SAFETY DATA SHEET
xGen® 10x Wash 2 Buffer

1. Identification

Product identifier
Product name xGen® 10x Wash 2 Buffer

Recommended use of the chemical and restrictions on use
Application For research and development purposes only.
Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet
Manufacturer Integrated DNA Technologies
1710 Commercial Park
Coralville Iowa, 52241
custcare@idtdna.com

Emergency telephone number
Emergency telephone ChemTrec 800-424-9300

2. Hazard(s) identification

Classification of the substance or mixture
Physical hazards Not Classified
Health hazards Not Classified
Environmental hazards Not Classified

Label elements
Hazard statements NC Not Classified

Other hazards
This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures
Composition comments The exact percentage is withheld as a trade secret in accordance with 29 CFR 1910.1200.

4. First-aid measures

Description of first aid measures
General information If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
Inhalation No specific recommendations. If throat irritation or coughing persists, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if any discomfort continues.
Ingestion No specific recommendations. If throat irritation or coughing persists, proceed as follows. Rinse mouth. Get medical attention if any discomfort continues.
Skin Contact No specific recommendations. Rinse with water. Get medical attention if any discomfort continues.
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**Eye contact**
Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.

**Protection of first aiders**
Use protective equipment appropriate for surrounding materials.

**Most important symptoms and effects, both acute and delayed**

**General information**
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**
No specific symptoms known. Spray/mists may cause respiratory tract irritation.

**Ingestion**
No specific symptoms known. May cause discomfort if swallowed.

**Skin contact**
No specific symptoms known. May cause discomfort.

**Eye contact**
No specific symptoms known. May be slightly irritating to eyes.

**Indication of immediate medical attention and special treatment needed**

**Notes for the doctor**
Treat symptomatically.

**Specific treatments**
No special treatment required.

### 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**
The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Special hazards arising from the substance or mixture**

**Specific hazards**
Containers can burst violently or explode when heated, due to excessive pressure build-up.

**Hazardous combustion products**
Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

**Advice for firefighters**

**Protective actions during firefighting**
Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak.

**Special protective equipment for firefighters**
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
No specific recommendations. For personal protection, see Section 8.

**Environmental precautions**

**Environmental precautions**
Avoid discharge into drains or watercourses or onto the ground.

**Methods and material for containment and cleaning up**

**Methods for cleaning up**
Reuse or recycle products wherever possible. Absorb spillage to prevent material damage. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of contents/container in accordance with national regulations.

**Reference to other sections**
For personal protection, see Section 8. For waste disposal, see Section 13.

### 7. Handling and storage

**Precautions for safe handling**
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Usage precautions
Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists.

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities
Store away from incompatible materials (see Section 10). No specific recommendations.

Storage precautions
Unspecified storage.

Specific end uses(s)
The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Trisodium citrate dihydrate (CAS: 6132-04-3)

Ingredient comments
No exposure limits known for ingredient(s).

Exposure controls

Appropriate engineering controls
No specific ventilation requirements.

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.

Hand protection
Wear protective gloves.

Other skin and body protection
Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures
Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection
Respiratory protection not required.

Environmental exposure controls
Not regarded as dangerous for the environment.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance
Liquid.

Color
Colorless.

Odor
Odorless.

Odor threshold
Not available.

pH
Not available.

Melting point
Not available.

Initial boiling point and range
Not available.

Flash point
No specific test data are available.

Evaporation rate
Not available.

Evaporation factor
Not available.
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<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not available</td>
</tr>
<tr>
<td>Other flammability</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not considered to be explosive.</td>
</tr>
<tr>
<td>Explosive under the influence of a flame</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Other information</td>
<td>None.</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

- **Reactivity**
  - See the other subsections of this section for further details.
- **Stability**
  - Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
- **Possibility of hazardous reactions**
  - No potentially hazardous reactions known.
- **Conditions to avoid**
  - There are no known conditions that are likely to result in a hazardous situation.
- **Materials to avoid**
  - No specific material or group of materials is likely to react with the product to produce a hazardous situation.
- **Hazardous decomposition products**
  - Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

### 11. Toxicological information

- **Information on toxicological effects**
  - Not regarded as a health hazard under current legislation.
- **Acute toxicity - oral**
  - Notes (oral LD₅₀)
    - Based on available data the classification criteria are not met.
- **Acute toxicity - dermal**
  - Notes (dermal LD₅₀)
    - Based on available data the classification criteria are not met.
- **Acute toxicity - inhalation**
  - Notes (inhalation LC₅₀)
    - Based on available data the classification criteria are not met.
- **Skin corrosion/irritation**
Animal data

Based on available data the classification criteria are not met.

Serious eye damage/irritation
Serious eye damage/irritation
Based on available data the classification criteria are not met.

Respiratory sensitization
Respiratory sensitization
Based on available data the classification criteria are not met.

Skin sensitization
Skin sensitization
Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro
Based on available data the classification criteria are not met.

Carcinogenicity
Carcinogenicity
Based on available data the classification criteria are not met.

IARC carcinogenicity
None of the ingredients are listed or exempt.

Reproductive toxicity
Based on available data the classification criteria are not met.

Reproductive toxicity - fertility
Based on available data the classification criteria are not met.

Reproductive toxicity - development
Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure
Not classified as a specific target organ toxicant after a single exposure.

Target organs
Respiratory system, lungs

Specific target organ toxicity - repeated exposure
STOT - repeated exposure
Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard
Based on available data the classification criteria are not met.

General information
No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
No specific symptoms known. Spray/mists may cause respiratory tract irritation.

Ingestion
No specific symptoms known. May cause discomfort if swallowed.

Skin Contact
No specific symptoms known. May cause discomfort.

Eye contact
No specific symptoms known. May be slightly irritating to eyes.

Route of exposure
Ingestion Inhalation Skin and/or eye contact

Target Organs
No specific target organs known.

12. Ecological Information

Ecotoxicity
Not regarded as dangerous for the environment.

Toxicity
Based on available data the classification criteria are not met.

Persistence and degradability
The degradability of the product is not known.

Bioaccumulative potential
No data available on bioaccumulation.

Partition coefficient
Not available.
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Mobility in soil
Mobility No data available.

Other adverse effects
Other adverse effects None known.

13. Disposal considerations

Waste treatment methods
General information The generation of waste should be minimized or avoided wherever possible. This material and its container must be disposed of in a safe way.

Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority.

14. Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number
UN No. (DOT) Not applicable.

UN proper shipping name
Proper shipping name (DOT) Not applicable.

Transport hazard class(es)
DOT transport labels
No transport warning sign required.

Packing group
DOT packing group Not applicable.

Special precautions for user
DOT reportable quantity Not applicable.

DOT TIH Zone Not applicable.

15. Regulatory information

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA) None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities None of the ingredients are listed or exempt.

SARA 313 Emission Reporting None of the ingredients are listed or exempt.

CAA Accidental Release Prevention None of the ingredients are listed or exempt.

FDA - Essential Chemical None of the ingredients are listed or exempt.
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FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
None of the ingredients are listed or exempt.

Massachusetts "Right To Know" List
None of the ingredients are listed or exempt.

Rhode Island "Right To Know" List
None of the ingredients are listed or exempt.

Minnesota "Right To Know" List
None of the ingredients are listed or exempt.

New Jersey "Right To Know" List
The following ingredients are listed or exempt:
Trisodium citrate dihydrate

Pennsylvania "Right To Know" List
The following ingredients are listed or exempt:
Trisodium citrate dihydrate

Inventories
US - TSCA
The following ingredients are listed or exempt:
water

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms
Acute Tox. = Acute toxicity
Eye Dam. = Serious eye damage
Skin Corr. = Skin corrosion
STOT SE = Specific target organ toxicity-single exposure

Training advice
Only trained personnel should use this material.

Revision comments
Contact legal for statement

Revision date
12/11/2017
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Revision 4
SDS No. 4587

The information in this safety data sheet is, to the best of our knowledge, correct as of the date it was issued. We do not guarantee that this safety data sheet includes all the information necessary for your intended use. You (the user) are responsible for determining whether this material or product is suitable for your particular purpose.