SAFETY DATA SHEET

1. IDENTIFICATION

This Safety Data Sheet is for the following products:

MANUFACTURER: Immucor GTI Diagnostics, Inc.
20925 Crossroads Circle
Waukesha WI 53186 USA
Manufacturer’s Phone: 855-IMMUCOR (855-466-8267)

AUTHORIZED REPRESENTATIVE: Immucor Medizinische Diagnostik GmbH
Robert-Bosch-Strasse 32
63303 Dreieich
Germany

After normal business hours, weekends, and holidays:
Call your local emergency center.

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>PRODUCT NAME</th>
<th>Product Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>628230</td>
<td>LIFECODES Donor Specific Antibody</td>
<td>Capture Beads 665 μL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conjugate Concentrate 550 μL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SA-PE Concentrate 285 μL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lymphocyte Lysis Buffer 2.5 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lysate Control Reagent 285 μL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specimen Diluent 5 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wash Buffer 250 mL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive Control Serum 228 μL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative Control Serum 228 μL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dried Lymphocyte Control Pellet 3 vials, 1 pellet each</td>
</tr>
</tbody>
</table>

SPECIFIC USE: For Laboratory testing. Please see the product Insert for more details

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Capture Beads, SA-PE Concentrate, Lysate Control Reagent
ProClin 300 contains a dangerous ingredient: mixture of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one at a concentration between 2.8 and 3.8%. In the column classification substance, the classification of this ingredient is mentioned.

Conjugate Concentrate, Positive Control Serum, Negative Control Serum, Wash Buffer
Contains 0.1% Sodium Azide

Lymphocyte Lysis Buffer
Contains 0.5% Sodium Azide

Specimen Diluent
Contains 0.09% Sodium Azide

2.2 Label Elements:

Acute Toxicity, Oral (Category 4), H302
Causes skin irritation (Category 2) H315

Label Elements: All kit components

GHS07

Signal word (GHS) Warning
Hazard statements (GHS):
- H302 - Harmful if swallowed
- H315 - Causes skin irritation.

Precautionary statements (GHS):
- P264 - Wash hands thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P281 - Use personal protective equipment as required
- P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 - IF ON SKIN: wash with plenty of soap and water.
- P332+P313 - IF SKIN irritation occurs: Get medical advice/attention.
- P362 - Take off contaminated clothing and wash before reuse.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>CAS NUMBER</th>
<th>CONCENTRATION</th>
<th>CLASSIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPTURE BEADS, SA-PE CONCENTRATE, LYSATE CONTROL REAGENT</td>
<td>ProClin 300</td>
<td>55965-84-9</td>
<td>0.05%</td>
</tr>
<tr>
<td>CONJUGATE CONCENTRATE (LMD), POSITIVE CONTROL SERUM, NEGATIVE CONTROL SERUM, WASH BUFFER</td>
<td>Sodium Azide</td>
<td>26628-22-8</td>
<td>0.1%</td>
</tr>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LYMPHOCYTE LYSIS BUFFER</td>
<td>Sodium Azide</td>
<td>26628-22-8</td>
<td>0.5%</td>
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<tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPECIMEN DILUENT</td>
<td>Sodium Azide</td>
<td>26628-22-8</td>
<td>0.09%</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

*ProClin 300 contains a dangerous ingredient: mixture of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one at a concentration between 2.8 and 3.8%. In the column classification substance, the classification of this ingredient is mentioned.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, Unconscious: maintain adequate airway and respiration. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Consult a doctor/medical service if breathing problems develop.

Ingestion: DO NOT induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person. Give nothing (little) to drink. Get medical attention immediately.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Do not apply neutralizing agents Get medical attention if irritation persists

Skin Contact: Rinse with water. Remove clothing before washing. Consult a doctor/medical service if irritation persists

5. FIRE-FIGHTING MEASURES

Flash Point: N/A

Autoignition Temperature: N/A

Fire and Explosion Hazards: N/A

Extinguishing Media: Use appropriate extinguishing media for surrounding fire: dry chemical, carbon dioxide, water spray or regular foam.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Fight fires only if properly trained. Take account of toxic fire fighting water. Dike fire control water. Do not direct a solid stream of water at burning materials as spattering may result.

Unusual Fire and Explosion Hazards: Avoid breathing vapors or dusts. Keep upwind.
Hazardous Decomposition Products: On heating, burning: formation of small quantities of nitrous vapors, carbon monoxide, carbon dioxide

6. ACCIDENTAL RELEASE MEASURES

Action to Be Taken If Material Is Released or Spilled: Do not touch spilled material. Stop the release if you can do it without risk. Isolate the area and deny entry. Absorb the spill and place used absorbent material into approved containers for later disposal. Decontaminate the area with an approved disinfectant. Cover the area with paper towels and pour disinfectant over the area. Wipe the area until clean and dry. Discharge of absorbed material according to local regulations, Wash clothing and equipment after handling. Prevent soil and water pollution.

7. HANDLING AND STORAGE

Handling: Food and drink should not be consumed, nor tobacco products used, nor cosmetics applied in areas where chemicals are stored or handled. Observe normal hygiene standards. Discharge according to local regulations. Remove and clean contaminated clothing. Handle and open the container with care.


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below permissible air concentrations.

Eye/Face Protection: Use chemical safety goggles and/or full face shield where splashing of the solution is possible. Maintain eyewash fountain and quick drench facilities in the work area.

Skin Protection: Clothing such as gowns, aprons, or lab coats should be worn when working with this material. Protective gloves should be worn while handling materials and/or surfaces, which are potentially infectious.

Respiratory Protection: A NIOSH/MSHA approved respirator should be worn where airborne exposures may exceed OSHA/ACGIH exposure limits.

Other/General Protection: Hood, surgical caps, boots and shoe covers should be worn in areas with significant quantities of infectious materials.

<table>
<thead>
<tr>
<th>Chemical/Component</th>
<th>TLV/NIOSH REL</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Azide (as NaN₃)</td>
<td>0.3 mg/m³ ACGIH TLV-CL</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium Azide (as HN₃)</td>
<td>0.1 ppm</td>
<td>Not listed</td>
</tr>
</tbody>
</table>


9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>All kit components:</th>
<th>Odor.</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (physical state, color, etc.)</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
<td>Initial boiling point and boiling range:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
<td>Evaporation rate:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>No data available</td>
<td>Vapor density:</td>
<td>No data available</td>
</tr>
<tr>
<td>vapor pressure</td>
<td>No data available</td>
<td>Solubility(ies):</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td>Upper/lower flammability or explosive limits:</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>Viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY
Chemical Stability: Stable
Conditions to Avoid: Keep away from metals and acids (Azide containing components)
Incompatibility: No data available
Hazardous Decomposition Products: No hazardous decomposition products are formed in high quantities
Hazardous Polymerization: Will not occur.
Possibility of Hazardous Reaction: Not determined.

11. TOXICOLOGICAL INFORMATION

Components containing NaN₃
See Section: 3. “Composition/Information on ingredients” to identify the kit components that contain the substances mentioned in this section

Acute toxicity:
Sodium azide: LD₅₀ oral rat : 27 mg/kg
LD₅₀ dermal rat : 20 mg/kg

Chronic toxicity:
Sodium azide:
- Carcinogenicity (TLV): A₄
- Target Organ(s): nerves, heart, brain, laboratory experiments have shown mutagenic effects

Routes of exposure:
Ingestion, inhalation, eyes and skin
Caution! Most components contain (a) substance(s) that are absorbed through the skin.

Acute effects/symptoms:
Positive Control Serum, Wash Buffer, Negative Control Serum, Conjugate Concentrate, Lymphocyte Lysis Buffer, Specimen Diluent
- Harmful if swallowed
- May cause skin irritation, eye irritation, vomiting, and diarrhea upon ingestion
- May be harmful if inhaled
- May irritate mucous membranes and upper respiratory tract
- May cause nausea, headache, vomiting. Experiments have shown animals to produce hypotensive effects, demyelination of myelinated nerve fibers in the CNS, testicular damage, blindness, attacks of rigidity, hepatic and cerebral effects

Lymphocyte Lysis Buffer:
- May cause skin irritation, severe eye irritation
- Harmful if swallowed
- May be harmful when inhaled

Capture Beads, SA-PE Concentrate, Lysate Control Reagent
- May cause allergic skin reaction. Contact with skin may cause burns. Harmful if absorbed through skin.
- Exposure may cause Dermatitis. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.
- Contact with eyes may cause burns.
- Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- Harmful if swallowed.

Chronic effects:
See also Chronic Toxicity. Other components do not contain substances with a known chronic effect (e.g. carcinogenicity, mutagenicity, toxicity to reproduction)

Components Containing ProClin 300
See Section: 3. “Composition/Information on ingredients” to identify the kit components that contain the substances mentioned in this section
May cause eye irritation

Chronic effects:
See also Chronic Toxicity
Acute Toxicity:
LD50 Oral rat, female 3,723 mg/kg
LD50 Oral rat, male 3,600 mg/kg
LD50 Skin Rabbit > 3,600 mg/kg
LD50 Skin Rabbit 3,500 mg/kg

Irritation Data:
Skin Rabbit 18.6 % Remarks: Severe irritation effect
Skin Rabbit 9.3 % Remarks: Moderate irritation effect
Skin Rabbit 1.8 % Remarks: No irritation effect
Eyes Rabbit Remarks: Severe irritation effect
Eyes Rabbit 9.3 % Remarks: Moderate irritation effect
Eyes 1.8 % Remarks: No irritation effect
Skin Rabbit Remarks: Severe irritation effect
Sensitization:
Skin: May cause allergic skin react

Signs and Symptoms of Exposure:
Exposure can cause: Dermatitis. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Route of Exposure:
Skin Contact: Causes burns.
Skin Absorption: Harmful if absorbed through skin.
Eye Contact: Causes burns.
Inhalation: Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion: Harmful if swallowed.

12. ECOLOGICAL INFORMATION
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Prevent soil and water pollution.
Discharge according to local regulations
Aquatic toxicity
Sodium azide: -LC50 (96h): 0.8 mg/l (SALMO GAIRDNERI/ONCORHYNCHUS MYKISSL)
-LC50 (96h): 0.7 mg/l (LEPOMIS MACROCHIRUS)
-LC50 (96h): 9 mg/l (GAMMARUS SP.)
Other information
-WGK:1 (Classification based on the components as per Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
-Effect on the ozone layer: Not dangerous for the ozone layer (1999/45/EC)
-Greenhouse effect: No data available
-Effect on waste water purification: No data available

13. DISPOSAL CONSIDERATIONS
Dispose in accordance with applicable federal, state, and local government regulations. Waste generators must determine whether a discarded material is classified as a hazardous waste. USEPA guidelines for the classification determination are listed in 40 CFR parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
Patient samples, Negative Control Serum, Positive Control Serum, HLA & LifeScreen Deluxe Beads, Conjugate Concentrate and Wash solution are potentially infectious. They should be disposed of following established safety procedures and local regulations. All the kit components must be considered as hazardous waste. They should be disposed of following local regulations. Sodium azide reacts with lead and copper plumbing forming highly explosive metal azides.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>UN ID Number:</th>
<th>N/A</th>
<th>Transport Hazard Class:</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Proper Shipping Name:</td>
<td>N/A</td>
<td>Packaging Group:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

TSCA: All components of this product besides ProClin 300 are listed on the TSCA inventory
CERCLA Reportable Quantity: None
SARA Title III Section 302: None
SARA Title III Section 313: None
SARA Title III Section 311/312: None

16. OTHER INFORMATION

This product is designed for use by professionals. The human blood components included in this kit have been tested by European approved and/or FDA approved methods and found negative for HBsAg, anti-HCV and anti-HIV-1/2. No known method can offer complete assurance that human blood derivatives will not transmit hepatitis, AIDS or other infections. Therefore, handling of reagents, serum or plasma specimens should be in accordance with local safety procedures.

All animal products and derivatives have been collected from healthy animals. Bovine components originate from countries where BSE has not been reported.

List of relevant hazard statements mentioned in section 3.

H300 Fatal if swallowed
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

It remains the user's own responsibility to make sure that the information is appropriate and complete for his specific use of this product. The user is also responsible for observing any laws and applicable guidelines.

DISCLAIMER: The information contained herein is based on data considered accurate and is offered at no charge. No warranty is expressed or implied regarding the accuracy of this data. Liability is expressly disclaimed for loss or injury arising out of use of this information or the use of any materials designated.

Based on Regulation 1907/2006 (REACH)

REVISION DATE: 2018-08-07