

ProteoClean - Reagent B

Version number: 2.0
Replaces version of: 2025-01-19 (1)

Revision: 2025-04-09
First version: 2025-01-19

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name ProteoClean - Reagent B

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Inhibitor of Reagent A

1.3 Details of the supplier of the safety data sheet

CLADE GmbH
Schelztorstraße 54-56
73728 Esslingen
Germany

Telephone: +49 711-400 52 400
e-mail: info@clade.io
Website: clade.io

e-mail (competent person)

nathalie.kittel@clade.io

National contact

Telephone: +49 711-400 52 400
e-Mail: info@clade.io

1.4 Emergency telephone number

Poison centre		
Country	Name	Telephone
United Kingdom	NHS	111

As above or nearest toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (acc. to GB CLP)

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

For full text of abbreviations: see SECTION 16

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2.2 Label elements

Labelling (acc. to GB CLP)

Signal word warning

Pictograms

GHS07



Hazard statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container to an authorized waste treatment facility.

Hazardous ingredients for labelling Guanadine hydrochloride

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Guanadine hydrochloride	CAS No 50-01-1	25 - < 50	Acute Tox. 4 / H302 Acute Tox. 4 / H332		-

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Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
	EC No 200-002-3		Skin Irrit. 2 / H315 Eye Irrit. 2 / H319		

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
Guanadine hydrochloride	-	-	773.6 mg/kg 3.181 mg/l/4h	oral inhalation: dust/mist

Remarks

For full text of H-phrases: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Self-protection of the first aider.

Remove affected person from the danger area and lay down.

Do not leave affected person unattended.

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact

Wash with plenty of soap and water.

Take off contaminated clothing.

If skin irritation occurs: Get medical advice/attention.

Following eye contact

Irrigate copiously with clean, fresh water, holding the eyelids apart.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

Malaise.
Vomiting.
Diarrhoea.
Nausea.
Irritating to eyes and skin.
Harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.
Hazardous decomposition products: Section 10.

Hazardous combustion products

nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO₂), hydrogen chloride (HCl)

5.3 Advice for firefighters

Keep containers cool with water spray.
In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Wear self-contained breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.
Ventilate affected area.
Eliminate all ignition sources if safe to do so.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Bunding.
Covering of drains.

Advice on how to clean up a spill

Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not get in eyes, on skin, or on clothing.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.
Keep away from sources of ignition - No smoking.

Measures to protect the environment

Avoid release to the environment.
Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Incompatible substances or mixtures

Incompatible materials: see section 10.
Store away from oxidizing agents.

Protect against external exposure, such as

frost

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.
Keep cool.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

Human health values

Relevant DNELs of components						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Guanadine hydrochloride	50-01-1	DNEL	3.5 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Guanadine hydrochloride	50-01-1	DNEL	1 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection. (EN 166)

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
IIR: isobutene-isoprene (butyl) rubber	no information available	no information available
FKM: fluoro-elastomer	no information available	no information available
NBR: acrylonitrile-butadiene rubber	no information available	no information available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Body protection

Protective clothing against liquid chemicals.

(EN 13832, EN 340, EN 13034, EN 14605).

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

(EN 136, EN 140, EN 14387, EN 143, EN 149).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	blue
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	6 – 8 (20 °C)

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Kinematic viscosity	not determined
Dynamic viscosity	not determined
Solubility(ies)	
Water solubility	not miscible in any proportion
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	not determined
Density and/or relative density	
Density	1.122 g/cm ³
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Test data are not available for the complete mixture.
Harmful if swallowed.

Acute toxicity estimate (ATE)

Oral 1,682 mg/kg

Acute toxicity of components

Acute toxicity estimate (ATE) of components			
Name of substance	CAS No	Exposure route	ATE
Guanadine hydrochloride	50-01-1	oral	773.6 mg/kg
Guanadine hydrochloride	50-01-1	inhalation: dust/mist	3.181 mg/l/4h

Acute toxicity of components							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
Guanadine hydrochloride	50-01-1	oral	LD50	773.6 mg/kg	rat, female	OECD Guideline 401	ECHA
Guanadine hydrochloride	50-01-1	inhalation: dust/mist	LC50	3.181 mg/l/4h	rat, female	OECD Guideline 403	ECHA
Guanadine hydrochloride	50-01-1	dermal	LD50	>2,000 mg/kg	rabbit	OECD Guideline 402	ECHA

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Based on available data, the classification criteria are not met.

Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Guanadine hydrochloride	50-01-1	LC50	48 h	1,758 mg/l	orfe (Leuciscus idus)	DIN 38412 T.15	ECHA
Guanadine hy-	50-01-1	EC50	48 h	70.2 mg/l	daphnia	OECD	ECHA

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Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
drochloride					magna	Guideline 202	
Guanadine hydrochloride	50-01-1	ErC50	72 h	33.5 mg/l	algae (raphidocelis subcapitata)	EU method C.3	ECHA

Aquatic toxicity (chronic)

Based on available data, the classification criteria are not met.

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
Guanadine hydrochloride	50-01-1	NOEC	35 d	181 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA
Guanadine hydrochloride	50-01-1	NOEC	21 d	2.9 mg/l	daphnia magna	OECD Guideline 211	ECHA
Guanadine hydrochloride	50-01-1	NOEC	72 h	6.3 mg/l	algae (raphidocelis subcapitata)	OECD Guideline 201	ECHA
Guanadine hydrochloride	50-01-1	LOEC	35 d	424 mg/l	fathead minnow (Pimephales promelas)	OECD Guideline 210	ECHA
Guanadine hydrochloride	50-01-1	LOEC	21 d	4.2 – 6.09 mg/l	daphnia magna	OECD Guideline 211	ECHA

12.2 Persistence and degradability

Biodegradation

No data available.

Persistence

No data available.

12.3 Bioaccumulative potential

Bioaccumulative potential of components

Name of substance	CAS No	BCF	Log KOW
Guanadine hydrochloride	50-01-1	-	<-1.7 (pH value: 7.4, 20 °C)

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

12.7 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	UN number	not assigned
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	-
14.4	Packing group	-
14.5	Environmental hazards	-
14.6	Special precautions for user	-
14.7	Maritime transport in bulk according to IMO instruments	-

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant provisions of the European Union (EU)

Seveso Directive

Not assigned.

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed.

Regulation on the marketing and use of explosives precursors

None of the ingredients are listed.

Regulation on drug precursors

None of the ingredients are listed.

Regulation on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

Regulation concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

National regulations (GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

None of the ingredients are listed

Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	Conditions of restriction
ProteoClean - Reagent B	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3

Legend

- R3
1. Shall not be used in:
 - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
 2. Articles not complying with paragraph 1 shall not be placed on the market.
 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or

Legend

perfume, or both, if they:

- can be used as fuel in decorative oil lamps for supply to the general public, and,
- present an aspiration hazard and are labelled with R65 or H304,

4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the British Standard Specification on Decorative oil lamps (BS EN 14059) adopted by the British Standards Institute.

5. Without prejudice to the implementation of other legislation relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:

(a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010 'Just a sip of lamp oil

- or even sucking the wick of lamps
- may lead to life-threatening lung damage;

(b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as

follows: 'Just a sip of grill lighter may lead to life-threatening lung damage';

(c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.

7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the Agency.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances

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Abbr.	Descriptions of used abbreviations
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended).

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended).

GB mandatory classification and labelling.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

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Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.