

1. IDENTIFICATION Product Identification

Product Name RayBright® LIVE Cell Live/dead marker

Catalog Number 137-02001-100, 137-02001-500, 137-14002-100, 137-14002-500, 137-09003-100, 137-09003-500, 137-24004-100, 137-24004-500, 137-27005-100, 137-27005-500

Usage

This product is furnished for LABORATORY RESEARCH USE ONLY. Not for diagnostic or therapeutic use.

Supplier Identification

Company RayBiotech, Inc.
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Norcross, GA 30092
USA
Telephone 1-888-494-8555 (Toll Free); 770-729-2992
Fax 770-206-2393
Website www.RayBiotech.com
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Emergency Telephone Number

Emergency Phone # 1-888-494-8555

2. HAZARDS IDENTIFICATION Hazardous Ingredients

1. dimethyl sulfoxide (DMSO)

OSHA/HCS status

dimethyl sulfoxide: This material is considered hazardous by the OSHA Hazard Communication Standard

GHS Label Elements Hazard Pictograms



Signal Word Warning

Hazard Statements dimethyl sulfoxide: Causes Serious eye irritation; Flammable liquid

Response EYE CONTACT: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
 FLAMMABLE LIQUUID: Keep away from flames and hot surfaces. – No smoking.

Storage Room temperature, prevent light.

Disposal Not applicable.

Hazards not otherwise classified
 None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS CAS Numbers/other identifiers

<u>Ingredient Name</u>	<u>%</u>	<u>CAS Number</u>
dimethyl sulfoxide	100	7647-14-5

Any percentage shown as a range is to protect confidentiality or is due to batch variation.
 There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. FIRST-AID MEASURES Description of Necessary First Aid Measures

Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Skin Contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing and clean shoes before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything

by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Potential Acute Health Effects

Eye Contact	Risk of serious damage to eyes.
Skin Contact	No known significant effects or critical hazards
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	Irritating to mouth, throat and stomach.

Over-Exposure Signs/Symptoms

Eye contact: Adverse symptoms may include pain or irritation, watering, redness.

Notes to Physician

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific Treatments

No specific treatment

Protection of First-Aiders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Use an extinguishing agent suitable for the surrounding fire, such as water spray, carbon dioxide, dry chemical power or appropriate foam. Prevent contact with skin and eyes.
Chemical Hazards from Fire	In a fire or if heated, a pressure increase will occur and the component containers may burst.

6. ACCIDENTAL RELEASE MEASURES Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For Emergency Responders	

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in “Fr Non-Emergency Personnel” above

Environmental Precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Protective Equipment Wear respirator, chemical safety goggles, rubber boots and rubber gloves.

Methods and Materials for Containment and Cleaning Up

Small Spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large Spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. STORAGE AND HANDLING Storage

Store at room temperature.

Handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION Permissible Exposure Limits (PELs)

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate Engineering Controls

- Showers
- Eyewash stations
- Ventilation systems

Protective Equipment

Wear suitable protective clothing, including gloves, safety glasses, dust mask, and a laboratory coat.

Special Precautions

Not for human or drug use. Not for household use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless
Odor	Odorless
Physical State	Liquid

pH	7.2 - 7.4
Boiling Point	N/A
Melting Point	N/A
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Specific Gravity	N/A
Evaporation Rate	N/A
Solubility in Water	N/A
Odor Threshold	N/A
Coefficient of Water/Oil Distribution	N/A

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal handling procedures.

Hazardous Reactions Under normal conditions of storage and use, hazardous reactions will not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Ingredient Name	Result	Species	Dose
dimethyl sulfoxide	LD50	Dermal Rat Oral Rat	40000 mg/kg 14500 mg/kg

Carcinogenicity Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Sensitization Not Available

Mutagenicity Not available

Reproductive Toxicity Not Available

**Specific target organ
toxicity (single exposure)** Not Available

**Specific target organ toxicity
(repeated exposure)** Not available

Aspiration hazard Not available

Likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact Causes serious eye irritation

Inhalation No known significant effects or critical hazards.

Ingestion Irritating to the mouth, throat, and stomach.

Skin Contact Skin irritant

12. ECOLOGICAL INFORMATION

Ecotoxicity Toxic to aquatic organisms, particularly those in fresh water.

Persistence and degradability	No data available
Bioaccumulation/accumulation	No data available
Mobility in environmental media	No data available
Other hazardous effects	May be harmful to the environment, particularly aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Disposal should be in accordance with applicable national, state, and local laws and regulations. Local regulations may be more stringent than national or state requirements. Verify local and state regulations before discharging into public sewers or landfills. Do not dump into any body of water. Contact a licensed professional waste disposal service for appropriate methods of disposal.

14. TRANSPORT INFORMATION

DOT	Not dangerous goods.
IATA	Not dangerous goods.
ADR	Not dangerous goods.

15. REGULATORY INFORMATION

United States (TSCA)	All ingredients are on the inventory or exempt from listing.
Canada (DSL / NDSL)	All ingredients are on the inventory or exempt from listing.
SARA 302 Components	All ingredients are on the inventory or exempt from listing
SARA 313 Components	All ingredients are on the inventory or exempt from listing
SARA 311/312 Hazards	No known hazards.
California Prop. 65 Components	This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION

Disclaimer

The above information was obtained from sources available at the time of revision and believed to be accurate and reliable. The information included is not intended to be all inclusive and should only be used as a guide. RayBiotech shall not be held liable for any damage resulting from use, handling, or contact with the above product.

Last Revised

June 12, 2017

