

SAFETY DATA SHEET

REFRACTROL

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance or preparation

Product name : REFRACTOMETER CONTROLS
Product type/Physical state : Liquid
Component : Refractrol 84652, 84653, 84654, 84655, 84679

Use of the Substance/preparation : For *in vitro* diagnostic use only

Company/undertaking identification

Manufacturer (with hours of operation) : Kova International, Inc.
7272 Chapman Avenue, Suite B
Garden Grove, CA 92841
United States

Tel: + (1) 714 902 1700 (8:00 a.m. – 5:00 p.m., Monday – Friday, PST)

Emergency telephone number: Contact your local Poison Control Center

2. HAZARDS IDENTIFICATION

Classification: Refractrol Not hazardous according to Directive 67/548/EC

Potential acute health effects

Eyes Refractrol Slightly hazardous (irritant)
Skin Refractrol Slightly hazardous (irritant)
Inhalation Refractrol Slightly hazardous (irritant)
Ingestion Refractrol Slightly hazardous (irritant)

See toxicological information (section 11)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Composition: Bottle contains up to 0.34% BSA Fraction V.

Ingredient name	CAS Number	%	EINECS (EC) Number	Classification	ANNEX 1
Bovine Serum Albumin	9048-46-8	34	2232-936-2		None

Occupational exposure limits, if available, are listed in section 8.

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4. FIRST AID MEASURES

Eye Contact:	Refractrol	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, get medical attention if irritation occurs...
Skin Contact	Refractrol	In case of contact, immediately flush skin with plenty of water. Re-wash with a detergent that contains anti-microbial agents. Cover the irritated skin with an emollient. Get medical attention if irritation occurs.
Ingestion:	Refractrol	Flush mouth with water, without swallowing. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Inhalation	Refractrol	If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Direction for Physician	Refractrol	Symptomatic treatment by a physician

See section 11 for more detailed information on health effects and symptoms

5. FIRE-FIGHTING MEASURES

<u>Extinguishing Media</u>	
Suitable	: Use an extinguishing agent suitable for the surrounding fire. Water, dry chemicals, carbon dioxide or appropriate foam.
Not Suitable	: Not Applicable
Special exposure hazards	:Keep away from heat, sparks and flames.
Hazardous combustion products	: Decomposition products may include the following materials: Carbon dioxide Carbon monoxide
Special protective equipment for fire-fighters	: Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) to prevent contact with skin and eyes.
Thermal Decomposition	: Dangerous decomposition is not anticipated

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Refractrol	Exercise appropriate precautions to avoid any direct contact with skin or eyes and prevent inhalation of dust.
Environmental precautions	Refractrol	Consult a specialist for disposal of the spilled substance.
Methods for cleaning up Spillage:	Refractrol	Dilute liquids with water and absorb with an inert material (vermiculite, dry sand, earth). DO NOT use combustible materials, such as sawdust Wash contaminated area with a germicide product. Disinfect after handling.

Waste Disposal Method: Observe all Federal and State laws concerning clean-up or disposal.

7. HANDLING AND STORAGE

Handling	Bovine serum albumin.	Keep in its original container, tightly closed. Protect from physical damage. Open and handle container carefully. Keep away from heat and sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents.
Storage		Do not store near heat or ignition sources. Store at room temperature 15 - 30°C. Store in original container in a dry, cool and well-ventilated area, away from incompatible material (see section 10). Keep container tightly closed and sealed until ready for use, Use appropriate containment to avoid environmental contamination.
Packaging materials Recommended		Use original container.

Other Precautions: N/A

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

Ingredient name / Product name

Occupational exposure limits

United States

No exposure limit value known.

EU

Refractrol

EU OEL (Europe, 4/2006). Skin Notes: Indicative

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for determination of hazardous substances.

Exposure controls

Occupational exposure controls /
Engineering measures

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposures limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below any recommended or statutory exposure limit.

Hygiene measures

Wash hands, before eating, smoking and using the lavatory and at the end of the working period. Disinfect them at the end of work. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

Use a properly fitted, dust respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Wash hands before breaks and disinfect them at end of the work.

Eye protection

Protective chemical safety goggles where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dust.

Skin protection

Chemical resistant protective gloves and clothing are recommended. The choice of protective gloves or clothing must be based on chemical resistance and other use requirements.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information

Stable under ordinary conditions of use and storage (room temperature)

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Appearance

Physical State Liquid

Color/colour Clear

Important health, safety and environmental information

pH 6.0 – 8.0 [Basic]

Boiling point ~ 100°C (212°F)

Solubility Easily soluble in the following materials: cold water and hot water.

10. STABILITY AND REACTIVITY

Stability and reactivity The product is stable. Under normal conditions of room temperature (15-30°C) storage and use, hazardous polymerization will not occur.

Conditions to avoid Heat sensitive.

Materials to avoid, incompatibility with various substances Incompatible with: oxidizing agents, alkalis, metals, strong acids and heat.

Hazardous decomposition products Carbon monoxide, carbon dioxide
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Other Hazardous polymerization will not occur.

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11. TOXICOLOGICAL INFORMATION

Potential acute health effects

Inhalation Dust may cause respiratory tract irritation. Low hazard for usual industrial handling.

Ingestion Low hazard for usual industrial handling.

Skin contact May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure. Low hazard for usual industrial handling. May cause allergic reaction characterized by a rash.

Eye contact : Dust may cause eye irritation

Acute toxicity

Product/ingredient name
 Bovine serum albumin

Result

LD50 Dermal
 LD50 Oral
 LC50 Inhalation

Species

Not known
 Not known
 Not known

Dose

Exposure

Conclusion/Summary

Not available.

Potential chronic health effects

Chronic toxicity

Conclusion/Summary

Not available.

Carcinogenicity

Conclusion/Summary.

Not available.

Mutagenicity

Conclusion/Summary.

Not available.

Teratogenicity

Conclusion/Summary.

Not available.

Reproductive toxicity

Conclusion/Summary.

May cause adverse reproductively effects based on animal data. No human data found..

Chronic effects

Carcinogenicity

Mutagenicity

Teratogenicity

Developmental effects

Fertility effects

No known significant effects or critical hazards

No known significant effects or critical hazards

No known significant effects or critical hazards

No known significant effects or critical hazards

No known significant effects or critical hazards

No known significant effects or critical hazards

Over-exposure signs/symptoms

Inhalation

Ingestion

No Specific data.

Contact poison treatment specialist immediately if large quantities have been ingested or inhaled

Skin

Eyes

No Specific data

No specific data

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Target organs

Contains material which may be harmful to the following organs: mucous membranes, upper respiratory track, skin.

Other adverse effects

To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Use product according with good laboratory practices and avoid to release to the environment.

Ecotoxicity (aquatic toxicity): Not available.

Mobility: Product is not expected either to selectively partition or to be absorbed to soil and/or sediments.

Persistence and Degradability: when released into the soil, or into water, this product is not expected to persist in the environment.

Bioaccumulative potential: The product is not expected to significantly bioaccumulation

Other adverse effects: None

[Conclusion/Summary.](#)

Not available

[Biodegradability](#)

[Conclusion/Summary](#)

Not available

[Other adverse effects](#)

No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Observe all Federal, State and Local laws concerning clean up or Dispose.

[Methods of disposal](#)

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

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14. TRANSPORT INFORMATION

Regulatory information

ADR/ IMDG / IATA : Not regulated.

Regulatory information

DOT / IMDG / IATA : Not regulated.

Transport in accordance with national and international regulations.

Is not subject to current regulations for transportation of hazardous goods (eg.GGUS/ADR, GGUE/RID, IMDG,IATA/ICAD)

Do not compromise container integrity.

15. REGULATORY INFORMATION

Precautions: After contact with skin, wash immediately with plenty of soap and water.

[EU regulations](#)

Classification and labeling have been determined according to EU Directives 67/548/EC (including amendments) and take into account the intended product use.

Hazard symbol or symbols Not applicable

Risk phrases Not applicable

Safety phrases Bovine serum albumin S36- Wear suitable protective clothing

Contains Bovine serum 9048-46-8
Product use albumin Industrial applications
Europe inventory Europe inventory ; All components are listed or exempted.

[Other EU regulations](#)

[HCS Classification](#)

Target organ effects. May contains material which may cause damage to the following organs: mucous membranes, shin.

[U.S. Federal regulations](#)

United States inventory (TSCA 8b): Albumin, bovine, Fraction V.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found
SARA 311/312 MSDS distribution - chemical inventory hazard identification: No products were found

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

[State regulations](#)

Connecticut Carcinogen Reporting: None of the components are listed.

Connecticut Hazardous Material Survey: None of the components are listed.

Florida substances: None of the components are listed.

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Illinois Chemical Safety Act: None of the components are listed.

Illinois Toxic Substances Disclosure to Employee Act:
 None of the components are listed.

Louisiana Reporting: None of the components are listed.

Louisiana Spill: None of the components are listed.

Massachusetts Spill: None of the components are listed.

Massachusetts Substances: The following components are listed: Disodium hydrogenorthophosphate

Michigan Critical Material: None of the components are listed.

Minnesota Hazardous Substances: None of the components are listed.

New Jersey Hazardous Substances: No products were found

New Jersey Spill: None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.

New York Acutely Hazardous Substances: No products were found

New York Toxic Chemical Release Reporting: None of the components are listed.

Pennsylvania RTK Hazardous Substances: No products were found

Rhode Island Hazardous Substances: None of the components are listed.

- No products were found

State regulations
 California Prop. 65

16. OTHER INFORMATION

Date of issue 02/27/2015

Date of previous issue 09/05/2014

Notice to reader

DISCLAIMER: This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing the suitability of the Product for a particular application.

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