

Safety Data Sheet

acc. to OSHA HCS


Printing date 05/26/2015

Reviewed on 05/26/2015

1 Identification

- **Product identifier**
- **Trade name:** Lyphochek® Urine Metals Control, Level 1
- **Catalog or product number:** 400
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU20 Health services
- **Application of the substance / the mixture** In-vitro laboratory reagent or component
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
9500 Jeronimo Road
Irvine, California 92618-2017
- 1(949) 598-1200
- **Information department:** Technical services, customer support
- **Emergency telephone number:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Hazard(s) identification

- **Classification of the substance or mixture**
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
 - **Label elements**
 - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
 - **Hazard pictograms**
- 

GHS07
- **Signal word** Warning
 - **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
 - **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a poison center/doctor if you feel unwell.
P363 Wash contaminated clothing before reuse.
 - **Emergency overview:**
 - **Routes of exposure:**
Inhalation
Ingestion
Skin

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- **Classification system**
- **NFPA ratings (scale 0-4)**
Health = 1
Fire = 0
Reactivity = 0
- **Special Hazards** Contains human sourced and/or potentially infectious components.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

	Human Urine	50-100%
CAS: 16674-78-5	Magnesium Acetate Tetrahydrate	20-35%
CAS: 495-69-2 EINECS: 207-806-3	hippuric acid	5-10%
CAS: 90-64-2 EINECS: 202-007-6	mandelic acid	5-10%
CAS: 611-73-4 EINECS: 210-278-7	benzoylformic acid	2.5-5%
CAS: 76-03-9 EINECS: 200-927-2	trichloroacetic acid	1.0-2.5%
CAS: 108-95-2 EINECS: 203-632-7	phenol	0.1-1.0%
CAS: 7681-49-4 EINECS: 231-667-8	sodium fluoride	0.1-1.0%
CAS: 10048-95-0 EINECS: 231-902-4	di-Natriumhydrogenarsenat-Heptahydrat	0.01-0.1%
CAS: 7446-08-4 EINECS: 231-194-7	selenium dioxide	.001-.01%
CAS: 7487-94-7 EINECS: 231-299-8	mercury dichloride	.001-.01%
CAS: 28300-74-5	Potassium antimonyl tartrate trihydrate	.001-.01%
CAS: 10108-64-2 EINECS: 233-296-7	cadmium chloride	.001-.01%
CAS: 7758-95-4 EINECS: 231-845-5	lead dichloride	.001-.01%
CAS: 87-86-5 EINECS: 201-778-6	pentachlorophenol	.001-.01%
CAS: 563-68-8 EINECS: 209-257-5	thallium acetate	.001-.01%

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· **Additional information** Contains components derived from human urine.

4 First-aid measures

- **Description of first aid measures**
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed**
 - Skin irritation
 - Eye irritation
 - Respiratory irritation
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
 - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Handle as potentially infectious.
- **Environmental precautions:**
 - Keep contaminated washing water and dispose of appropriately.
 - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Absorb liquid components with liquid-binding material.
 - Pick up mechanically.
 - Clean the affected area carefully; suitable cleaners are:
 - Disinfectant
- **Reference to other sections** See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:**
Refer to package insert for additional information regarding storage conditions.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

Components with limit values that require monitoring at the workplace:

76-03-9 trichloroacetic acid

REL (United States) 7 mg/m³, 1 ppm
TLV (United States) (6.7) NIC-3.34 mg/m³, (1) NIC-0.5 ppm

108-95-2 phenol

PEL (United States) 19 mg/m³, 5 ppm
Skin
REL (United States) Short-term value: C60* mg/m³, C 15.6* ppm
Long-term value: 19 mg/m³, 5 ppm
*15-min; Skin
TLV (United States) 19 mg/m³, 5 ppm
Skin; BEI

7681-49-4 sodium fluoride

PEL (United States) 2.5 mg/m³
as F
REL (United States) 2.5 mg/m³
as F
TLV (United States) 2.5 mg/m³
as F, BEI

10048-95-0 di-Natriumhydrogenarsenat-Heptahydrat

PEL (United States) 0.01 mg/m³
as As; 29CFR1910.1018
REL (United States) Short-term value: C0.002 mg/m³
as As; 15min
TLV (United States) 0.01 mg/m³
as As; BEI

7446-08-4 selenium dioxide

PEL (United States) 0.2 mg/m³
as Se
REL (United States) 0.2 mg/m³
as Se
TLV (United States) 0.2 mg/m³
as Se

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7487-94-7 mercury dichloride

PEL (United States) Short-term value: C 0.1 mg/m³
as Hg
REL (United States) Short-term value: C 0.1 mg/m³
as Hg; Skin
TLV (United States) 0.025 mg/m³
as Hg; Skin; BEI

28300-74-5 Potassium antimonyl tartrate trihydrate

PEL (United States) 0.5 mg/m³
as Sb
REL (United States) 0.5 mg/m³
as Sb
TLV (United States) 0.5 mg/m³
as Sb

10108-64-2 cadmium chloride

PEL (United States) 0.005 mg/m³
as Cd; see 29 CFR 1910.1027
REL (United States) as Cd; LFC (LOQ 0.1 mg/m³)
TLV (United States) 0.01* 0.002** mg/m³
as Cd; *inhalable **respirable fraction; BEI

7758-95-4 lead dichloride

PEL (United States) 0.05 mg/m³
as Pb; See 29 CFR 1910.1025
REL (United States) 0.05* mg/m³
as Pb; *8-hr TWA, Blood Pb<0.06mg/100g whole blood
TLV (United States) 0.05 mg/m³
as Pb; BEI

87-86-5 pentachlorophenol

PEL (United States) 0.5 mg/m³
Skin
REL (United States) 0.5 mg/m³
Skin
TLV (United States) 0.5 mg/m³
Skin; BEI

563-68-8 thallium acetate

PEL (United States) 0.1 mg/m³
as Tl; Skin
REL (United States) vgl. Abschn. IIb
TLV (United States) 0.1 mg/m³
as Tl; Skin

Ingredients with biological limit values:

108-95-2 phenol

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<i>BEI (United States)</i>	250 mg/g creatinine Medium: urine Time: end of shift Parameter: Phenol with hydrolysis (background, nonspecific)
7681-49-4 sodium fluoride	
<i>BEI (United States)</i>	2 mg/L Medium: urine Time: prior to shift Parameter: Fluoride (background, nonspecific)
	3 mg/L Medium: urine Time: end of shift Parameter: Fluoride (background, nonspecific)
10048-95-0 di-Natriumhydrogenarsenat-Heptahydrat	
<i>BEI (United States)</i>	35 µg As/L Medium: urine Time: end of workweek Parameter: Inorganic arsenic plus methylated metabolites
7487-94-7 mercury dichloride	
<i>BEI (United States)</i>	35 µg/L Medium: urine Time: prior to shift Parameter: Total inorganic mercury (background)
	15 µg/L Medium: blood Time: end of shift at end of workweek Parameter: Total inorganic mercury (background)
7758-95-4 lead dichloride	
<i>BEI (United States)</i>	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
87-86-5 pentachlorophenol	
<i>BEI (United States)</i>	2 mg/g creatinine Medium: urine Time: prior to last shift of workweek Parameter: Total pentachlorophenol (background)
	5 mg/L Medium: plasma Time: end of shift Parameter: Free pentachlorophenol (background)

· **Additional information:** The lists that were valid during the creation were used as basis.

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- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Follow the usual biosafety practices for handling potentially infectious materials.
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Synthetic gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Solid
Color:	Yellow
Odor:	Light
- **pH-value at 20 °C:** 4.9-5.1
- **Change in condition**
 - Melting point/Melting range:** undetermined
 - Boiling point/Boiling range:** undetermined
- **Flash point:** Not applicable
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined
- **Solubility in / Miscibility with Water:** Soluble
- **Solvent content:**

Organic solvents:	0.0 %
Solids content:	100.0 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**

108-95-2 phenol

Oral	LD50	300 mg/kg (mus)
Dermal	LD50	670 mg/kg (rat)
Inhalative	LC50/4 h	316 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

76-03-9	trichloroacetic acid	3
108-95-2	phenol	3
7681-49-4	sodium fluoride	3
10048-95-0	di-Natriumhydrogenarsenat-Heptahydrat	1
7446-08-4	selenium dioxide	3
7487-94-7	mercury dichloride	3
10108-64-2	cadmium chloride	1
10026-24-1	Cobalt(II) sulfate heptahydrate	2B
7758-95-4	lead dichloride	2A
87-86-5	pentachlorophenol	2B

· **NTP (National Toxicology Program)**

10048-95-0	di-Natriumhydrogenarsenat-Heptahydrat	K
7446-08-4	selenium dioxide	R
10108-64-2	cadmium chloride	K
7758-95-4	lead dichloride	R

· **OSHA-Ca (Occupational Safety & Health Administration)**

10048-95-0	di-Natriumhydrogenarsenat-Heptahydrat	
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10108-64-2 cadmium chloride

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Dispose of waste in accordance to applicable national, regional, or local regulations.
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|-------------------------------------|------|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |

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- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**

108-95-2	phenol
7487-94-7	mercury dichloride

· **Section 313 (40CFR372.65):**

108-95-2	phenol
7446-08-4	selenium dioxide
7487-94-7	mercury dichloride
28300-74-5	Potassium antimonyl tartrate trihydrate
10108-64-2	cadmium chloride
10026-24-1	Cobalt(II) sulfate heptahydrate
7758-95-4	lead dichloride
87-86-5	pentachlorophenol
563-68-8	thallium acetate

· **TSCA (Toxic Substances Control Act):**

495-69-2	hippuric acid
90-64-2	mandelic acid
76-03-9	trichloroacetic acid
108-95-2	phenol
7681-49-4	sodium fluoride
7446-08-4	selenium dioxide
7487-94-7	mercury dichloride
10108-64-2	cadmium chloride
7758-95-4	lead dichloride
87-86-5	pentachlorophenol
563-68-8	thallium acetate

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

10108-64-2	cadmium chloride
10026-24-1	Cobalt(II) sulfate heptahydrate

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7758-95-4	lead dichloride
87-86-5	pentachlorophenol

· Developmental Toxicity

7487-94-7	mercury dichloride
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· Carcinogenic categories

· EPA (Environmental Protection Agency)

76-03-9	trichloroacetic acid	C
108-95-2	phenol	I
10048-95-0	di-Natriumhydrogenarsenat-Heptahydrat	A
7446-08-4	selenium dioxide	D
7487-94-7	mercury dichloride	C
10108-64-2	cadmium chloride	B1
7758-95-4	lead dichloride	B2
87-86-5	pentachlorophenol	B2

· TLV (Threshold Limit Value established by ACGIH)

76-03-9	trichloroacetic acid	A3
108-95-2	phenol	A4
7681-49-4	sodium fluoride	A4
10048-95-0	di-Natriumhydrogenarsenat-Heptahydrat	A1
7487-94-7	mercury dichloride	A4
10108-64-2	cadmium chloride	A2
7758-95-4	lead dichloride	A3
87-86-5	pentachlorophenol	A3

· MAK (German Maximum Workplace Concentration)

108-95-2	phenol	3B
10048-95-0	di-Natriumhydrogenarsenat-Heptahydrat	1
7446-08-4	selenium dioxide	3
7487-94-7	mercury dichloride	3
28300-74-5	Potassium antimonyl tartrate trihydrate	2
10108-64-2	cadmium chloride	2
7758-95-4	lead dichloride	2
87-86-5	pentachlorophenol	2

· NIOSH-Ca (National Institute for Occupational Safety and Health)

10048-95-0	di-Natriumhydrogenarsenat-Heptahydrat
10108-64-2	cadmium chloride

· National regulations

· Technical instructions (air):

Class	Share in %
I	0.1-1.0
III	0.1-1.0

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- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environmental Health and Safety.

- **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

- **Date of preparation / last revision** 05/26/2015 / -

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

- *** Data compared to the previous version altered.**