

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/29/2021

Reviewed on 08/20/2020

1 Identification

- **Product identifier**
- **Trade name:** ReadyPrep Sequential Extraction Kit Reagent 3
- **Catalog or product number:** 1632104, 9703562
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547 (510)741-1000
- **Information department:** lsg_techserv_us@bio-rad.com
- **Emergency telephone number:**
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
510-741-1000

2 Hazard(s) identification

- **Classification of the substance or mixture**
Carc. 2 H351 Suspected of causing cancer.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
 - **Label elements**
 - **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
 - **Hazard pictograms**
-
- GHS08
- **Signal word** Warning
 - **Hazard-determining components of labeling:**
thiourea
 - **Hazard statements**
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
 - **Precautionary statements**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
 - **Classification system**
 - **Special Hazards** Reproductive toxin.

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- **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:**

57-13-6	urea	50-100%
62-56-6	thiourea Carc. 2, H351; Repr. 2, H361 Aquatic Chronic 2, H411 Acute Tox. 4, H302	25-35%
55179-31-2	1-(4-biphenyloxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol Acute Tox. 3, H331 Acute Tox. 4, H302; Acute Tox. 4, H312	2.5-5%

- **Additional information** For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **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** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

urea	30 mg/m ³
thiourea	0.38 mg/m ³

· **PAC-2:**

57-13-6 urea	280 mg/m ³
62-56-6 thiourea	4.1 mg/m ³

· **PAC-3:**

57-13-6 urea	1,700 mg/m ³
62-56-6 thiourea	25 mg/m ³

7 Handling and storage

- **Handling**
- **Precautions for safe handling** Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **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.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

57-13-6 urea

WEEL Long-term value: 10 mg/m³

- **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**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
- **Breathing equipment:** Not necessary if room is well-ventilated. Adequate ventilation required.
- **Protection of hands:** Protective gloves.
- **Material of gloves:** 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

9 Physical and chemical properties

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

Form:	Liquid
Color:	Light yellow
Odor:	Odorless
Odor threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined
- **Flash point:**

Flash point:	Not applicable
	Not determined.
- **Flammability (solid, gaseous)** Not applicable.
- **Ignition temperature:** 440 °C
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Not determined.
- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.
- **Vapor pressure:** Not determined.
- **Density:** Not determined
- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.

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- | | |
|---|--|
| · Solubility in / Miscibility with Water: | Fully miscible |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| dynamic: | Not determined. |
| kinematic: | Not determined. |
| · Solvent content: | |
| Water: | 0.2 % |
| Solids content: | 99.7 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **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:		
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57-13-6 urea		
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Oral	LD50	14,500 mg/kg (rat)
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62-56-6 thiourea		
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Oral	LD50	1,750 mg/kg (rat)
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Dermal	LD50	2,800 mg/kg (rbt)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No 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:

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
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62-56-6	thiourea	3
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· **NTP (National Toxicology Program)**

62-56-6 thiourea

R

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

None of the ingredients is listed.

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.· **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.

Danger to drinking water if even small quantities leak into the ground.

· **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**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Dispose of waste in accordance to applicable national, regional, or local regulations.

· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**· **DOT, ADR, IMDG, IATA**

UN2810

· **UN proper shipping name**· **DOT**

Toxic, liquids, organic, n.o.s. (thiourea, 1-(4-biphenyloxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol)

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· ADR	2810 TOXIC LIQUID, ORGANIC, N.O.S. (thiourea, 1-(4-biphenyloxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol), ENVIRONMENTALLY HAZARDOUS
· IMDG, IATA	2810 TOXIC LIQUID, ORGANIC, N.O.S. (thiourea, β -([1,1'-biphenyl]-4-yloxy)-alpha-tert-butyl-1H-1,2,4-triazol-1-ethanol) TOXIC LIQUID, ORGANIC, N.O.S. (thiourea, 1-(4-biphenyloxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol)
· Transport hazard class(es)	
· DOT, ADR, IMDG, IATA	
· Class	6.1 Toxic substances
· Label	6.1
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Toxic substances
· Hazard identification number (Kemler code):	60
· EMS Number:	F-A,S-A
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	Void Void
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

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· **UN "Model Regulation":**

UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (THIOUREA, 1-(4-BIPHENYLYLOXY)-3,3-DIMETHYL-1-(1H-1,2,4-TRIAZOL-1-YL)-2-BUTANOL), 6.1, III, ENVIRONMENTALLY HAZARDOUS

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):**

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

62-56-6 thiourea

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

57-13-6 urea

ACTIVE

62-56-6 thiourea

ACTIVE

77-86-1 Tris(hydroxymethyl)aminomethane

ACTIVE

7732-18-5 water

ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **California Proposition 65:**· **Chemicals known to cause cancer:**

62-56-6 thiourea

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Developmental Toxicity**

None of the ingredients is listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

57-13-6 urea

II

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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- **National regulations**
- **Technical instructions (air):**

Class	Share in %
I	20-35

- **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** 01/29/2021 / -

- **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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