

SAFETY DATA SHEET

BioOcean® Human IL-12 ELISA Kit

Section 1. Identification

GHS product identifier Code: BioOcean® Human IL-12 ELISA Kit, EK112

Other means of identification: Not available

Trade name: Human IL-12 ELISA Kit

Supplier/Manufacturer 3550 Lexington Ave, Suite 203, Shoreview, Minnesota 55126

In case of emergency: Bio-Ocean: 1-800-852-7601

Section 2. Hazards identification

| | | |
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| OSHA/HCS status: | BioOcean® anti-Human IL-12 detect antibody(100X) | While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product. |
| | BioOcean® Human IL-12 Standard (lyophilized) | While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product. |
| | BioOcean® Stop Solution | While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910. 1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product. |
| Classification of the substance or mixture: | BioOcean® anti-Human IL-12 detect antibody(100X) | Not classified. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not classified. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not classified. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not classified. |
| | BioOcean® Stop Solution | Not classified. |
| GHS label elements | | |
| Signal word | BioOcean® anti-Human IL-12 detect antibody(100X) | No signal word. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No signal word. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No signal word. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No signal word. |
| | BioOcean® Stop Solution | No signal word. |
| Hazard statements | BioOcean® anti-Human IL-12 detect antibody(100X) | No known significant effects or critical hazards. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No known significant effects or critical hazards. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No known significant effects or critical hazards. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No known significant effects or critical hazards. |
| | BioOcean® Stop Solution | No known significant effects or critical hazards. |
| Precautionary statements | | |
| General | BioOcean® anti-Human IL-12 detect antibody(100X) | Not applicable. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not applicable. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not applicable. |

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| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not applicable. |
| | BioOcean® Stop Solution | Not applicable. |
| Prevention | BioOcean® anti-Human IL-12 detect antibody(100X) | Not applicable. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not applicable. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not applicable. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not applicable. |
| | BioOcean® Stop Solution | Not applicable. |
| Response | BioOcean® anti-Human IL-12 detect antibody(100X) | Not applicable. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not applicable. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not applicable. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not applicable. |
| | BioOcean® Stop Solution | Not applicable. |
| Storage | BioOcean® anti-Human IL-12 detect antibody(100X) | Not applicable. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not applicable. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not applicable. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not applicable. |
| | BioOcean® Stop Solution | Not applicable. |
| Disposal | BioOcean® anti-Human IL-12 detect antibody(100X) | Not applicable. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not applicable. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not applicable. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not applicable. |
| | BioOcean® Stop Solution | Not applicable. |
| Supplemental label elements | BioOcean® anti-Human IL-12 detect antibody(100X) | None known. |
| | BioOcean® Human IL-12 Standard (lyophilized) | None known. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | None known. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | None known. |
| | BioOcean® Stop Solution | None known. |
| Hazards not otherwise classified | BioOcean® anti-Human IL-12 detect antibody(100X) | None known. |
| | BioOcean® Human IL-12 Standard (lyophilized) | None known. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | None known. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | None known. |
| | BioOcean® Stop Solution | None known. |

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

| Ingredient name | % | CAS number |
|--------------------------------|----------|------------|
| BioOcean® Human IL-12 Standard | 99.9-100 | - |

Any concentration 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.

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

Section 4. First aid measures

Description of necessary first aid measures

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| Eye contact | BioOcean® anti-Human IL-12 detect antibody(100X) | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
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| | BioOcean® Human IL-12 Standard (lyophilized) | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | BioOcean® Stop Solution | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| Inhalation | BioOcean® anti-Human IL-12 detect antibody(100X) | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | BioOcean® Stop Solution | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| Skin contact | BioOcean® anti-Human IL-12 detect antibody(100X) | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | BioOcean® Stop Solution | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| Ingestion | BioOcean® anti-Human IL-12 detect antibody(100X) | Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | BioOcean® Stop Solution | Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed Potential acute health effects | | |
| Eye contact | BioOcean® anti-Human IL-12 detect antibody(100X) | No known significant effects or critical hazards. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No known significant effects or critical hazards. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No known significant effects or critical hazards. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No known significant effects or critical hazards. |
| | BioOcean® Stop Solution | No known significant effects or critical hazards. |
| Inhalation | BioOcean® anti-Human IL-12 detect antibody(100X) | No known significant effects or critical hazards. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No known significant effects or critical hazards. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No known significant effects or critical hazards. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No known significant effects or critical hazards. |
| | BioOcean® Stop Solution | No known significant effects or critical hazards. |
| Skin contact | BioOcean® anti-Human IL-12 detect antibody(100X) | No known significant effects or critical hazards. |

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|---|---|---|
| | BioOcean® Human IL-12 Standard (lyophilized) | No known significant effects or critical hazards. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No known significant effects or critical hazards. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No known significant effects or critical hazards. |
| | BioOcean® Stop Solution | No known significant effects or critical hazards. |
| Ingestion | BioOcean® anti-Human IL-12 detect antibody(100X) | No known significant effects or critical hazards. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No known significant effects or critical hazards. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No known significant effects or critical hazards. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No known significant effects or critical hazards. |
| | BioOcean® Stop Solution | No known significant effects or critical hazards. |
| Over-exposure signs/symptoms | | |
| Eye contact | BioOcean® anti-Human IL-12 detect antibody(100X) | No specific data. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No specific data. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No specific data. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No specific data. |
| | BioOcean® Stop Solution | No specific data. |
| Inhalation | BioOcean® anti-Human IL-12 detect antibody(100X) | No specific data. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No specific data. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No specific data. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No specific data. |
| | BioOcean® Stop Solution | No specific data. |
| Skin contact | BioOcean® anti-Human IL-12 detect antibody(100X) | No specific data. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No specific data. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No specific data. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No specific data. |
| | BioOcean® Stop Solution | No specific data. |
| Ingestion | BioOcean® anti-Human IL-12 detect antibody(100X) | No specific data. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No specific data. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No specific data. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No specific data. |
| | BioOcean® Stop Solution | No specific data. |
| Indication of immediate medical attention and special treatment needed, if necessary, see toxicological information (Section 11) | | |
| Notes to physician | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. | |
| Specific treatments | No specific treatment | |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. | |

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

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| BioOcean® anti-Human IL-12 detect antibody(100X) | Use an extinguishing agent suitable for the surrounding fire. |
| BioOcean® Human IL-12 Standard (lyophilized) | Use an extinguishing agent suitable for the surrounding fire. |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Use an extinguishing agent suitable for the surrounding fire. |
| BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Use an extinguishing agent suitable for the surrounding fire. |
| BioOcean® Stop Solution | Use an extinguishing agent suitable for the surrounding fire. |

Unsuitable extinguishing media

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|---|-------------|
| BioOcean® anti-Human IL-12 detect antibody(100X) | None known. |
| BioOcean® Human IL-12 Standard (lyophilized) | None known. |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | None known. |
| BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | None known. |

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|---|---|---|
| | BioOcean® Stop Solution | None known. |
| Specific hazards arising from the chemical | BioOcean® anti-Human IL-12 detect antibody(100X) | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | BioOcean® Human IL-12 Standard (lyophilized) | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | BioOcean® Stop Solution | In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | BioOcean® anti-Human IL-12 detect antibody(100X) | No specific data. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No specific data. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No specific data. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No specific data. |
| | BioOcean® Stop Solution | No specific data. |
| Special protective actions for fire-fighters | BioOcean® anti-Human IL-12 detect antibody(100X) | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | BioOcean® Stop Solution | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Special protective equipment for fire-fighters | BioOcean® anti-Human IL-12 detect antibody(100X) | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | BioOcean® Stop Solution | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

Section 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. 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 "For non-emergency personnel".

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).

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. 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 non-combustible, 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. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

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| BioOcean® anti-Human IL-12 detect antibody(100X) | Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). |
| BioOcean® Human IL-12 Standard (lyophilized) | Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). |
| BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). |
| BioOcean® Stop Solution | Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). |

Advice on general occupational hygiene

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| BioOcean® anti-Human IL-12 detect antibody(100X) | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| BioOcean® Human IL-12 Standard (lyophilized) | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| BioOcean® Stop Solution | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

Conditions for safe storage including any incompatibilities

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|---|---|
| BioOcean® anti-Human IL-12 detect antibody(100X) | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, |
| BioOcean® Human IL-12 Standard (lyophilized) | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, |
| BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, |

BioOcean® Stop Solution

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry,

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

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 dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side- shields.

Skin protection

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.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Use a properly fitted, air-purifying or air-fed 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.

Section 9. Physical and chemical properties

Physical state

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| BioOcean® anti-Human IL-12 detect antibody(100X) | Liquid. |
| BioOcean® Human IL-12 Standard (lyophilized) | Solid |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Liquid. |
| BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Liquid. |
| BioOcean® Stop Solution | Liquid. |

Color

| | |
|---|----------------|
| BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| BioOcean® Stop Solution | Not available. |

Odor

| | |
|---|----------------|
| BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |

| | | |
|-----------------------------------|---|----------------|
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Flash point | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Auto-ignition temperature | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Flammable limits | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Molecular weight | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Molecular formula | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| pH | BioOcean® anti-Human IL-12 detect antibody(100X) | 7.0-7.2 |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | 7.0-7.2 |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | 7.0-7.2 |
| | BioOcean® Stop Solution | 1.1-1.3 |
| Boiling/condensation point | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Melting/freezing point | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |

| | | |
|---------------------------------------|---|----------------|
| Relative density | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Vapor pressure | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Vapor density | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Volatility | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Evaporation rate | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Viscosity | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Solubility | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |
| Physical/chemical properties comments | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |

Section 10. Stability and reactivity

| | | |
|---|---|---|
| Reactivity | BioOcean® anti-Human IL-12 detect antibody(100X) | No specific test data related to reactivity available for this product or its ingredients. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No specific test data related to reactivity available for this product or its ingredients. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No specific test data related to reactivity available for this product or its ingredients. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No specific test data related to reactivity available for this product or its ingredients. |
| | BioOcean® Stop Solution | No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | BioOcean® anti-Human IL-12 detect antibody(100X) | The product is stable. |
| | BioOcean® Human IL-12 Standard (lyophilized) | The product is stable. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | The product is stable. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | The product is stable. |
| | BioOcean® Stop Solution | The product is stable. |
| Possibility of hazardous reactions | BioOcean® anti-Human IL-12 detect antibody(100X) | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. |
| | BioOcean® Stop Solution | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | BioOcean® anti-Human IL-12 detect antibody(100X) | No specific data. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No specific data. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No specific data. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No specific data. |
| | BioOcean® Stop Solution | No specific data. |
| Incompatible materials | BioOcean® anti-Human IL-12 detect antibody(100X) | No specific data. |
| | BioOcean® Human IL-12 Standard (lyophilized) | No specific data. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | No specific data. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | No specific data. |
| | BioOcean® Stop Solution | No specific data. |
| Hazardous decomposition products | BioOcean® anti-Human IL-12 detect antibody(100X) | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | | |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity: Not available.
Irritation/Corrosion: Not available.
Sensitization: Not available.
Mutagenicity: Not available.
Carcinogenicity: Not available.
Reproductive toxicity: Not available.
Teratogenicity: Not available.
Specific target organ toxicity (single exposure): Not available.
Specific target organ toxicity (repeated exposure): Not available.
Aspiration hazard: Not available.
Information on the likely routes of exposure: Not available.

Potential acute health effects

Eye contact: Not available.
Inhalation: Not available.
Skin contact: Not available.
Ingestion: Not available.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Not available.
Inhalation: Not available.
Skin contact: Not available.
Ingestion: Not available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure: Not available.
Potential immediate effects: Not available.
Potential delayed effects: Not available.
Long term exposure: Not available.
Potential immediate effects: Not available.
Potential delayed effects: Not available.
Potential chronic health effects:
General: Not available.
Carcinogenicity: Not available.
Mutagenicity: Not available.
Teratogenicity: Not available.
Developmental effects: Not available.
Fertility effects: Not available.
Numerical measures of toxicity Acute toxicity estimates: Not available.
Interactive effects: Not available.
Other information: Not available.

Section 12. Ecological information

Toxicity: Not available.
Persistence and degradability: Not available.
Bioaccumulative potential: Not available.
Mobility in soil

| | | |
|--|---|----------------|
| Soil/water partition: coefficient (K_{oc}) | BioOcean® anti-Human IL-12 detect antibody(100X) | Not available. |
| | BioOcean® Human IL-12 Standard (lyophilized) | Not available. |
| | BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not available. |
| | BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not available. |
| | BioOcean® Stop Solution | Not available. |

Mobility: Not available.

Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | DOT Classification | TDG Classification | Mexico Classification | ADR/RID | IMDG | IATA |
|-------------------------|--------------------|--------------------|-----------------------|----------------|----------------|----------------|
| UN number | Not available. | Not available. | Not available. | Not available. | Not available. | Not available. |
| UN proper shipping name | Not available. | Not available. | Not available. | Not available. | Not available. | Not available. |
| Packing group | - | - | - | - | - | - |
| Environmental hazards | No. | No. | No. | No. | No. | No. |
| Additional information | - | - | - | - | - | - |

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not available.

Section 15. Regulatory information

U.S. Federal regulations: TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304 Composition/information on ingredients

| Name | % | EHS | SARA 302 TPQ (lbs) | (gallons) | SARA 304 RQ (lbs) | (gallons) |
|--|-----|------|--------------------|-----------|-------------------|-----------|
| BioOcean® Substrate Reagent with hydrogen peroxide | 0-1 | Yes. | 1000 | 106.1 | 1000 | 106.1 |

SARA 304 RQ: 68292000 lbs / 31004568 kg

SARA 311/312 Classification: Not applicable.

Composition/information on ingredients: No products were found.

State regulations

Massachusetts: None of the components are listed.

New York: None of the components are listed.

New Jersey: None of the components are listed.

Pennsylvania: None of the components are listed.

Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Canada

WHMIS (Canada)

BioOcean® anti-Human IL-12 detect antibody(100X)

Not controlled under WHMIS (Canada).

| | |
|---|--------------------------------------|
| BioOcean® Human IL-12 Standard (lyophilized) | Not controlled under WHMIS (Canada). |
| BioOcean® PBS Buffer with Tween 20 (Assay, Diluent or Washing buffer) | Not controlled under WHMIS (Canada). |
| BioOcean® Streptavidin-HRP (100x) and Substrate Reagent | Not controlled under WHMIS (Canada). |
| BioOcean® Stop Solution | Not controlled under WHMIS (Canada). |

Canadian lists [Canadian NPRI](#): None of the components are listed.

CEPA Toxic substances: None of the components are listed

Canada inventory: Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

| | |
|------------------|---|
| Health | 0 |
| Flammability | 0 |
| Physical hazards | 0 |
| | |

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



History

Date of issue/Date of revision: 6/11/2016

Date of previous issue: No previous validation.

Version: 1

Section 16. Other information

Key to abbreviations:

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

Notice to reader

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