastric: LD_{50} mouse 1950±75 Inhalation: LC_{50} mouse 6500±3000 2 h; Lim_{ac} rat 120 (1), Lim_{ac} rabbit 30—60 (7); Lim_{ir} man 150; Lim_{olf} 15 Affects cerebral cortex, autonomous centres and kidneys
2-Methyl-1,3-dioxolane (acetal) $TSEL_{wz}$ 30 346	Intragastric: LD_{50} mouse 3500±16, LD_{50} rat 4700±22 Inhalation: CL_{50} mouse 59 000±6600 2 h, LC_{50} rat 80 000±5900 4 h; Lim_{ac} mouse and rat 5000 2—4 h (1); Lim_{ir} man 400

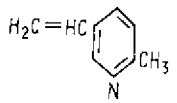
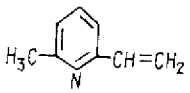
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Methylene-bis-(N-carbomylmaleimide) 148	Intragastric: LD_{50} mouse 710, LD_{50} rat 1420
Methylene bromide (dibromomethane) CH_2Br_2 MAC_{wz} 50 (v), Class III 312, 526	Inhalation: LC_{100} rat 70 000 2 h; LC_{50} rat 40 000 2 h; Lim_{ac} rat 1000—1200 4 h (4) Narcotic; affects kidneys and liver Detection: nephelometry; detection limit 5 μg in analytical volume
Mthylene chloride (dichloromethane, methylene dichloride) CH_2Cl_2 MAC_{wz} 50 (v), Class IV 462, 496	Inhalation: LC_{50} mouse 50 000 2 h; Lim_{ac} rat 1000 1 h (4) Narcotic; damages liver and kidneys Detection: colorimetry; detection limit 2.5 μg in analytical volume
Methyl ethyl ketone $CH_3{=}\overset{\overset{O}{\|}}{C}{-}CH_2CH_3$ MAC_{wz} 200 (v), Class IV MAC_w 1 189, 461	Inhalation: LC_{50} mouse 40 000 2 h; NC_{50} mouse 20 000 2 h Has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
O-Methyl-O-ethyl-O-p-nitrophenyl thiophosphate (methylethylthiophos)+  MAC_{wz} 0.03 (v+a), Class 1 452, 462	Intragastric: LD_{50} mouse 4.2 (3.4—5), LD_{50} rat 2.8 (2—3), LD_{50} cat 5.6 (2.8—8.4) On skin: LD rabbit 200 Inhalation: LC rat <3 4 h Detection: colorimetry; detection limit 5 μg in analytical volume
2-Methyl-5-ethylpiperidine+  MAC_{wz} 2 (v), Class III 357, 465	Intragastric: LD_{50} mouse 282, LD_{50} rat 368 Subcutaneous: LD_{50} mouse 294, LD_{50} rat 826 Affects central nervous system; has irritant properties Detection: photometry; detection limit 20 μg in analytical volume
O-Methyl-O-ethyl-O-(2,4,5-trichlorophenyl)thiophosphate (trichloro-3-methaphos)+ 	Intragastric: LD_{50} rat 314 (223—405); LD rabbit <100; LD_{100} rabbit 400; Lim_{ac} rat 10 (24)

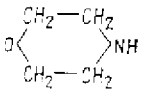
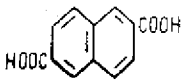
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 0.3 (v+a), Class II MAC_w 0.4 460, 548	On skin: LD rabbit <1500 Inhalation: LC rat and cat <20 4 h; Lim_{ac} rat and cat 2—5 4 h (24) Detection: colorimetry; detection limit 0.1 μg in analytical volume
Methylfluorophenyldichlorosilane $CH_3FC_6H_4SiCl_2$ MAC_{wz} 1 (v), Class II 204	Subcutaneous: LD_{100} mouse 2000; LD mouse <1000 Inhalation: LC_{50} mouse 500 2 h
2-Methylfuran (sylvan)  MAC_{wz} 1 (v), Class II 323	Subcutaneous: LC_{50} rat 10 000 2 h; Lim_{ac} rat 50 2 h (4)
Methyl iodide (iodomethane) CH_3I 45, 397	Intraabdominal: LD_{50} mouse 172 (162—182), LD_{50} rat 101 (96—105), LD_{50} guinea pig 51 (39—63) Detection: colorimetry; detection limit 5 μg per 6 ml of analytical volume
Methyl isobutyl ketone $CH_3COCH_2CH_2(CH_3)_2$ $TSEL_{wz}$ 5 32	Intragastric: LD_{50} mouse 2850 (2638—3078), LD_{50} rat 4600 (3932—5382) Inhalation: LC_{50} mouse 15 000 2 h, LC_{50} mouse 23 300 (18 490—29 360) 2 h; Lim_{ac} rat 200 4 h (4); Lim_{ir} cat 250—500 15 min (28); Lim_{ir} man 30—100
Methyl isobutyrate $(CH_3)_2{=}CH{-}COOCH_3$ MAC_{wz} 10 (v), Class III 217, 461	Inhalation: LC_{50} mouse 25 500±2370 2 h; Lim_{ac} rat 210 4 h (1) Detection: colorimetry; detection limit 10 μg in analytical volume
Methyl isocyanate $CH_3N{=}C{=}O$ MAC_{wz} 0.05 (v), Class I 461	Inhalation: LC_{50} mouse 43.5±6.8 2 h; Lim_{ac} mouse 5 2 h (1); Lim_{ir} man 0.55
Methyl isovalerate $(CH_3)_2{=}CH{-}CH_2{-}COOH_3$ MAC_{wz} 5 (v), Class III 217, 461	Inhalation: LC_{50} mouse 20 250±980 2 h; Lim_{ac} rat 109 4 h (1) Detection: colorimetry; detection limit 10 μg in analytical volume
Methyl mercaptan CH_3SH MAC_{wz} 0.8 (v), Class II MAC_{hw} $9\cdot10^{-6}$ MAC_w 0.002 289, 395	Inhalation: LC_{50} mouse 1700 (1170—2460) 2 h, LC_{50} rat 1200 (770—1860) 4 h; Lim_{ac} rat 9.5 4 h (4); Lim_{ir} rabbit 9.2 15 min (7); Lim_{ac} man 1—2 30 min (12); Lim_{olf} man 0.1—0.3 Affects central nervous system Detection: colorimetry; detection limit 2.5 μg in analytical volume

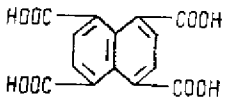
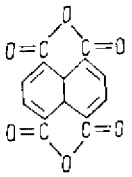
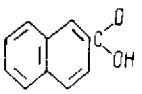
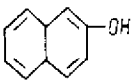
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Methylmercaptophos+ (mixture of O,O-dimethyl-O-ethylmercaptoethylthiophosphate and O,O-dimethylethylmercaptoethylthiophosphate) MAC_{wz} 0.1 (v+a), Class I 456, 464	Intragastric: LD_{50} mouse 46, LD_{50} rat 75; LD cat 30–50 On skin: LD_{100} rabbit 100 Inhalation: LC cat 20—33 4 h; Lim_{ac} cat 1 4 h (2-1) Detection: photometry; detection limit 0.5 μg in analytical volume
Methyl methacrylate  MAC_{wz} 10 (v), Class III MAC_{w} 0.01 416, 422	Inhalation: NC_{50} mouse 16 200 (13 300—19 100) 2 h; LC_{50} mouse 18 500 (15 200—21 800) 2 h; Lim_{ac} mouse 2000 2 h (1); Lim_{tr} rabbit 1680 40 min (7), Lim_{tr} man 284; Lim_{olf} 85 Detection: colorimetry; detection limit 2 μg in analytical volume
2-Methylthio-4-methylamino-6-isopropylamino-sym-triasine (semeron)  MAC_{wz} 2 (a), Class III 486	Intragastric: LD_{50} mouse 700±160, LD_{50} rat 2000±280 On skin: LD rabbit >500
m-Methylomorpholine  MAC_{wz} 5 (v), Class III 269, 469	Intragastric: LD_{50} rat 1960±117 Inhalation: LC_{50} mouse 25 200 2 h; Lim_{ac} rat 100 4 h (1); Lim_{tr} man 200 Detection: colorimetry; detection limit 5 μg in analytical volume
1-Methylnaphthalene $C_{11}H_{10}$ MAC_{wz} 20 (v), Class IV 339, 465	Intragastric: LD_{50} rat 1840±226 Affects nervous system, blood, kidneys, gastrointestinal tract; causes irritation of skin and upper respiratory tract and opacification of lens Detection: photometry; detection limit 10 μg in analytical volume
2-Methylnaphthalene $C_{11}H_{10}$ MAC_{wz} 20 (v), Class IV 339, 465	Intragastric: LD_{50} rat 1630±224 Affects nervous system, blood, kidneys and gastrointestinal tract; causes irritation of skin and upper respiratory tract and opacification of lens Detection: colorimetry; detection limit 10 μg in analytical volume

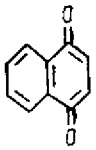
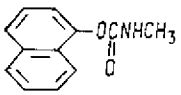
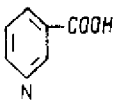
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Methyl propionate $CH_2=CH_2=COOCH_3$ MAC_{wz} 10 (v), Class III 217, 461	Intragastric: LD_{50} mouse 3500±230, LD_{50} rat 5300±430 Inhalation: LC_{50} mouse 27 500±2200 2 h; Lim_{ac} rat 1100 4 h (1); Lim_{ac} rat 600 4 h (4); Lim_{ir} rabbit 520 40 min; Lim_{oir} 420 Detection: colorimetry; detection limit 10 μg in analytical volume
1-Methyl-2-(3-pyridyl)-pyrrolidine sulfate (nicotine sulfate)  MAC_{wz} 0.1 (v=a), Class I MAC_w 0.5 223, 461	Intragastric: LD_{50} mouse 8.5, LD_{50} rat 56 Intraabdominal: LD_{50} cat 20 Inhalation: LC_{50} rat 22 Detection: colorimetry; detection limit 1 μg in analytical volume
3-(5)-Methyl pyrazol C_5H_8N $TSEL_{wz}$ 10 123, 456	Intragastric: LD_{50} mouse 933±40 Detection: gas—liquid chromatography
N-Methyl-α-pyrrolidone  MAC_{wz} 100 (v+a), Class IV MAC_w 0.5 266, 442	Intragastric: LD_{50} mouse 5320±1040, LD_{50} rat 7900, LD_{50} guinea pig 4400, LD_{50} rabbit 3500 Inhalation: LC mouse <180—200 2 h
α-Methylstyrene (isopropenylbenzene)  MAC_{wz} 5 (v), Class III MAC_{hw} 0.04 MAC_{ad} 0.04 MAC_w 0.1 467	Inhalation: LC mouse <400 2 h; Lim_{ac} cat 40 (4) Has irritant properties Detection: gas chromatography; detection limit 5 μg in analytical volume

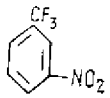
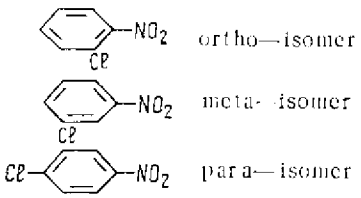
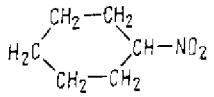
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
2-Methylthio-4,6-bis(isopropylamino)sym-triazine (prometryne)  MAC_{wz} 5 (a), Class III MAC_{w} 3 485	Intragastric: LD_{50} mouse 2000 (1750—2370), LD_{50} rat 1800 (1470—2120) On skin: LD mouse and rabbit >1000 Inhalation: LC mouse >2500 2 h; LC rat >4400 4 h; Lim_{ac} rat 1100 4 h (27) Detection: spectrophotometry; detection limit 5 μg in analytical volume; gas chromatography
Methylthioethyl acrylate $CH_2{=}CHCOOCH_2CH_2SCH_3$ 398	Intragastric: LD_{50} mouse 3730 (3057—4500), LD_{50} rat 1340 (1126—1594)
2-Methylthiophene  MAC_{wz} 20 (v), Class IV 469, 494	Intragastric: LD_{50} mouse 1460 (1200—1700) LD_{50} rat 3200 (2100—4500) Intraabdominal: LD_{50} rat 1000 Inhalation: LC_{50} mouse 11 500 (8900—14 800) 2 h; Lim_{ac} rat 100 2 h (4) Narcotic; irritates respiratory tract mucous membranes Detection: nephelometry; detection limit 2 μg in analytical volume
3-Methylthiophene  MAC_{wz} 20 (v), Class IV 469, 503	Intragastric: LD_{50} mouse 1800 (1500—2100) Inhalation: LC_{50} mouse 18 000 (14 100—22 800) 2 h; Lim_{ac} rat 1000 2 h (4) Narcotic; irritates respiratory tract mucous membranes Detection: nephelometry; detection limit 2 μg in analytical volume
Methyl p-toluate $p\text{-}CH_3C_6H_4COOCH_3$ MAC_{wz} 10 (v), Class II 193, 461	Intragastric: LD_{50} mouse 3800, LD_{50} rat 4855 Intraabdominal: LD_{50} mouse 1250 Inhalation: LC rat <250 6 h; Lim_{str} man 0.9 Detection: colorimetry; detection limit 10 μg in analytical volume
n-Methylurethanebenzenesulfohydrazine (porofor ChKhZ-5)  MAC_{wz} 0.05 (a), Class I 3	Intragastric: LD_{50} mouse 350 Inhalation: LC_{50} rat 20—30 1 h, LC_{50} rat 7—10 2 h Damages central nervous system and hematopoiesis

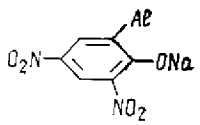
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Methyl valerate+ CH_3-CH_2-CH_2-CH_2-$COOCH_3$ MAC_{wz} 1 (v), Class III 217, 461	Inhalation: LC_{50} mouse 6600±160 2 h; Lim_{ac} rat 23 4 h (1); Lim_{ir} man 20 Detection: colorimetry; detection limit 10 μg in analytical volume
Methyl vinyl ketone+ CH_2=$CHCOCH_3$ MAC_{wz} 0.1 (v), Class I 253, 469	Intragastric: LD_{50} mouse 33 (26—41), LD_{50} rat 31 (21—40) Inhalation: LC_{50} rat 7±0.6 4 h, LC_{50} mouse 8±0.1 2 h; Lim_{ir} rabbit 4—8 40 min (2), Lim_{ir} rabbit 2—4 40 min (7), Lim_{ir} cat (28, 29), Lim_{ir} man 5; Lim_{olf} 0.5 Detection: colorimetry; detection limit 0.1 μg in analytical volume
2-Methyl-5-vinylpyridine+  MAC_{wz} 2 (v), Class III 357, 469	Intragastric: LD_{50} mouse 775±96, LD_{50} rat 2050±210 Subcutaneous: LD_{50} mouse 532±41, LD_{50} rat 1290±340 Inhalation: LC_{50} mouse 213±19 2 h, LC_{50} rat 189±13 2 h; Lim_{ac} rat 10 4 h (1); Lim_{olf} man 1.25 Detection: colorimetry; detection limit 2.5 μg in analytical volume
6-Methyl-2-vinylpyridine+  MAC_{wz} 0.5 (v), Class II 77, 469	Intragastric: LD_{50} mouse 510 Inhalation: LC_{50} mouse 150 2 h; Lim_{ac} rat 1 4 h (1) Detection: colorimetry; detection limit 2.5 μg in analytical volume
Molybdenum boride Mo_2B_5 MAC_{wz} 4 (a), Class III 277, 461	Intraabdominal: LD_{50} mouse 1377 (1243—1501) Detection: colorimetry; detection limit 1 μg in analytical volume
Molybdenum (metallic) Mo 276, 461	Inhalation: LC rat <25 000—30 000 1 h Detection: colorimetry; detection limit 1 μg in analytical volume
Molybdenum trioxide MoO_3 MAC_{wz} 4 (a), Class III 276, 461	Inhalation: LC rat 12 000—15 000 1 h Detection: colorimetry; detection limit 1 μg in analytical volume
Monochlorodibromotrifluoroethane CF_2Br-$CFBrCl$ MAC_{wz} 50 (v), Class IV 281, 461	Inhalation: LC_{50} mouse 22 000 (17 800—27 000) 2 h; Lim_{ac} rabbit 500—1000 40 min (2); Lim_{olf} man 200—300 Detection: photometry; detection limit 0.1 μg in analytical volume

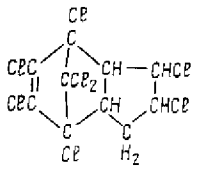
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Monochlorodimethyl ether CH_3OCH_2Cl MAC_{wz} 0.5 (v), Class III 119, 469	Inhalation: LC_{50} mouse 1030 2 h; Lim_{ac} rabbit 25—28 40 min (2); Lim_{ir} rabbit 2—9 40 min (7) Detection: photometry; detection limit 0.5 μg in analytical volume
Monochloromonofluoroethane (freon 151) C_2H_5FCl MAC_{wz} 1000 (v), Class IV 169, 460	Inhalation: LC_{50} mouse 124 500 (116 000—135 000) 2 h Narcotic Detection: thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume
Monochlorostyrene $C_6H_5CH{=}CHCl$ MAC_{wz} 50 (v), Class IV 312, 348	Inhalation: Lim_{ac} rabbit 1250—2500 40 min (2); Lim_{ir} man 1000 Detection: colorimetry; detection limit 30 mg/m³
Monomer FA (condensation product of furfural and acetone; composition: 55% monofurfurylidenacetone, 44% difurfurylidenacetone and 1% acetone and furfural) MAC_{wz} 0.1 (v), Class II 488	Intragastric: LD_{50} mouse 980, LD_{50} rat 1070, LD_{50} rabbit 285 On skin: LD_{50} rat 2600, LD_{50} rabbit 900 Inhalation: Lim_{ac} rat 225 4 h (24, 27), Lim_{ac} rabbit 184 4 h (24, 27)
Morpholine+  MAC_{wz} 0.5 (v), Class II MAC_{wz} 0.04 269, 469	Intragastric: LD_{50} rat 1200±140 On skin: LT_{50} mouse 27.1±3.6 Inhalation: LC mouse 10 000 2 h; Lim_{ac} rat 280 4 h (1); Lim_{ir} rat 40 4 h (9), Lim_{ir} man 16 Irritates upper respiratory tract, affects liver and kidneys Detection: colorimetry; detection limit 5 μg in analytical volume
Naphthalene  MAC_{wz} 20 (v), Class IV MAC_{hw} 0.003 MAC_{ad} 0.003 339, 465	Intragastric: LD_{50} rat 490±70 Intraabdominal: LD rat <1000 Inhalation: LC rat <100 Affects nervous system, blood, kidneys, gastrointestinal tract; irritates skin and upper respiratory tract; causes opacification of lens Detection: colorimetry; detection limit 10 μg in analytical volume
2,6-Naphthalenetetracarboxylic acid  MAC_{wz} 0.1 (a), Class II 552	Intragastric: LD mouse and rat <18 000

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
1,4,5,8-Naphthalenetetracarboxylic acid  MAC_{wz} 0.5 (a), Class II 502	Intragastric: LD_{50} mouse 3800, LD_{50} rat 7500 Inhalation: Lim_{ac} rat 80 4 h (43)
1,4,5,8-Naphthalenetetracarboxylic acid dianhydride  MAC_{wz} 1 (a), Class II 501	Intragastric: LD_{50} mouse 7100, LD_{50} rat 7400 Intratracheal: LD_{100} rat 50 Inhalation: Lim_{ac} rat 120 4 h (1)
Naphthenic acids (mixture of mono-, cyclic, fatty and aromatic acids) $TSEL_{wz}$ 5 MAC_{w} 0.3 386	Intragastric: LD_{50} mouse 6900 (6000—7930), LD_{50} rat 5400 (4000—7290)
2-Naphthoic acid  MAC_{wz} 0.1 (a), Class II 553	Intragastric: LD_{50} mouse 4700±660, LD_{50} rat 4500±650
β-Naphthol  MAC_{wz} 0.1 (a), Class II MAC_{w} 0.4 335, 461, 467	Intragastric: LD_{50} mouse 98 (70—137), LD_{50} rat 2460 (1700—3570), LD_{50} guinea pig 1335, LD_{50} rabbit 5400, LD_{50} cat 89 Inhalation: LC mouse <20 4 h, LC rat <4 h; Lim_{ac} rabbit 0.25 15 min (7) Detection: polarography; detection limit 1 μg in analytical volume

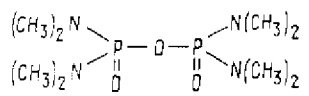
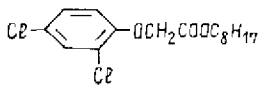
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
α-Naphthoquinone (1,4-naphthoquinone)  MAC_{wz} 0.1 (v), Class I MAC_{hw} 0.005 MAC_{sd} 0.005 414, 467	Intragastric: LD_{100} rat 500 Suncutaneous: LD_{100} rat 250 Intraabdominal: LD_{100} rat 50 Inhalation: Lim_{ir} 0.4 15 min (7) Has irritant properties Detection: polarography; detection limit 2.5 μg in analytical volume
1-Naphthyl-N-methylcarbamate (sevin)  MAC_{wz} 0.1 (a), Class II 553	Intragastric: LD_{50} mouse 363 (294—432), LD_{50} rat 721 (653—789), LD_{50} cat 150 Inhalation: LC cat <82 6 h; Lim_{ac} cat 20 6 h (24)
Nickel MAC* Ni_{wz} 0.5 (a), Class II 374, 467	Intravenous: LD mouse 50 Detection: amperometry; detection limit 0.3 μg in analytical volume
Nickel carbonyl $Ni(CO)_4$ MAC_{wz} 0.0005 (v), Class I 272, 312	Inhalation: LC_{50} mouse 15 100±2200 2 h, LC_{50} rat 151 300±22 100 2 h, LC_{50} rat 81 500±9600 4 h Has irritant and neurotoxic actions Detection: colorimetry; detection limit 0.007 mg/m³
Nicotinic acid  401	Intragastric: LD_{50} mouse 6980 (6769—7191), LD_{50} rat 7043 (6834—7252) Intraabdominal: LD_{50} mouse 3250 (3041—3459)
Nitroammophoska MAC_{wz} 4 (a), Class IV 87, 461	Intragastric: LD_{50} mouse 2500, LD_{50} rat 8700 Detection: weighing method
o-Nitroaniline+ $o\text{-}NO_2C_6H_4NH_2$ MAC_{wz} 0.5 (a), Class II $TSEL_{hw}$ 0.006 45, 512, 549	Intraabdominal: LD_{100} rat 800 Methemoglobin former Affects central nervous system Detection: colorimetry; detection limit 1 μg in analytical volume

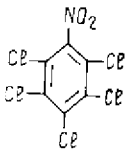
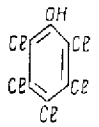
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions. Action(s), Method(s) of Detection
p-Nitroaniline+ p-$NO_2C_6H_4NH_2$ MAC_{wz} 0.1 (a), Class I $TSEL_{hw}$ 0.006 45, 512, 549	Intraabdominal: LD_{100} rat 600 Inhalation: Lim_{ac} rat 10 4 h (16) Methemoglobin former Affects central nervous system Detection: colorimetry; detection limit 1 μg in analytical volume
p-Nitroanisole (1-methoxy-4-nitrobenzene) p-$CH_3OC_6N_4NO_2$ MAC_{wz} 3 (v), Class III 462, 537	Intragastric: LD_{100} mouse 3500; LD mouse <750 Inhalation: LC mouse <10—30 2 h Affects central nervous system Detection: colorimetry; detection limit 2 μg in analytical volume
p-Nitrobenzoic acid  $TSEL_{wz}$ 4 156	Intragastric: LD_{50} rat 5000 Intratracheal: LD rat <50 Detection: gas—liquid chromatography
m-Nitrobenzotrifluoride  MAC_{wz} 1 (v), Class II 150	Intragastric: LD_{50} mouse 520 (317—759), LD_{50} rat 610 (455—817) Inhalation: LC_{50} mouse 880 (770—1010) 2 h. LC_{50} rat 870 (790—950); Lim_{ac} rat 33 4 h (1)
Nitrochlorobenzene+  ortho—isomer meta- isomer para—isomer MAC_{wz} 1 (v), Class II MAC_{ad} 0.004 MAC_w 0.05 67, 422	Intragastric: LD_{50} mouse 440 (para isomer), LD_{50} mouse 440 (ortho isomer), LD_{50} rat 555 (para isomer), LD_{50} rat 339 (ortho isomer), LD_{50} rat 420 (meta isomer), LD_{50} rabbit 280 (ortho isomer) Affects central nervous system; methemoglobin former Detection: photometry; detection limit 0.2 μg in analytical volume
Nitrocyclohexane 	Intragastric: LD_{50} mouse 250 Inhalation: LC_{100} mouse 10 2 h; LC_{50} rat 150 4 h

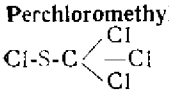
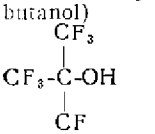
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 1 (v), Class II MAC_w 0.1 185, 462	Has irritant, neuro- and hepatotoxic actions Detection: colorimetry; detection limit 1 μg in analytical volume
Nitroethane $CH_3CH_2NO_2$ MAC_{wz} 30 (v), Class IV MAC_w 1 312, 454	Intragastric: LD_{50} mouse 860±104, LD_{50} rat 1100±97 Inhalation: LC mouse 19 500 2 h; Lim_{ac} rabbit 1000 40 min (2) Narcotic Detection: colorimetry; detection limit 20 μg in analytical volume
Nitrogen oxides (as NO_2) MAC_{wz} 5 (v), Class II MAC_{hw} 0.085 MAC_{ad} 0.085 1, 6, 464	Inhalation: LC_{50} rat 690—850 25 min; Lim_{ir} man 150 4 min, Lim_{ir} man 90 15 min; Lim_{olf} 10 Irritates lower respiratory tract Detection: colorimetry; detection limit 1 μg in analytical volume
Nitroform (trinitromethane) $CH(NO_2)_3$ MAC_{wz} 0.5 (v), Class II MAC_w 0.01 463, 472	Intragastric: LD_{100} mouse 300 Inhalation: LC_{50} mouse 800 2 h; Lim_{ac} cat 40 1 h (4), Lim_{ac} rat 50 1 h (1); Lim_{ir} man 12 Detection: colorimetry; detection limit 0.5 μg in analytical volume
Nitromethane CH_3NO_2 MAC_{wz} 30 (v), Class IV MAC_w 0.005 289, 454	Intragastric: LD_{50} mouse 950±122, LD_{50} rat 940±80 Inhalation: LC mouse 18 000 2 h; Lim_{ac} rabbit 1000 40 min (2) Narcotic; has convulsive action Detection: polarography; detection limit 0.2 μg per 1 ml of solution
Nitrophene (containing up to 72% alkyl phenols)  ($Al_c = C_1—C_5$) MAC_{wz} 1 (a), Class II 134	Intragastric: LD_{50} mouse 450, LD_{50} rat 700; LD_{100} cat 300; LD rabbit 3000 On skin: LD rat <2000, LD rabbit <5000 Inhalation: LC cat 620 4 h; Lim_{ac} cat 13 4 h (4) Detection: photometry; detection limit 5 μg in analytical volume
Nitrophoska containing nitric and sulfuric acids MAC_{wz} 5 (a), Class III 41, 468	Intragastric: LD_{50} mouse 3700, LD_{50} rat 8800 Inhalation: LC rat <280 4 h Detection: weighing method
Nitrophoska containing no chlorine MAC_{wz} 2 (a), Class III 41, 468	Intragastric: LD_{50} mouse 2300, LD_{50} rat 6500 Detection: weighing method

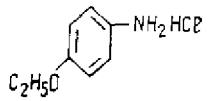
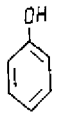
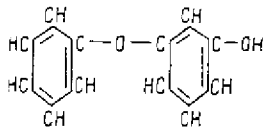
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Nitrophoska containing sulfates MAC_{wz} 2 (a), Class III 41, 468	Intragastric: LD_{50} mouse 2900, LD_{50} rat 7900 Detection: weighing method
Nitrophoska containing phosphates MAC_{wz} 2 (a), Class III 41, 468	Intragastric: LD_{50} mouse 1500, LD_{50} rat 4800 Detection: weighing method
2-Nitropropane $CH_3\text{-}CH(NO_2)\text{-}CH_3$ MAC_{wz} 30 (v), Class IV MAC_w 1 312, 360	Inhalation: LC_{50} mouse 10 000 2 h; Lim_{ac} rat 100 1 h (4) Narcotic Detection: colorimetry; detection limit 20 mg/m³
Nitroxylene+ $(CH_3)_2C_6H_3NO_2$ MAC_{wz} 5 (v), Class II $TSEL_{hw}$ 0.008 45, 118	Inhalation: LC mouse <1500 5 h; Lim_{ac} rabbit 120—200 40 min (2); Lim_{ir} rabbit 10 (7) Affects central nervous system; methemoglobin former Detection: photometry; detection limit 5 μg in analytical volume
Nonyl alcohol (octylcarbinol) $CH_3(CH_2)_7CH_2OH$ MAC_{wz} 10 (v+a), Class III MAC_w 0.01 82, 462	Intragastric: LD_{50} mouse 19 000±3000 Inhalation: LC_{50} mouse 5500±1500 2 h Detection: colorimetry; detection limit 5 μg in analytical volume
Octachlorotetrahydro-endo-methyleneindan (chlorindan)+  MAC_{wz} 0.01 (v+a), Class I 175, 464	Intragastric: LD_{50} mouse 250, LD_{50} rat 390 On skin: LD rabbit 250 Inhalation: LC cat 100—200 6 h Detection: colorimetry; detection limit 0.5 μg in analytical volume
Octafluoroamyl alcohol $CHF_2CF_2CF_2CF_2CH_2OH$ MAC_{wz} 20 (v), Class IV 29, 468	Inhalation: LC_{50} mouse 10 500 2 h; Lim_{ac} rabbit 1150 40 min (2) Detection: photometry; detection limit 1.4 kg in analytical volume
Octafluorocyclobutane (freon 318S) C_4F_8 MAC_{wz} 3000 (v), Class IV 312	Inhalation: CL mouse <620 000 2 h Detection: colorimetry; detection limit 0.002 μg per 5 ml of solution
Octafluorodichlorocyclohexane $C_6F_8Cl_2$	Inhalation: LC_{50} mouse 980 (680—1410) 2 h, LC_{50} mouse 910 (710—1160)[1] 2 h;

[1] Technical — grade product

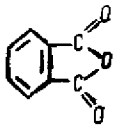
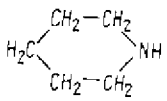
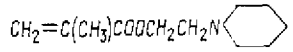
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 1 (v), Class II 463, 489	Lim_{ac} mouse 50 2 h (4, 15) Detection: colorimetry; detection limit 100 μg in analytical volume
Octamethyltetramide of pyrophosphoric acid (octamethyl)+  MAC_{wz} 0.02 (v+a), Class I 53, 464	Intragastric: LD rat 3 Intraocular: LD rabbit 5 On skin: LD rabbit 20 Inhalation: LC_{100} rat 8—10 4 h Detection: photometry; detection limit 0.5 μg in analytical volume
Octyl alcohol (octanol) $CH_3(CH_2)_6CH_2OH$ MAC_{wz} 10 (v+a), Class III MAC_w 0.05 468, 543	Intragastric: LD_{50} mouse 4000 Inhalation: LC rat <180—350 2 h Has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Octyl alcohol, secondary $CH_3CH(OH)(CH_2)_5CH_3$ 399, 525	Intragastric: LD_{50} mouse 12 400 (11 376—13 516), LD_{50} 7370 (6824—7960) Detection: chromatography
Octyl alcohol, tertiary $CH_3(CH_2)_4C(CH_3)_2OH$ 399	Intragastric: LD_{50} rat 2200 (1864—2464)
Octyl 2,4-dichlorophenoxyacetate  MAC_{wz} 1 (v+a), Class II 468, 517	Intragastric: LD_{50} mouse 1650 (1400—1900), LD_{50} mouse 1200 (900—1596) On skin: LD rabbit 2000 Detection: colorimetry; detection limit 100 μg in analytical volume
Octyl iodide (1-iodoctane) $C_8H_{17}I$ 45	Intraabdominal: LD_{50} mouse 1416 (1142—1690), LD_{50} rat 1982 (1634—2329) Detection: colorimetry; detection limit 5 μg per 6 ml of analytical volume
Oil shales (ash) MAC_{wz} 4 (a), Class IV 468	Intragastric: LD_{50} mouse 20 000 Intraabdominal: LD_{50} mouse 8250 Detection: weighing method
Oxacillin $C_{19}H_{18}N_3NaO_5S \cdot H_2O$ MAC_{wz} 0.05 (a), Class I 155, 469	Intragastric: LD_{20} mouse 6500; LD rat <10 000 Inhalation LC rat <100 4 h Detection: colorimetry; detection limit 5 μg per 1 ml of solution
Ozone O_3 MAC_{wz} 0.1 (v), Class I 283, 462	Inhalation: LC_{50} mouse 46 2 h, LC_{50} rat 28 2 h Has irritant properties Detection: colorimetry; detection limit 0.4 μg in analytical volume

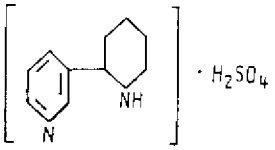
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Pentachloroacetone $Cl_3C{=}C{=}CHCl_2$ ‖ O MAC_{wz} 0.5 (v), Class II 295, 463	Intragastric: LD_{50} rat 200 Inhalation: LC_{50} mouse 450 (390—510) 2 h; Lim_{ac} mouse 20—30 2 h (1); Lim_{ir} man 1 Has irritant properties Detection: colorimetry; detection limit 0.3 μg in analytical volume
Pentachlorofluoroethane (freon 115) $CClF_2CF_3$ MAC_{wz} 3000 (v), Class IV 169, 460	Inhalation: LC mouse <1 907 000 2 h Narcotic Detection: thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume
Pentachloronitrobenzene  MAC_{wz} 0.5 (v+a), Class II $TSEL_{hw}$ 0.01 45, 370	Intragastric: LD_{50} mouse 1400, LD_{50} rat 1300 Inhalation: LC_{50} mouse 2000, LC_{50} rat 1400; Lim_{ac} rat 50 Affects cardiovascular and central nervous systems Detection: photometry; detection limit 0.1 μg in analytical volume
Pentachlorophenol  MAC_{wz} 0.1 (v+a), Class I $TSEL_{hw}$ 0.02 71, 466	Intragastric: LD_{50} mouse 130 (106—161), LD_{50} rat 184 (148—220) On skin: LD_{50} rat 96 (73—120) Inhalation: LC_{50} mouse 225 (165—285) 2 h, LC_{50} rat 355 (295—415); Lim_{ac} rat 42 4 h (24) Affects cardiovascular system, liver and kidneys Detection: photometry; detection limit 2 μg in analytical volume
Pentachlorothiophenol, zinc salt (renacit IV) $C_{12}Cl_{10}S_2Zn$ MAC_{wz} 2 (a), Class III 385, 462	Intragastric: LD mouse <10 000 Inhalation: LC rat <10 Detection: colorimetry; detection limit 9.6 μg in analytical volume
Pentadecylamine $C_{15}H_{31}NH_2$ MAC_{wz} 1 (v), Class II 191, 463	Intragastric: LD_{50} mouse 520 (452—598), LD_{50} rat 660 (545—799) Inhalation: LC_{50} mouse 240 (160—350), LC_{50} rat 900 (600—1350) 4 h; Lim_{ac} rat 10 4 h (1) Lowers blood pressure; damages blood vessels Detection: photometry; detection limit 1 μg in analytical volume

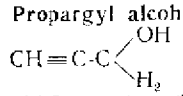
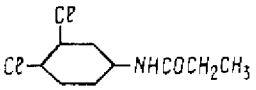
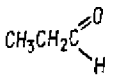
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Pentafluoropropionic acid CF_2CF_3COOH MAC_{wz} 2 (v), Class III 45, 149	Intragastric: LD_{50} rat 750 Inhalation: LC_{50} mouse 2100 2 h, LC_{50} rat 155 000 2 h; Lim_{ac} rat 2700 1 h (1); Lim_{ir} man 350—400 Has irritant properties Detection: colorimetry; detection limit 0.5 μg in analytical volume
Perchloromethyl mercaptan  MAC_{wz} 1 (v), Class II 101, 466	Inhalation: LC_{50} mouse 296±43 2 h; LC_{100} rat 260 4 h; Lim_{ac} mouse 46 (1); Lim_{olf} man 1.8 Narcotic Detection: colorimetry; detection limit 1 μg in analytical volume
Perfluoroacetone dihydrate+ $(CF_3)_2CO \cdot 2H_2O$ MAC_{wz} 2 (v), Class III 219, 312	Inhalation: LC_{50} mouse 2400±280 2 h, LC_{50} rat 3800±300 4h; Lim_{ir} rabbit 60 15 min (7), Lim_{ir} man 30; Lim_{olf} 8—15 Detection: photometry; detection limit 0.002 mg per 5 ml of solution
Perfluoroadipodinitrile $NC(CF_2)_4CN$ MAC_{wz} 0.1 (v), Class I 173	Intragastric: LD_{50} mouse 1955, LD_{50} rat 2917 Inhalation: LC_{50} mouse 140 4 h, LC_{50} rat 62 4 h; Lim_{ac} rat 9—10 4 h (1, 8, 15)
Perfluorobutyl alcohol (perfluorobutanol)  MAC_{wz} 20 (v), Class IV 284	Intragastric: LD_{50} rat 3630 Inhalation: LC_{50} mouse 10 230 (8200—12 790) 2 h; Lim_{ac} rat 1000—1500 4 h (1, 7, 8, 10) Has irritant properties
Perfluorodibutyl ether $(C_4F_9)_2O$ MAC_{wz} 1000 (v), Class IV 169	Intragastric: LD rat >18 000 Inhalation: LC_{50} mouse 49 500 2 h, LC_{50} rat 80 000 4 h; Lim_{ac} rat 10 400 4 h (1, 7, 26)
Perfluoroglutarodinitrile $NC(CF_2)_3CN$ MAC_{wz} 0.05 (v), Class I 173	Intragastric: LD_{50} mouse 997, LD_{50} rat 2600 Inhalation: LC_{50} mouse 58 4 h, LC_{50} rat 67 4 h; Lim_{ac} rat 9—10 4 h (1, 8, 15)
Perfluoroisobutylene (octafluoroisobutylene) $(CF_3)_2C=CF_2$ MAC_{wz} 0.1 (v), Class I 144, 312	Inhalation: LC_{100} mouse 15 2 h; LC mouse <8 2 h; LC_{100} rat 18 2 h; LC rat <10 2 h; LC_{100} rat 15 min; LC cat 25—35 2 h; Lim_{ac} rat 2—3 6 h (33) Irritates lower respiratory tracts Detection: photometry; detection limit 0.002 μg in analytical volume

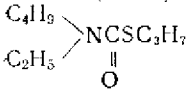
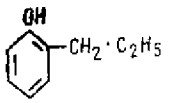
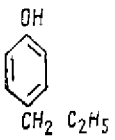
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions. Action(s), Method(s) of Detection
p-Phenetidine (p-aminophenetole)+  MAC_{wz} 0.2 (v), Class II 467, 510	Intragastric: LD_{50} mouse 540 (450—630), LD_{50} rat 580 (500—640) Inhalation: LC_{100} rat 250 4 h; Lim_{ac} rat 4.2 4 h (16) Methgemoglobin former; affects liver, lungs and spleen Detection: polarography; detection limit 1 μg in analytical volume
p-Phenetidine chloride  MAC_{wz} 0.5 9 a), Class II MAC_w 0.02 467, 510	Intragastric: LD_{50} mouse 1180 (1090—1280), LD_{50} rat 2080 (1850—2310) Inhalation: Lim_{ac} rat 10 4 h (16) Methgemaglobin former; affects liver, lungs and spleen Detection: polarography; detection limit 1 μg in analytical volume
Phenol (oxybenzene, carbolic acid)+  MAC_{wz} 0.3 (v), Class II MAC_{hw} 0.01 MAC_{ad} 0.01 MAC_w 0.001 125, 176, 419, 458	Intragastric: LD_{50} mouse 427 (395—458), LD_{50} rat 512 (455—568) Subcutaneous: LD_{50} mouse 510±30, LD_{50} rat 670±75 On skin: LD_{50} rat 1500 (1200—1800) Inhalation: LC_{50} rat 330 (260—420) 2 h Affects nervous system; has irritant and cauterizing actions Detection: colorimetry; detection limit 4 μg in analytical volume
m-Phenoxyphenol+  MAC_{wz} 1 (v), Class II 215	Intragastric: LD_{50} mouse 493 (460—526), LD_{50} rat 1211 (1120—1302); Lim_{ac} rat 17 (27) On skin: LD_{50} rat 2750 (2579—2930) Inhalation: LC mouse, rat and guinea pig <110 4 h; Lim_{ac} rat 9 4 h (1, 27) Detection: photometry; detection limit 5 μg in analytical volume
Phenylaminoethyl methacrylate  398	Intragastric: LD_{50} 5660 (4814—6506)

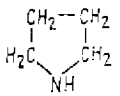
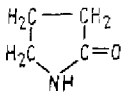
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
N-Phenyl-N,N-dimethylurea (phenuron)	Intragastric: LD_{50} guinea pig 3200, LD_{50} rat 7550; Lim_{ac} 300 (37) Has irritant propertis and affects nervous system
$TSEL_w$ 0.2 313	
Phenylmethyldichlorosilane $C_6H_5CH_3SiCl_2$ MAC_{wz} 1 (v), Class II 190, 203	Intragastric: LD mouse <100 Subcutaneous: LD_{100} mouse 100 Intraabdominal: LD_{100} mouse 100, LD_{100} rat 100 Inhalation: LC_{100} mouse 200—300 2 h; LC mouse <20—40 2 h Detection: colorimetry; detection limit 50 μg in analytical volume
N,N-m-Phenylenedimaleimide 148	Intragastric: LD_{50} mouse 250, LD_{50} rat 1370
Phosgene $C(=O)Cl_2$ MAC_{wz} 0.5 (v), Class II 60, 462	Inhalation: LC rabbit 720 15 min, LC cat 190 15 min, LC dog 600 15 min, LC man 360 30 min Causes acute toxic edema of lungs, circulatory disturbances and hypoxemia Detection: colorimetry; detection limit 1 μg in analytical volume
Phosphoric anhydride P_2O_5 MAC_{wz} 1 (a), Class II 12, 454	Inhalation: LC rabbit 5000—7000 2—3 h Has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
Phosphorus oxychloride (phosphoryl chloride) $POCl_3$ MAC_{wz} 0.05 (v), Class I 279, 469	Intragastric: LD_{50} rat 380 Inhalation: LC_{50} rat 71 (62—80) 4 h; Lim_{ac} rat 6 4 h (1, 8, 11); Lim_{ir} rat 1 1 h (7), Lim_{ir} man 1 Has irritant and necrotizing properties Detection: colorimetry; detection limit 2 μg in analytical volume
Phosphorus pentoxide+ PCl_5 MAC_{wz} 0.2 (v), Class II 279, 469	Intragastric: LD_{50} rat 600 Inhalation: LC_{50} rat 205 (152—283) 4 h; Lim_{ac} rat 40 4 h (1, 8); Lim_{ir} rat 8 4 h (7). Lim_{ir} man 10 Has irritant and necrotizing properties Detection: colorimetry; detection limit 2 μg in analytical volume

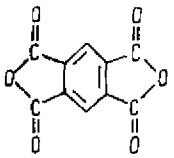
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Phosphorus trichloride+ PCl_3 MAC_{wz} 0.2 (v), Class II 279, 469	Intragastric: LD_{50} rat 550 (470—643) Inhalation: LC_{50} rat 225 (173—287) 4 h; **Lim_{ac} rat 10 4 h (1, 8, 11); Lim_{ir}** rat 5 4 h (7), **Lim_{ir} man 4** Has irritant and necrotizing actions Detection: colorimetry; detection limit 2 μg in analytical volume
Phthalic anhydride  MAC_{wz} 1 (v+a), Class II MAC_{hw} 0.1 MAC_{ad} 0.1 188, 289	Intragastric: LD_{50} mouse 1500, LD_{40} rat 1500—200 Intratracheal: LD rat <30 Inhalation: LC rat <100 2.5 h Has irritant properties Detection: fluorescence measurement; detection limit 1 μg in analytical volume
Picolines (isomers mixture) $CH_3C_5H_4N$ MAC_{wz} 5 (v), Class III 351, 464	Inhalation: Lim_{ac} rabbit 330 40 min (2); Lim_{ir} man 5 Has irritant propertis; affects nervous system, liver and kidneys Detection: colorimetry; detection limit 10 μg in analytical volume
Piperazine adipate  MAC_{wz} 5 (a), Class III 471	Intragastric: LD_{50} mouse 8000 (7500—8500), LD_{16} rat 12 000 Intraabdominal: LD_{50} mouse 1640 (1000—2600)
Piperidine+  MAC_{wz} 0.2 (v), Class II MAC_w 0.06 34	Intragastric (8% solution): LD_{50} mouse 360 (290—380) (8% solution), LD_{50} 371 (307—449), LD_{50} rabbit 145 (105—157) On skin: LT_{50} mouse 120 (80—170) Inhalation: LC_{50} mouse 6500 (5000—10 700); Lim_{ac} rat 20 4 h (1); Lim_{ir} man 50 Has irritant properties
Piperidylethyl methacrylate  398	Intragastric: LD_{50} rat 3532 (2635—4428)

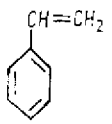
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
3(2-Piperidyl)pyridyl sulfate (anabasine sulfate)  MAC_{wz} 0.1 (v+a), Class I 224	Intragastric: LD_{50} rat 210 (185—235), LD_{50} mouse 4250 Intraabdominal: LD_{50} cat 5600 Inhalation: LC_{50} rat 60 4 h Neuralpoison; affects intermediate ganglia of autonomous nervous system
Piperylene $CH_3CH=CH-CH=CH_2$ MAC_{wz} 40 (v), Class IV 396	Inhalation: LC_{50} mouse 1100 (9760—12 397) 2 h, LC_{50} rat 140 000 (97 200—201 600) 2 h; Lim_{ac} rat 4000 4 h (4); Lim_{ir} man 1000 1 min; Lim_{orl} man 6
Polychloropinene (complex mixture of bicyclic compounds)+ MAC_{wz} 0.2 (v+a), Class II MAC_w 0.2 289, 520	Intragastric: LD_{50} mouse 240, LD_{50} rat 350 On skin: LD_{100} rabbit 1000 Inhalation: LC_{50} cat 60 4 h Affects central nervous system Detection: photometry; detection limit 1.5 μg in analytical volume
Polyethylene (low pressure) $(-CH_2-CH_2-)\cdot p$ MAC_{wz} 10 (a), Class III 384, 461	Intragastric: LD mouse >7000 Inhalation: LC rabbit and rat >100 2 h Has irritant properties Detection: weighing method
Polyformaldehyde $(-CH_2-O-)\cdot p$ 80, 461	Inhalation: LC rat >730 2 h Has irritant properties Detection: weighing method
Polymarcin (composition: 40% zinc ethylenebisdithiocarbamate, 20% manganese ethylenebisdithiocarbamate and 40% ethylenethiuramdisulfide) MAC_{wz} 0.5 (a), Class II 259, 469	Intragastric: LD_{50} rat 3200, LD_{50} rabbit 2250 On skin: LD rabbit >1000; Lim_{ac} rat and cat 20 4 h (39, 40) Detection: colorimetry; detection limit 15 μg in analytical volume
Polypropylene MAC_{wz} 10 (a), Class III 140, 461	Intragastric: LD mouse >8000 Inhalation: LC rat >100 2 h, LC rabbit >100 2 h Has irritant properties Detection: weighing method
Polyvinyl chloride $(-CH_2-\underset{\displaystyle Cl}{\underset{|}{CH}}-)\cdot p$ MAC_{wz} 6 (a), Class III 114, 468	Intragastric: LD mouse >5000 Inhalation: LC rat >300—400 4 h Intratracheal: LD rat >50 Has irritant properties Detection: weighing method

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Potassium xanthogenate butyl ether $C_4H_9OCS_2K$ MAC_{wz} 10 (a), Class III MAC_w 0.001 24	Intragastric: LD_{50} rat 456 (398—531); Lim_{ac} rat 40 (1) Inhalation: LC_{50} rat 7690 (7030—8320) 2 h; Lim_{ac} rat 2500 2 h (1)
Propargyl alcohol  MAC_{wz} 1 (v), Class II 443, 462	Intragastric: LD_{50} mouse 53±3 Inhalation: LC_{50} mouse 1500—2000, LC_{50} rat 1600—2000 2 h Narcotic; has irritant properties Detection: colorimetry; detection limit 4 μg in analytical volume
Propionic acid 3,4-dichloroaniline (propanide)  MAC_{wz} 0.1 (a), Class I 303	Intragastric: LD_{50} mouse 675 (478—872), LD_{50} rat 2500 (2130—2870) On skin: LD rat and rabbit <2000 Inhalation: LC rat and cat <25 4 h; Lim_{ac} rat and cat 15 4 h (16, 27) Detection: chromatography; detection limit 5 μg in analytical volume
Propionic aldehyde  MAC_{wz} (v), Class III 435, 464	Intragastric: LD_{50} rat 1410 Inhalation: LC_{50} mouse 21 800 (17 000—27 900); 2 h; NC mouse 10 000 2 h; Lim_{ac} rabbit 1040 40 min (7); Lim_{ir} man 14—16; Lim_{air} 1 Has irritant properties Detection: colorimetry; detection limit 2 μg in analytical volume
Propyl alcohol $CH_3CH_2CH_2OH$ MAC_{wz} 10 (v), Class III MAC_{hw} 0.3 MAC_{ad} 0.3 MAC_w 0.25 245, 422	Inhalation: Lim_{ac} rabbit 50 000 40 min (2) Narcotic: has irritant properties and damages eyes Detection: paper chromatography; detection limit 0.5 μg in analytical volume
Propylamine $CH_3CH_2CH_2NH_2$ MAC_{wz} 5 (v), Class III MAC_w 0.5 45, 127	Intragastric: LD_{50} rat 580 Inhalation: LC_{50} mouse 2500 2 h, LC_{50} rat 1738 2 h; Lim_{ac} rat 10 4 h (4, 7) Affects central nervous system
Propyl bromide $CH_3(CH_2)_2Br$ 174	Intraabdominal: LD_{50} mouse 2530, LD_{50} rat 2950 Narcotic; causes organic damages to nervous system Detection: colorimetry

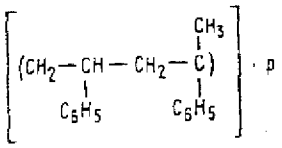
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Propylene oxide (1,2-epoxypropane, methyl oxirane)  MAC_{wz} 1 (v), Class II 14, 333, 358	Intragastric: LD_{50} rat 380 (317—456), LD_{50} mouse 440 (365—532) Intraabdominal: LD_{50} rat 150 (126—174), LD_{50} mouse 175 (149—201) On skin: LT_{50} mouse 3.1 (2.7—4.9) Inhalation: LC_{50} mouse 4500 (3600—5700) 2 h; Lim_{ac} rat 20 (1, 12) 4 h Has irritant properties Detection: photometry; detection limit 0.2 μg in analytical volume
β-Propyl-α-ethylacrolein (2-ethylhexanal) $C_3H_7CHC(C_2H_5)CHO$ MAC_{wz} 3 (v), Class III 255, 283	Intragastric: LD_{50} mouse 3550 (2540—4970), LD_{50} rat 6600 (5100—8600) Inhalation: NC_{50} mouse 600—830 2 h; Lim_{ac} mouse 32 63 2 h, Lim_{ac} 33∓6 2 h (4), Lim_{ir} man 5; Lim_{olf} 1.6
S-Propyl-N-ethyl-N-butylthiocarbamate (tillam)  MAC_{wz} 1 (v+a), Class II 469, 523	Intragastric: LD_{50} mouse 750, LD_{50} rat 1125 On skin: LD_{50} rat 2000; LD rabbit 1500 Inhalation: Lim_{ac} rat 9 4 h
Propyl iodide $CH_3CH_2CH_2I$ 397	Intraabdominal: LD_{50} mouse 297 (249—345), LD_{50} rat 650 (625—674), LD_{50} guinea pig 595 (469—720) Has irritant properties and affects central nervous system Detection: colorimetry; detection limit 5 μg per 6 ml of analytical volume
o-Propylphenol  514	Intragastric: LD_{50} mouse 356±37, LD_{50} rat 541±51, LD_{50} guinea pig 450
p-Propylphenol  514	Intragastric: LD_{50} mouse 348±16, LD_{50} rat 540±85, LD_{50} guinea pig 675

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Propyl propionate $CH_3CH_2COOC_3H_7$ MAC_{wz} 70 (v), Class IV 293, 312	Inhalation: LC_{50} mouse 24 000 2 h; Lim_{ac} mouse 1500 40 min, Lim_{ac} rabbit 1500—2000 40 min (2), Lim_{ac} rabbit 500—1000 40 min (4); Lim_{ir} man 1500, Lim_{ir} cat 500 30 min (28, 29) Narcotic; causes edema of lungs Detection: photometry; detection limit 10 mg/m³
Pyrene $C_{16}H_{10}$ $TSEL_{wz}$ 0.1 320	Intragastric: LD_{50} mouse 800 (657—964), LD_{50} rat 2700 (2400—2900) Inhalation: LC_{50} rat 170 (68—272) 4 h Detection: fluorescence measurement; detection limit $1 \cdot 10^{-2}$ μg per 1 ml of analytical volume
Pyridine  MAC_{wz} 5 (v), Class II MAC_{hw} 0.08 MAC_{ad} 0.08 MAC_w 0.2 351	Inhalation: LC rabbit and cat <5000 2 h; Lim_{ac} rabbit 370 40 min (2); Lim_{ir} man 5 Has irritant properties; affects nervous system, liver and kidneys
Pyrrolidine+  MAC_{wz} 0.1 (v), Class II 290, 469, 541	Intragastric: LD_{50} rat 250; LD mouse <250; LD_{63} guinea pig 250, LD_{70} rabbit 250 On skin: LT_{50} mouse 60; LD rabbit <500 Inhalation: LC_{50} mouse 1500 2 h; Lim_{ac} rat 30 4 h (1) Has irritant properties Detection: colorimetry; detection limit 2 μg in analytical volume
α-Pyrrolidone  $TSEL_{wz}$ 6 10, 184	Intragastric: LD_{50} rat 7500 Detection: chromatography

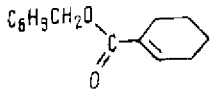
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Pyrromelitic acid dianhydride  MAC_{wz} 5 (a), Class III 161, 464	Intragastric: LD_{50} mouse 2400±400, LD_{50} rat 2200±200 Inhalation: LC rat 150 4 h; Lim_{ac} rat 70 4 h (1) Has irritant properties
Renacit II (alloy of trichlorothiophenol with disulfide and paraffin) $C_6H_3Cl_3S$ MAC_{wz} 5 (a), Class III 385, 468	Intragastric: LD_{50} mouse 2250 Inhalation: LC rat <20—30 Detection: weighing method
Resorcinol m-monomethyl ether (m-methxyphenol)+ m-$CH_3OC_6H_4OH$ MAC_{wz} 0.5 (v), Class II 216	Intragastric: LD_{50} mouse 312 (292—334), LD_{50} rat 597 (572—623) On skin: LD_{50} rat 682 (554—830) Inhalation: LC_{50} mouse 11.5 4 h, LC_{50} rat 11.5 4 h; LC guinea pig <11.5 4 h; Lim_{ac} rat 3.2 4 h (1, 27) Has irritant properties Detection: photometry; detection limit 2 μg in analytical volume
Selenious anhydride SeO_2 MAC_{wz} 0.1 (a), Class I 29, 461	Inhalation: LC rabbit <20 2 h Has irritant properties Detection: colorimetry; detection limit 20 μg in analytical volume
Selenium (amorphous) Se_8 MAC_{wz} 2 (a), Class III 29, 461	Inhalation: LC rabbit <40 Has irritant properties Detection: colorimetry; detection limit 20 μg in analytical volume
Sodium cis-chloroacrylate (acrofol) Cl—C(=CH)—COONa MAC_{wz} 0.5 (a), Class III 35	Intragastric: LD_{50} mouse 595 (513—677), LD_{50} rat 540 (379—701), LD_{50} rabbit 400 (198—602) On skin: LD_{50} rat 3900 (3304—4596) Inhalation: LC_{50} rat 150 (126—174) 4 h; Lim_{ac} rat and rabbit 73 4 h (1, 24, 37)
Sodium cyanide NaCN 34	Intraabdominal: LD_{50} rat 4.7 (4.3—5.1)
Sodium iodide NaI 71	Intragastric: LD_{50} mouse 1000; LD rat 1600 On skin: LD rabbit <500 Inhalation: LC mouse <50 000 2 h Detection: weighing method

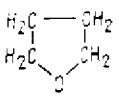
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Sodium N-methyldithiocarbamate (carbathione) $CH_3NHCSNa \cdot 2H_2O$ ‖ S MAC_{wz} 0.1 (a), Class I 282	Intragastric: LD_{50} mouse 340±25, LD_{50} mouse 145±9[1], LD_{50} rat 573±34, LD_{50} rat 444±72[1] On skin: LD_{50} rat 636 (623—669)
Sodium nitrite $NaNO_2$ $TSEL_{wz}$ 0.05 70	Intragastric: LD_{50} rat 200±4 Inhalation: LC_{50} rat 5.5±0.2 4 h; Lim_{ac} rat 1 4 h (20, 39)
Sodium pentachlorophenate C_6Cl_5ONa MAC_{wz} 0.1 (v+a), Class I MAC_w 5 324, 466	Intragastric: LD_{50} mouse 197±14.5; LD_{100} rat 545; LD rat 290; LD_{100} rabbit 328; LD guinea pig 260; LD guinea pig 168 On skin: LD_{50} mouse 124±8.4 Inhalation: LC_{50} mouse 240±28.6 2 h, LC_{50} guinea pig 341±42.5 2 h; Lim_{ac} guinea pig 35 4 h (27) Detection: colorimetry; detection limit 2 μg in analytical volume
Sodium thiocyanate (technical grade) NaSCH MAC_{wz} 50 (a), Class IV 328	Intragastric: LD_{50} mouse 362±25, LD_{50} rat 1180±80 Intratracheal: LD_{50} rat 232±34 Intravenous: LD rabbit 500 On skin: LD rat <1250 Inhalation: LC mouse and rat <3500 2 h
Streptomycin sulfate $(C_{21}H_{39}N_7O_{12})_2 \cdot 3H_2SO_4$ MAC_{wz} 0.1 (a), Class I 304, 461	Intragastric: LD_{50} mouse 430 (328—522), LD_{50} rat 430 (394—465) Inhalation: LC rat <75 3 h Detection: weighing method
Strontium nitrate $Sr(NO_3)_2$ MAC_{wz} 1 (a), Class I 461, 558	Intragastric: LD_{50} mouse 1826 (1685—1966), LD_{50} rat 2750 (2447—3053) Inhalation: Lim_{ac} rat 74 4 h (1, 11) Detection: weighing method
Styrene (vinylbenzene)  MAC_{wz} 5 (v), Class III MAC_{hw} 0.003 MAC_{ad} 0.003 MAC_w 0.1 390, 467	Inhalation: LC_{50} mouse 9500 4 h; Lim_{ac} rabbit 250—2000 40 min (2); Lim_{elt} man 20 Narcotic; has irritant properties Detection: chromatography; detection limit 1 μg in analytical volume

[1] Technical — grade product

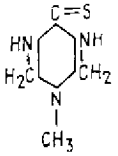
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Styrene-α-methylstyrene copolymer  MAC_{wz} 5 (a), Class III 43, 468	Intragastric: LD rat <12 500 Intratracheal: LD rat <25 Detection: weighing method
Sulfur chloride S_2Cl_2 $TSEL_{wz}$ 0.5 45, 409	Inhalation: Lim_{ac} rat 90—96 4 h (1, 11, 12); Lim_{ir} rat 9 (9), Lim_{ir} cat 10 1 h (28), Lim_{ir} man 5 Has irritant properties Detection: nephelometry and colorimetry
Sulfuric acid H_2SO_4 MAC_{wz} 1 (a), Class II MAC_{hw} 0.3 MAC_{sd} 0.1 283, 468	Inhalation: LC_{50} mouse 320 2 h, LC_{50} rat 510 2 h Has irritant properties Detection' colorimetry; detection limit 10 μg in analytical volume
Tellurium Te MAC_{wz} 0.01 (a), Class I MAC_w 0.01 228, 422	Intragastric: LD_{50} mouse 20 (15.7—24.3), LD_{50} rat 83 LD_{50} guinea pig 45, LD_{50} rabbit 67 Has irritant properties; affects liver and other parenchymatous organs Detection: spectrophotometry; detection limit 0.5 μg in analytical volume
Terephthalic acid (1,4-benzene-dicarboxylic acid)  MAC_{wz} 0.1 (v+a), Class I MAC_w 0.1 361, 469	Intragastric: LD_{40} mouse 10 000 Inhalation: LC rat <2—5 2 h Affects central nervous system Detection: colorimetry; detection limit 30 μg in analytical volume
Tetrabromoethane $CHBr_2$-$CHBr_2$ MAC_{wz} 1 (v), Class II 11, 307	Intragastric: LD_{50} mouse 269±44, LD_{50} rat 1100±106 On skin: LD_{50} rat 5250±110 Inhalation: LC_{50} rat 549±50 4 h Narcotic; affects liver and kidneys
Tetrachloroethane+ $Cl_2CHCHCl_2$ MAC_{wz} 5 (v), Class III MAC_w 0.2 326, 466	Intragastric: LD_{50} rat 800 Inhalation: LC_{50} mouse 4500 2 h; Lim_{ac} mouse 720 40 min (1); Lim_{ir} rat 18 2 h Narcotic; affects liver and kidneys Detection: photometry; detection limit 0.3 μg in analytical volume

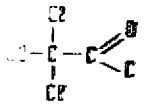
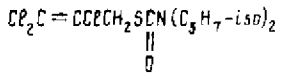
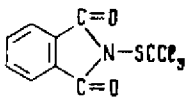
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Tetraethyl lead+ $Pb(C_2H_5)_4$ MAC_{wz} 0.005 (v), **Class I** MAC_w none 66, 460	Inhalation: LC mouse 5100 10 min Damages central nervous system, particularly cerebral cortex and thalamic and hypothalamic regions Detection: nephelometry; detection limit 1.5 μg in analytical volume
Tetrachloroethylene (perchloroethylene) $CCl_2=CCl_2$ MAC_{wz} 10 (v), Class III 72, 498	Inhalation: LC rat <100 000 4 h; Lim_{ac} rat 1000 4 h (5) Narcotic; affects liver and kidneys Detection: colorimetry; detection limit 0.5 μg in analytical volume
Tetrachloroheptane $Cl(CH_2CH_2)_3CCl$ MAC_{wz} (v), Class II MAC_w 0.0025 464, 498	Intragastric: LD rat 2500 Narcotic; affects liver Detection: colorimetry; detection limit 0.5 μg in analytical volume
Tetrachlorohexatriene+ $H_2C=C(Cl)-C(Cl)=C(Cl)-C(Cl)=CH_2$ MAC_{wz} 0.3 (v), Class II 56, 461	Intragastric: LD_{50} mouse 290 (235—344), LD_{50} rat 370 (322—418) On skin: LT_{50} mouse 91 Inhalation: LC_5 mouse 190 (104—271) 2 h, LC_{50} rat 670 (468—882); Lim_{ac} rat 48 4 h (1, 8) Detection: colorimetry; detection limit 0.5 μg in analytical volume
Tetrachlorononane $Cl(CH_2CH_2)_4CCl_3$ MAC_{wz} 1 (v+a), Class II MAC_w 0.003 464	Intragastric: LD_{50} rat 1 ml/kg Inhalation: LC_{100} rat 250 2 h; LC rat <100 2 h Narcotic; damages liver Detection: colorimetry; detection limit 0.5 μg in analytical volume
Tetrachloropentane $Cl(CH_2CH_2)_2CCl_3$ MAC_{wz} 1 (v), Class II MAC_w 0.005 464, 498	Intragastric: LD rat 1500 Narcotic; damages liver Detection: colorimetry; detection limit 0.5 μg in analytical volume
Tetrachloropropane $Cl(CH_2CH_2)CCl_3$ MAC_{wz} 1 (v), Class II MAC_w 0.01 464, 498	Intragastric: LD rat 4000 Narcotic; damages liver Detection: colorimetry; detection limit 0.5 μg in analytical volume
Tetrachloroundecane $Cl(CH_2CH_2)_5CCl_3$ MAC_{wz} 5 (v+a), Class III MAC_w 0.007 461,499	Intragastric: LD_{50} mouse 2000 Inhalation: LC rat <250; Lim_{ac} cat 50 1 h (4) Detection: colorimetry; detection limit 0.5 μg in analytical volume

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Tetracycline $C_{22}H_{24}N_2O_8$ MAC_{wz} 0.1 (a), Class II MAC_{hw} 0.01 MAC_{ad} 0.006 769, 554	Intragastric: LD_{50} mouse 5517 (5236—5798), LD_{50} rat 4250, LD_{50} guinea pig 1875 Inhalation: LC rat <100 5 h Causes allergic dermatitis and bronchial asthma Detection: colorimetry; detection limit 1 μg in analytical volume
Tetrafluoroethylene $CF_2=CF_2$ $TSEL_{wz}$ 20 460	Inhalation: LC_{50} mouse 143 000 2 h, LC_{50} rat 120 000 (113 000—147 200), 4 h, LC_{50} guinea pig 115 600 4 h; Lim_{ac} rat 5300 4 h (1, 7, 15) Detection: thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume
Tetrafluoro-(m-phenylene)dimaleimide 148	Intragastric: LD_{50} mouse 1650, LD_{50} rat 2100
Tetrafluoropropyl alcohol $CHF_2CF_2CH_2OH$ MAC_{wz} 20 (v), Class IV 30, 312	Inhalation: LC_{50} mouse 8600 2 h; Lim_{ac} rabbit 2800 40 min (2) Narcotic Detection: colorimetry; detection limit 0.002 mg in analytical volume
Tetrahydrobenzaldehyde C_6H_9CHO MAC_{wz} 0.5 (v), Class II MAC_w 0.1 $TSEL_{hw}$ 0.05 $TSEL_{ad}$ 0.05 274	Intragastric: LD_{50} rat 1050±35, LD_{50} mouse 1000, LD_{50} rabbit 1600, LD_{50} guinea pig 1750 Inhalation: LC_{50} mouse 556±14 4 h; LC rat <930 4 h; Lim_{ac} rat 50 4 h (1); Lim_{olf} man 0.14 Narcotic Detection: colorimetry, detection limit 3 μg per 1 ml of analytical volume; chromatography, detection limit 1 μg in analytical volume
Tetrahydrobenzyl cyclohexenecaroxylate  MAC_{wz} 1 (v), Class II $TSEL_{hw}$ 0.15 $TSEL_{ad}$ 0.15 274	Intragastric: LD_{50} rat 1670±39, LD_{50} mouse 1800, LD_{50} rabbit 2700, LD_{50} guinea pig 2900 Inhalation: LC mouse and rat <300 4 h; Lim_{ac} rat 100 4 h (1, 24); Lim_{olf} man 0.6 Narcotic Detection: colorimetry, detection limit 10 μg per 1 ml of analytical volume; chromatography; detection limit 2 μg on plate

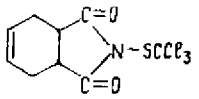
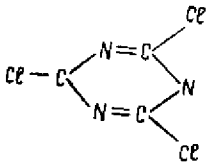
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Tetrahydrofuran (furanidine)  MAC_{wz} 100 (v), Class IV MAC_{hw} 0.2 MAC_{ad} 0.2 MAC_{w} 0.5 440, 464	Intragastric: LD_{20} rat 3000 Inhalation: LC_{50} rat 78 000 (51 400—100 800) 2 h; Lim_{ac} rat 20 000 4 h (1) Narcotic; has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Tetrahydroindene  $TSEL_{wz}$ 20 74	Intragastric: LD_{50} mouse 3500 (2230—4772) Intraabdominal: Lim_{ac} mouse 1.67 (1.12±2.5) (1) Inhalation: LC mouse <56 000 2 h; Lim_{ac} mouse 70±23 40 min (1) Lim_{tr} man 183; Lim_{olf} 2.5
Tetralin (tetrahydronaphthalene)  MAC_{wz} 100 (v), Class IV 45, 493	Inhalation: LC mouse <1000 2—7 h, LC rabbit <1000 2 h, LC cat <1000 4.5 h; Lim_{tr} man 1000 Narcotic; causes lens opacification Detection: titrimetry
Tetramethylthiuramdisulfide (thiuram, TMTD) $(CH_3)_2NC(=S)-S-S-C(=S)N(CH_3)_2$ MAC_{wz} 0.5 (a), Class II MAC_{w} 1 45, 278	Intragastric: LD_{50} mouse 1343 (1166—1521), LD_{50} rat 712 (636—788), LD_{50} rabbit 288 (185—391) On skin: LD rabbit 1000 Inhalation: LC cat and rabbit <780—810 4 h; Lim_{ac} cat and rat 150—300 4 h Increases sensitivity to alcohol; has irritant properties Detection: colorimetry; detection limit 7 μg in analytical volume
Tetranitromethane $C(NO_2)_4$ MAC_{wz} 0.3 (v), Class II MAC_{w} 0.5 168, 435	Inhalation: LC_{100} mouse 1000 2 h; Lim_{ac} rat 2—3 2 h, Lim_{ac} rat 3 2 h (4) Methemoglobin former Detection: gas-liquid chromatography
Thallium bromide $TlBr_3$ MAC_{wz} 0.01 (a), Class I	Intragastric: LD_{100} rat 35 Inhalation: LC rat <5 1 h Affects central and peripheral nervous systems, gastrointestinal tract and kidneys Detection: colorimetry; detection limit 2 μg in analytical volume

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Thallium iodide TlI_3 MAC_{wz} 0.01 (a), Class I 45, 365	Intragastric: LD_{100} rat 55 Inhalation: LC rat <5 1 h Affects central and peripheral nervous systems, gastrointestinal tract and kidneys Detection: colorimetry; detection limit 2 μg in analytical volume
Thiocarbonic acid diamide (thiourea) $NH_2C(S)NH_2$ 551	Intraabdominal: LD_{50} rat 3442±103
Thioglycolic acid (mercaptoacetic acid)+ $SH\text{-}CH_2\text{-}COOH$ MAC_{wz} 0.1 (v+a), Class I 343, 469	Intragastric: LD_{50} rat 120, LD_{50} mouse 250 (229—272) On skin: LD rabbit <80—90 Inhalation: LC mouse 7—8 2 h; Lim_{ac} rat 1—4 4 h (12) Affects skin and disturbs hematopoiesis Detection: colorimetry; detection limit 20 μg in analytical volume
Thiophene (thiofuran)  MAC_{wz} 20 (v), Class IV MAC_{hw} 0.6 MAC_w 2 270, 463	Intragastric: LD_{50} mouse 420 (350—510), LD_{50} rat 1400 (1100—1780) Inhalation: LC_{50} mouse 9500 (7600—11 900) 2 h; Lim_{ac} mouse 1000 2 h (4), Lim_{ac} rabbit 2000 40 min (2) Narcotic; has irritant properties Detection: nephelometry; detection limit 2 μg in analytical volume
Thiourea dioxide $CH_4SO_2N_2$ 551	Intragastric: LD_{50} rat 423±15
Titanium tetrachloride $TiCl_4$ MAC_{wz} 1 (v), Class II MAC_w 0.1 363, 461	Inhalation: LC_{50} mouse 100, LC_{50} rat 400 Has irritant properties Detection: colorimetry; detection limit 0.3 μg in analytical volume
Toluene (methylbenzene)  MAC_{wz} 50 (v), Class III MAC_{hw} 0.6 MAC_{ad} 0.6 MAC_w 0.5 243, 462	Inhalation: LC mouse 30 000—35 000 2 h; Lim_{ac} rabbit 3000—10 000 40 min (2) Narcotic; affects hematopoiesis has irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume

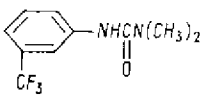
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
m-Toluic acid m-$CH_3C_6H_4COOH$ 33	Intragastric: LD_{50} mouse 1630 (1148—2315); LD rat <5000
Toluylenediamine+ $CH_3C_6H_8(NH_2)$ MAC_{wz} 2 (v+a), Class III 102, 465	Intragastric: LD_{50} rat 300 Inhalation: LC mouse 120—150 Methemoglobin former; causes hemolysis Detection: colorimetry; detection limit 1 μg in analytical volume
Triallylamine+ $(CH_2=CH_2-CH_2)_3N$ MAC_{wz} 1 (v), Class II 208, 469	Intragastric: LD_{50} mouse 620 (553—694), LD_{50} rat 2200 (1737—2376) Inhalation: LC_{50} rat 2800 (2000—3240) 4 h Detection: colorimetry detection limit 5 μg in analytical volume
Triazinethion  515	Intragastric: LD mouse, rat and guinea pig <5000
Tributyl phosphate+ $(C_4H_9O)_3PO$ MAC_{wz} 0.5 (v), Class II MAC_w 0.01 141, 460	Intragastric: LD_{50} mouse 1189±213, LD_{50} rat 3350±133 Intraabdominal: LD_{50} mouse 158±12, LD_{50} rat 215±27 On skin: LD rat <670 Inhalation: LC mouse <22 2 h, LC rat <22 4 h Has irritant properties; inhibits cholinesterase activity Detection: colorimetry detection limit 0.5 μg in analytical volume
Tributyltinmethacrylate $CH_2=C(CH_3)COOSn(C_4H_9)_3$ 490	Intragastric: LD_{50} mouse 210, LD_{50} rabbit 150, LD_{50} guinea pig 150
Trichloroacetic acid+ CCl_3COOH MAC_{wz} 5 (v+a), Class III 249	Intragastric: LD_{50} rat 8900 (7000—9900) On skin: LT_{50} mouse 129 (119—139) Inhalation: Lim_{ac} rat 43 4 h (1); Lim_{ir} rat 25 4 h (7), Lim_{ir} man 5—7 Has irritant properties

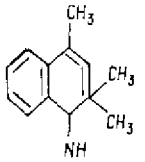
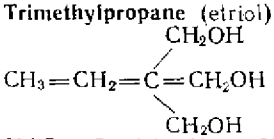
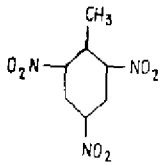
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
1,1,3-Trichloroacetone $CHCl_2COCH_2Cl$ MAC_{wz} 0.3 (v), Class II 297, 312	Inhalation: LC_{50} mouse 360±44 2 h, LC_{50} rat 390 2 h; Lim_{ac} mouse 40 2 h (1); Lim_{ir} man 0.8 Detection: colorimetry; detection limit 0.003 mg per 1 ml of solution
Trichloroacetyl chloride+  MAC_{wz} 0.1 (v), Class I 248, 461	Intragastric: LD_{50} rat 600 Inhalation: LC_{50} rat 475 (318—698) 4 h, LC_{50} mouse 445 (296—667); Lim_{ac} rat 10 4 h (1, 11, 15), Lim_{ac} rat 1—3 4 h (7, 9); Lim_{ir} man 0.6 Has irritant properties Detection: colorimetry; detection limit 0.1 μg in analytical volume
S-(2,3,3-Trichloroallyl)-N,N-di-(isopropyl)thiocarbamate (diphal)  MAC_{wz} 1 (v+a), Class II 322	Intragastric: LD_{50} mouse 832 (698—966), LD_{50} rat 1694 (1465—1923), LD_{50} cat 475[1] On skin: LD_{50} rat 3500 Inhalation: LC_{50} cat 400 4 h; LC rat <400 4 h; Lim_{ac} rat and cat 5—9 4 h (34)
Trichlorobenzene $C_6H_3Cl_3$ MAC_{wz} 10 (v), Class III $TSEL_{hw}$ 0.008 MAC_w 0.03 466, 507	Inhalation: LC rat <100 4 h Affects central nervous system, liver and kidneys Detection: photometry; detection limit 0.25 μg in analytical volume
Trichloroethylene $CHCl{-}CCl_2$ MAC_{wz} 10 (v), Class II MAC_{hw} 4 MAC_{ad} 1 MAC_w 0.5 27, 289	Inhalation: LC rat <50 5 h Narcotic; damages nervous system (predominantly trigeminal and optic nerves) and parenchymatous organs Detection: colorimetry; detection limit 0.3 μg per 2 ml of solution
Trichlorofluoromethane (freon 11) $CFCl_3$ MAC_{wz} 1000 (v), Class IV MAC_{hw} 100 MAC_{ad} 10 144, 169	Inhalation: LC_{50} mouse 346 700 2 h; Lim_{ac} rabbit 12 000 40 min (2) Narcotic Detection: thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume
N-Trichloromethylthiophthalimide (phthalan)  $TSEL_{wz}$ 2 251, 289	Intragastric: LD_{50} mouse 1546±120, LD_{50} rat 7540±876, LD_{50} rabbit 1115; Lim_{ac} rat 200 (42) Affects nervous system Detection: colorimetry; detection limit 1 μg per 2 ml of solution

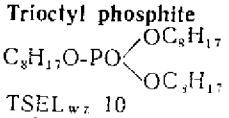
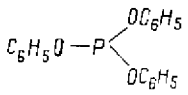
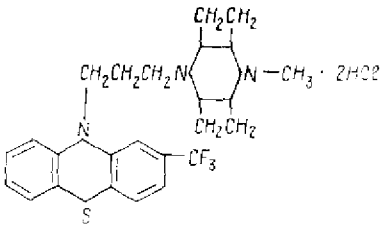
[1] Technical — grade product

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
N-Trichloromethylthiotetrahydrophthalimide (captan)  66	Intragastric: LD_{50} mouse 138±21, LD_{50} rat 2650±740, LD_{50} rabbit 740 Has irritant properties Detection: colorimetry; detection limit 2.5 μg per 2 ml of solution
Trichloromonosilane (silicochloroform, trichlorosilane) $SiHCl_3$ MAC_{wz} 1 (v), Class II 198, 462	Inhalation: LC_{50} mouse 1500—2000 2 h Has irritant properties Detection: colorimetry; detection limit 15 μg in analytical volume
1,2,3-Trichloropropane $CH_2—Cl—CH—Cl—CH—CH_2—Cl$ MAC_{wz} 2 (v), Class III MAC_w 0.07 312	Inhalation: LC_{50} mouse 3400 2 h, LC_{50} mouse 7000; Lim_{ac} rabbit 125 40 min (2) Narcotic; affects liver, heart and kidneys; has irritant properties Detection: colorimetry; detection limit 0.003 mg per 6 ml of solution
Tricresyl phosphate (more than 3% ortho isomers)+ $(CH_3C_6H_4O)_3PO$ MAC_{wz} 0.1 (a), Class I MAC_w 0.005 466, 555	Intragastric: LD_{50} mouse 3900±270 Causes diffuse organic lesions of central and peripheral nervous systems; impairs metabolism of vitamins B_1 and E; injures capillaries Detection: colorimetry; detection limit 12 μg in analytical volume
Tricresyl phosphate (less than 3% ortho isomers)+ $(CH_3C_6H_4O)_3PO$ MAC_{wz} 0.5 (a), Class II MAC_w 0.005 466, 555	Intragastric: LD mouse 7500±630 Causes diffuse organic lesions of central and peripheral nervous systems; impairs metabolism of vitamins B_1 and E; injures capillaries Detection: colorimetry; detection limit 12 μg in analytical volume
2,4,6-Trichloro-1,3,5-triazine (cyanuric chloride)  MAC_{wz} 0.1 (v), Class I 38, 312	Intragastric: LD_{50} mouse 350 (275—425), LD_{50} rat 485 (300—670) On skin: LD rabbit <200 Inhalation: LC_{100} mouse 10 (6.3—13.7) 2 h; Lim_{ac} mouse 0.6 2 h (1); Lim_{ir} man 0.3 Affects central nervous system, heart, liver and kidneys; has irritant properties Detection: photometry; detection limit 0.04 mg/m³
Triethanolamine $(CH_2CH_2OH)_3N$ MAC_w 1.4 78	Intragastric: LD_{50} mouse 7750, LD_{50} rat 8400, LD_{50} guinea pig 2200, LD_{50} rabbit 2200 Detection: colorimetry

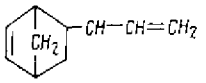
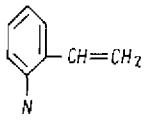
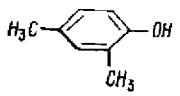
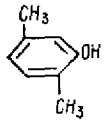
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Triethanolamine trimethacryl ether $[CH_2=C(CH_3)COOCH_2CH_2CH_2]_3$ 398	Intragastric: LD_{50} rat 11 163 (10 471—11 854)
Triethoxysilane $NSi(OC_2H_5)_3$ MAC_{wz} 1 (v), Class II 205, 464	Inhalation: LC_{50} mouse 500 2 h; Lim_{ac} mouse 5 (1) Narcotic; has irritant properties impairs respiration Detection: colorimetry; detection limit 1 μg in analytical volume
Triethylamine $(C_2H_5)_3N$ MAC_{wz} 10 (v), Class III $MAC_{a.w}$ 0.14 $MAC_{s.d}$ 0.14 MAC_w 2 206, 136, 422	Intragastric: LD_{50} mouse 545 (435—670) Inhalation: LC_{50} mouse 6000 2 h; Lim_{ac} rat 200 2 h (4), Lim_{ac} rat 100 2 h (7) Has irritant properties; damages parenchymatous organs Detection: photometry; detection limit 1 μg in analytical volume
Triethylene glycol diacrylate $CH_2=CHCOOCH_2CH_2OCH_2CH_2OCH_2CH_2OOCCH=CH_2$ 398	Intragastric: LD_{50} mouse 700 (592—828), LD_{50} rat 500 (407—615)
Triethylene glycol dimethacrylate $CH_2=C(CH_3)COOCH_2CH_2OCH_2CH_2OCH_2CH_2OOC(CH_3)=CH_2$ 398	Intragastric: LD_{50} rat 17 900 (15 980—20 020)
Trifluoroacetic acid CF_3COOH MAC_{wz} 2 (v), Class III 149, 312	Intragastric: LD_{10} rat 500 Inhalation: LC_{50} mouse 13 500 2 h, LC_{50} rat 10 000; Lim_{ac} rat 1500 1 h (1); Lim_{ac} man 250 Has irritant action damages lungs, liver and nervous system Detection: colorimetry; detection limit 0.5 μg in analytical volume
Trifluorobromomethane (freon 13B1) $CBrF_3$ MAC_{wz} 3000 v), Class IV 169, 460	Inhalation: LC mouse 2 000 000 2 h Narcotic Detection: thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume
1,1,1-Trifluoro-3-chloropropane (freon 253)+ $CF_3CH_2CH_2Cl$ MAC_{wz} 1 (v), Class II MAC_w 0.1 169, 461	Inhalation: LC_{50} mouse 800 (680—930) 2 h; LC_{100} rat 1800, LC_{100} rabbit 2300 Narcotic Detection: colorimetry; detection limit 1.4 μg in analytical volume
Trifluoroethane (freon 143) CH_3CF_3 MAC_{wz} 3000 (v), Class IV 460	Inhalation: LC mouse <2 500 000 2 h; Lim_{ac} mouse and rat 146 000—160 000 2—4 h (1, 4) Narcotic Detection: thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume

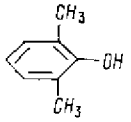
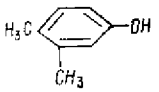
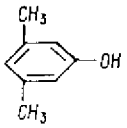
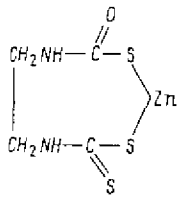
Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
1,1,1-Trifluoroethylamine (β,β,β-trifluoroethylamine) $CF_3CH_2NH_2$ MAC_{wz} 100 (v), Class IV 170, 463	Intragastric: LD_{50} mouse 4170 (3620 - 4790) Inhalation: LC_{50} mouse 4170 (2600—6670) 2 h; Lim_{ir} rat 2500 4 h (7), Lim_{ir} man 300 Has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
Trifluoroethyl alcohol (trifluoroethanol) CF_3CH_2OH MAC_{wz} 10 (v), Class III 284, 461	Intragastric: LD_{50} rat 590 Inhalation: LC_{50} mouse 2950 (2280—3390) 2 h; Lim_{ac} rat 100—300 4 h (1, 7, 8, 10) Affects nervous system and liver Detection: photometry; detection limit 1.4 μg in analytical volume
Trifluorochloroethylene $CF_2=CFCl$ MAC_{wz} 5 (v), Class III 169, 460	Inhalation: LC_{50} mouse 8500 2 h, LC_{50} rat 7100 4 h, LC_{50} guinea pig 4300 4 h; Lim_{ac} rat 150 4 h (1, 7) Has irritant properties Detection: thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume
N-(3-Trifluoromethylphenyl)-N,N-dimethylurea (coloran)  MAC_{wz} 5 (a), Class III MAC_w 0.3 325, 469	Intragastric: LD_{50} mouse 1088±92, LD_{50} rat 1515±22, LD_{50} guinea pig 810±78, LD_{50} rabbit 2500 Inhalation: LC mouse and guinea pig <6640 2 h; Lim_{ac} guinea pig 588 2 h (24) Detection: colorimetry; detection limit 0.1 μg in analytical volume
Trifluoropropene $CF_3CH=CH_2$ MAC_{wz} 3000 (v), Class IV 169, 460	Inhalation: LC_{50} mouse 1 691 000 2 h Narcotic Detection; thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume
Trifluoropropylamine (γ,γ,γ-trifluoropropylamine) $CF_3CH_2CH_2NH_2$ MAC_{wz} 5 (v), Class III 170, 463	Intragastric: LD_{50} mouse 29 Inhalation: LC_{50} mouse 600 (490—740) 2 h; Lim_{ac} rat 300—400 4 h (1, 7, 8); Lim_{ir} man 400 Has irritant properties and affects nervous system Detection: colorimetry; detection limit 1 μg in analytical volume

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Trifluorostyrene $C_6H_5CF=CF_2$ MAC_{wz} 5 (v), Class III 264, 462	Intragastric: LD_{50} rat 2500 (2100—2970) Inhalation: LC_{50} rat 8000 (5300—12 000) 4 h; Lim_{ac} rat 30 4 h (1)
1,2,2-Trifluorotrichloroethane (freon 113) $CF_2ClCFCl_2$ MAC_{wz} 3000 (v), Class IV 169, 460	Intragastric: LD rat <8000 Inhalation: LC_{50} 543 300 (452 700—651 900) 2 h; Lim_{ac} rat 50 000—80 000 4 h (1, 4) Narcotic Detection: thermal degradation in a quartz tube; detection limit 1.4 μg in analytical volume
Trimethylamine $(CH_3)_3N$ MAC_{wz} 5 (v), Class II 59, 342	Inhalation: LC_{50} mouse 19 000 (17 900—22 200) 2 h; Lim_{ac} 25 4 h (1); Lim_{orl} man 2 Detection: gas—liquid chromatography
Trimethyl-1,2,-dihydroquinoline (acetonanyl)  MAC_{wz} 1 (a), Class II 147	Intragastric: LD_{50} mouse 1450 (1356—1551), LD_{50} rat 2000 (1379—2900) Inhalation: LC rat <19 4 h; Lim_{ac} rat 6—7 4 h (1) Affects central nervous system, lungs and kidneys
Trimethylpropane (etriol)  MAC_{wz} 50 (v), Class IV 432, 462	Intragastric: LD_{50} mouse 13 700, LD_{50} rat 14 100 Inhalation: LC rat 700—2000 4 h Detection: colorimetry; detection limit 50 μg in analytical volume
Trinitrobenzene $C_6H_3(NO_2)_3$ 473	Intragastric: LD_{50} mouse 572, LD_{50} rat 280
2,4,5-Trinitrotoluene+ 	Subcutaneous: LD_{20} mouse 250

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 1 (v), Class II MAC_w 0.5 $TSEL_{hw}$ 0.007 411, 459	Methemoglobin former; affects central nervous system, liver and eyes; has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
Trioctyl phosphite  $TSEL_{wz}$ 10 116, 466	Intragastric: LD_{50} mouse 7000 Intraabdominal: LD_{50} mouse 5234±576; Lim_{ac} mouse 141 (24) Detection: photometry
Triphenyl phosphate $(C_6H_5O)_3PO$ $TSEL_{wz}$ 6 8, 466	Intragastric: LD_{50} mouse 1320±280, LD_{50} rat 3800±260 Damages nervous system Detection: photometry
Triphenyl phosphite  $TSEL_{wz}$ 1—2 116, 466	Intragastric: LD_{50} mouse 1333±162 Intraabdominal: LD_{50} mouse 1167±242; Lim_{ac} mouse 25 (24) Detection: photometry
Triphthazine  MAC_{wz} 0.01 (a), Class I 308	Intragastric: LD_{50} mouse 520 (388—696) Inhalation: LC rat < 868 4 h; Lim_{ac} rat 26 4 h (4) Affects central nervous system and heart
Tri-p-propylamine $(CH_3CH_2CH_2)_3N$ MAC_{wz} 2 (v), Class II 208, 422	Intragastric: LD_{50} rat 740 Inhalation: LC_{50} mouse 3800 2 h, LC_{50} rat 5100 4 h; Lim_{ac} rat 50 4 h (7, 30); Lim_{ot} man 0.6 Detection: photometry; detection limit 1 μg in analytical volume
Trixylenyl phosphate $[(CH_3)_2C_6H_3O]_3PO$	Intragastric: LD_{50} mouse 11 800

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
MAC_{wz} 1.5 (a), Class III MAC_w 0.05 483, 555	Causes diffuse organic lesions of central and peripheral nervous systems; decreases cholinesterase activity in blood Detection: colorimetry; detection limit 13 μg in analytical volume
Turpentine MAC_{wz} 3000 (v), Class IV MAC_w 0.2 226, 461	Inhalation: NC mouse 20 000 2 h; LC_{50} mouse 30 000 2 h; LC guinea pig 16 000 1 h, LC dog <4500—6000 3.5 h Affects central nervous system; has irritant properties Detection: colorimetry; detection limit 1 μg in analytical volume
Valeric acid $CH_3(CH_2)_3COOH$ MAC_{wz} 5 (v), Class III MAC_{hw} 0.03 MAC_{ad} 0.01 83, 464	Intragastric: LD_{50} mouse 600 Inhalation: LC_{50} mouse 4100 2 h Has irritant properties; affects nervous system Detection: colorimetry; detection limit 20 μg in analytical volume
Vanadium pentoxide V_2O_5 MAC_{wz} 0.1 (a), Class II MAC_{ad} 0.002 MAC_w 0.1 341, 464	Intragastric: LD_{50} mouse 23 Has systemic toxicity and irritant properties Detection: colorimetry; detection limit 5 μg in analytical volume
Vanadium trioxide V_2O_3 MAC_{wz} 0.5 (a), Class II 341, 464	Intragastric: LD_{50} mouse 130 Inhalation: LC rabbit <40—75 2 h Detection: colorimetry; detection limit 5 μg in analytical volume
Vinyl acetate $CH_3COOCH=CH_2$ MAC_{wz} 10 (v), Class III MAC_{hw} 0.15 MAC_{ad} 0.15 MAC_w 0.2 29, 113, 469	Intragastric: LD_{50} mouse 1613 Inhalation: LC_{50} mouse 4700 2 h; LC rabbit 20 000 2 h; Lim_{ir} cat 70—150, Lim_{ir} man 10—50 Has irritant properties Detection: paper chromatography; detection limit 5 μg in analytical volume
Vinylacetylene $HC\equiv C\text{-}CH=CH_2$ MAC_{wz} 20 (v), Class IV 45, 110	Inhalation: LC_{50} mouse 97 200 (93 700—100 700) 2 h; NC_{50} mouse 78 500 (75 600—81 400) 2 h; Lim_{ir} cat 50 000 30 min; Lim_{ac} rabbit 400—800 40 min (2); Lim_{ac} mouse 200—400 40 min (1); Lim_{ir} man 120; Lim_{ott} 60 Narcotic Has irritant properties Detection: titrimetry
Vinyl butyl ether $CH_2=CH\text{-}O\text{-}C_4H_9$ MAC_{wz} 20 (v), Class IV 466, 481	Inhalation: LC_{50} mouse 62 000 2 h; Lim_{ac} mouse 1000 2 h (1) Detection: photometry; detection limit 2.5 μg in analytical volume

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
Vinyl norbornene  $TSEL_{wz}$ 10 74	Intragastric: LD_{50} mouse 5667 (4690—6644) Intraabdominal: Lim_{ac} mouse 1.36 (0.4—4.6) (1) Inhalation: LC_{50} mouse 17 700 (15 100—20 300) 2 h; Lim_{ac} mouse 330 40 min (1); Lim_{ir} man 65; Lim_{olf} man 8
2-Vinylpyridine+  MAC_{wz} 0.5 (v), Class II 76, 469	Intragastric: LD_{50} mouse 420 Inhalation: LC_{50} mouse 460 2 h; Lim_{ac} rat 1 4 h (1) Has systemic toxicity and irritant properties Detection: colorimetry; detection limit 2.5 μg in analytical volume
Vinyltoluene $CH_3C_6H_4CH=CH_2$ MAC_{wz} 50 (v), Class IV 388, 465	Inhalation: LC_{50} mouse 29 500 4 h; LC cat <60 000; Lim_{ir} cat 5000 2 h; Lim_{ac} cat 1000—5000 40 min (2); Lim_{ir} man 2 min; Lim_{olf} 5—10 Has irritant properties Detection: photometry; detection limit 5 μg in analytical volume
White spirit (petroleum) MAC_{wz} 300 (v), Class IV 45, 120	Inhalation: Lim_{ac} rat 2000—2900 1 h (4) Narcotic Has irritant properties Detection: linear colorimetry
Xylene (mixture of isomers) $C_6H_4(CH_3)_2$ MAC_{wz} 50 (v), Class III MAC_{hw} 0.2 MAC_{ad} 0.2 MAC_w 0.05 243, 463	Inhalation: LC mouse 50 000; Lim_{ac} rabbit 200—400 40 min Narcotic Detection: photometry; detection limit 20 μg in analytical volume
2,4-Xylenol  196, 504	Intragastric: LD_{50} mouse 809 (724—914), LD_{50} rat 3200 (2780—3680) On skin: LD_{50} mouse 1040 (630—1716) Detection: gas chromatography
2,5-Xylenol  **196, 504**	Intragastric: LD_{50} mouse 1140 (797—1530), LD_{50} rat 1270 Detection: gas chromatography

Substance, MAC or TSEL, Hazard Class Reference(s)	Toxicometric Parameters, Test Conditions, Action(s), Method(s) of Detection
2,6-Xylenol  196, 504	Intragastric: LD_{50} mouse 980 (823—1166), LD_{50} rat 1750 (1420—2150) On skin: LD_{50} mouse 920 (576—1472) Detection: gas chromatography
3,4-Xylenol  196, 504	Intragastric: LD_{50} mouse 948 (658—1365), LD_{50} rat 1620 Detection: gas chromatography
3,5-Xylenol  196, 504	Intragastric: LD_{50} mouse 836 (773—906), LD_{50} rat 1915 Detection: gas chromatography
Yttrium oxide Y_2O_3 MAC_{wz} 2 (a), Class III 424	Intragastric: LD mouse <6000, LD rat $<10\,000$ Intraabdominal: LD_{50} mouse 430 ± 18, LD_{50} rat 230 ± 13 Inhalation: Lim_{ac} rat 92 4 h (1, 7) Detection: flame photometry; detection limit 5 μg per 1 ml of solution
Zinc ethylene-N,N′-bis-dithiocarbamate (zineb)  MAC_{wz} 0.5 (a), Class II MAC_w 0.03 354	Intragastric: LD_{50} rat 1900 ± 237, LD_{50} rabbit 4450 ± 470 Intraabdominal: LD_{50} mouse 1940 ± 200 Inhalation: LC rat ±800 4 h Affects hematopoiesis, liver and kidneys Detection: colorimetry; detection limit 2.5 μg in analytical volume

Annex I

STANDARD TEST CONDITIONS FOR MEASURING TOXICOMETRIC PARAMETERS

Parameter	Animal species	Test conditions
LC_{50}	Mice weighing 20±2 g Rats weighing 220±±40 g	Inhalation for 2—4 h followed by observation for 2 weeks
LD_{50}	Same	Administration into the stomach, under the skin, or into the abdominal cavity or else application on the skin
Lim_{ir}	Any species	Inhalation for 15 min
Lim_{ac}	Two species (the use of rats being obligatory)	Inhalation for 4 h, with an examination carried out 15 min postexposure; at least two integral methods should be employed)

[1] These tests can be carried out on man provided adequate safety precautions are taken (inhalation time = 1 min.).

Annex II

CLASSIFICATION OF CHEMICALS BY HAZARD

Parameter	Hazard Class			
	I	II	III	IV
Maximum allowable concentration (MAC) in the air of working zones (mg/m³)	<0.1	0.1—1.0	1.1—10.0	>10.0
Median lethal dose (LD_{50}) with intragastric administration (mg/kg)	<15	15—150	151—5000	>5000
Median lethal dose (LD_{50}) with skin application (mg/kg)	<100	100—500	500—2500	>2500
Median lethal concentration (LC_{50}) in air (mg/m³)	<500	500—5000	5001—50,000	>50,000
Coefficient of potential poisoning by inhalation	>300	300—30	29—3	<3
Acute action zone	<6.0	6.0—18.0	18.1—54.0	>54.0
Chronic action zone	>10.0	10.0—5.0	4.9—2.5	<2.5

Notes:

1. Class I — extremely dangerous substances
   Class II — highly dangerous substances
   Class III — moderately dangerous substances
   Class IV — slightly dangerous substances

2. The coefficient of potential poisoning by inhalation (CPPI) is the ratio of the maximum attainable concentration of a given substance in the air at 20° C to the median lethal concentration of that substance for mice.

   The acute action zone is the ratio of the median lethal concentration of a given substance to the acute action threshold for that substance.

   The chronic action zone is the ratio of the acute action threshold for a given substance to the chronic action threshold (i. e., the lowest concentration that produces adverse effects in a long — term test with exposures of 4 hours daily 5 times a week for a period of at least 4 months) for that substance.

CLASSIFICATION OF CHEMICALS BY TOXICITY WITH SUBCUTANEOUS AND INTRAABDOMINAL ADMINISTRATION

(SOURCE: SIDOROV, 1973)

Toxicity class	Toxicity Rating	Median Lethal Dose (mg/kg) with	
		subcutaneous administration	Intraabdominal administration
I	Extremely toxic	⩽0.3	⩽0.2
II	Highly toxic	0.4—15	0.3—10
III	Moderately toxic	16—150	11—100
IV	Slightly toxic	151—1500	101—1000
V	Practically nontoxic	1501—4500	1001—3000
VI	Relatively harmless	>4500	>3000

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Printed by PIK VINITI Зак. № 8103