Safety Data Sheet

Document Group:	23-1246-0	**Version Number:**	4.00
Issue Date:	06/01/15	**Supercedes Date:**	02/08/10

Product identifier
3M™ Clean-Trace™ Biomass Detection Kit (formerly Biotrace™ Multi-Trace Water Kit)

ID Number(s):

GH-6205-0015-3, GH-6205-2247-0

Recommended use
Microbiological testing

Supplier's details

MANUFACTURER:	3M
DIVISION:	Food Safety Department
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

23-0013-5, 22-9762-0, 23-0012-7

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Safety Data Sheet

Document Group:	23-0012-7	**Version Number:**	3.00
Issue Date:	12/21/15	**Supercedes Date:**	02/16/10

SECTION 1: Identification

1.1. Product identifier
Diluent

Product Identification Numbers
GH-6205-0777-8, GH-6205-0778-6, GH-6205-0831-3

1.2. Recommended use and restrictions on use

Recommended use
Kit Component, Used to reconstitute freeze dried B reagent in the 3M Biomass Detection Kit.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	3M United Kingdom Food Safety Department
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	80 - 100
ISOPROPYL ALCOHOL	67-63-0	< 1
LECITHIN	Trade Secret*	< 1
NON-HAZARDOUS STABILIZER	Trade Secret*	< 1
SODIUM AZIDE	26628-22-8	< 0.1

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ventilate the area with fresh air. Observe precautions from other sections.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
No specific handling precautions are necessary.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
SODIUM AZIDE	26628-22-8	ACGIH	CEIL(as hydrazoic acid vapor):0.11 ppm;CEIL(as NaN3):0.29 mg/m3	A4: Not class. as human carcin
ISOPROPYL ALCOHOL	67-63-0	ACGIH	TWA:200 ppm;STEL:400 ppm	A4: Not class. as human carcin
ISOPROPYL ALCOHOL	67-63-0	OSHA	TWA:980 mg/m3(400 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Odorless; Colorless
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point	*Not Applicable*
Boiling Point	*No Data Available*
Flash Point	*Not Applicable*
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*No Data Available*
Vapor Density	*No Data Available*
Density	*No Data Available*
Specific Gravity	*No Data Available*
Solubility in Water	Complete
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	*No Data Available*
Percent volatile	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	**Condition**
None known.	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient

classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
No known health effects.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
No known health effects.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
NON-HAZARDOUS STABILIZER	Dermal		LD50 estimated to be > 5,000 mg/kg
NON-HAZARDOUS STABILIZER	Ingestion	Rat	LD50 > 38,000 mg/kg
ISOPROPYL ALCOHOL	Dermal	Rabbit	LD50 12,870 mg/kg
ISOPROPYL ALCOHOL	Inhalation-Vapor (4 hours)	Rat	LC50 72.6 mg/l
ISOPROPYL ALCOHOL	Ingestion	Rat	LD50 4,710 mg/kg
SODIUM AZIDE	Dermal	Rabbit	LD50 20 mg/kg
SODIUM AZIDE	Ingestion	Rat	LD50 42 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
ISOPROPYL ALCOHOL	Multiple animal species	No significant irritation
SODIUM AZIDE	Not available	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
ISOPROPYL ALCOHOL	Rabbit	Severe irritant
SODIUM AZIDE	Not available	Moderate irritant

Skin Sensitization

Name	Species	Value

ISOPROPYL ALCOHOL	Guinea pig	Not sensitizing

Respiratory Sensitization
For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
ISOPROPYL ALCOHOL	In Vitro	Not mutagenic
ISOPROPYL ALCOHOL	In vivo	Not mutagenic
SODIUM AZIDE	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
ISOPROPYL ALCOHOL	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
SODIUM AZIDE	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
ISOPROPYL ALCOHOL	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	during organogenesis
ISOPROPYL ALCOHOL	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	LOAEL 9 mg/l	during gestation
SODIUM AZIDE	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 10 mg/kg/day	during gestation

Lactation

Name	Route	Species	Value
SODIUM AZIDE	Ingestion	Rat	Does not cause effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
ISOPROPYL ALCOHOL	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ISOPROPYL ALCOHOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
ISOPROPYL ALCOHOL	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL 13.4 mg/l	24 hours
ISOPROPYL ALCOHOL	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
SODIUM AZIDE	Inhalation	vascular system	Causes damage to organs	Human	NOAEL NA	occupational exposure
SODIUM AZIDE	Ingestion	vascular system	Causes damage to organs	Human	NOAEL NA	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure

						Duration
ISOPROPYL ALCOHOL	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 12.3 mg/l	24 months
ISOPROPYL ALCOHOL	Inhalation	nervous system	All data are negative	Rat	NOAEL 12 mg/l	13 weeks
ISOPROPYL ALCOHOL	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	12 weeks
SODIUM AZIDE	Ingestion	vascular system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	2.5 years
SODIUM AZIDE	Ingestion	central nervous system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 5 mg/kg/day	103 weeks
SODIUM AZIDE	Ingestion	liver | respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 10 mg/kg/day	103 weeks
SODIUM AZIDE	Ingestion	heart | skin | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | kidney and/or bladder	All data are negative	Rat	NOAEL 10 mg/kg/day	103 weeks

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	23-0012-7	**Version Number:**	3.00
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Safety Data Sheet

Document Group:	23-0013-5	**Version Number:**	2.00
Issue Date:	12/18/15	**Supercedes Date:**	02/03/10

SECTION 1: Identification

1.1. Product identifier
3M Extractant XM

Product Identification Numbers
LE-B100-0345-3

1.2. Recommended use and restrictions on use

Recommended use
Intermediate

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Food Safety Department
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

2.3. Hazards not otherwise classified
None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Water	7732-18-5	95 - 100
Cationic Agent	18472-51-0	< 1 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
No need for first aid is anticipated.

Skin Contact:
No need for first aid is anticipated.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid release to the environment.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls
No engineering controls required.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Colorless liquid
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point	*No Data Available*
Boiling Point	*No Data Available*
Flash Point	*Not Applicable*
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*No Data Available*

Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	Negligible
Vapor Density	*No Data Available*
Density	1 g/ml
Specific Gravity	1 g/cm3 [*Ref Std:* WATER=1]
Solubility in Water	Complete
Solubility- non-water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	*No Data Available*
Percent volatile	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	Condition
None known.	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
No known health effects.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced) in sensitive people: Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
No known health effects.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Cationic Agent	Dermal	Rabbit	LD50 > 5,000 mg/kg
Cationic Agent	Ingestion	Rat	LD50 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Cationic Agent	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Cationic Agent	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Cationic Agent	Human and animal	Some positive data exist, but the data are not sufficient for classification

Respiratory Sensitization
For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Cationic Agent	In Vitro	Not mutagenic
Cationic Agent	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Cationic Agent	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Cationic Agent	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 30 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Cationic Agent	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Cationic Agent	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 0.89 mg/kg/day	1 years
Cationic Agent	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 71 mg/kg/day	2 years
Cationic Agent	Ingestion	hematopoietic system | kidney and/or bladder	All data are negative	Rat	NOAEL 71 mg/kg/day	2 years

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - No

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 0 **Flammability:** 0 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
Enzyme B10

Product Identification Numbers
GH-6205-0780-2

1.2. Recommended use and restrictions on use

Recommended use
Kit Component, Reagent for detection of Adenosine Triphosphate used as part of the 3M Biomass Detection Kit.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	3M United Kingdom Food Safety Department
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

2.3. Hazards not otherwise classified

None.

24% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
SUCROSE	57-50-1	40 - 70
SODIUM 4-2(-HYDROXYETHYL)PIPERAZIN-1-YLETHANESULPHONATE	75277-39-3	10 - 30
HEPES ACID	7365-45-9	3 - 7
MAGNESIUM SULFATE	7487-88-9	3 - 7
WATER	7732-18-5	3 - 7
BOVINE SERUM ALBUMIN	9048-46-8	0.5 - 1.5
EDTA	60-00-4	0.5 - 1.5
DITHIOTHREITOL	3483-12-3	0.1 - 1.0
LUCIFERIN	115144-35-9	0.1 - 1.0
LUCIFERASE	61970-00-1	< 0.01
TETRA SODIUM PYROPHOSPHATE	7722-88-5	< 0.01

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition

Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ventilate the area with fresh air. Observe precautions from other sections.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
SUCROSE	57-50-1	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
SUCROSE	57-50-1	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Freeze Dried Powder
Odor, Color, Grade:	DTT Odour; White Colour
Odor threshold	*No Data Available*
pH	7.7 - 7.8 [*Test Method:* ISO METHOD]
Melting point	*No Data Available*
Boiling Point	*No Data Available*
Flash Point	*Not Applicable*
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*No Data Available*
Vapor Density	*No Data Available*
Density	*No Data Available*
Specific Gravity	*No Data Available*
Solubility in Water	Complete
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	*No Data Available*
Percent volatile	*No Data Available*

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

Eye Contact:
Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
SUCROSE	Ingestion	Rat	LD50 29,700 mg/kg
MAGNESIUM SULFATE	Ingestion	Mouse	LD50 > 5,000 mg/kg
EDTA	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation
For the component/components, either no data are currently available or the data are not sufficient for classification.

Serious Eye Damage/Irritation
For the component/components, either no data are currently available or the data are not sufficient for classification.

Skin Sensitization
For the component/components, either no data are currently available or the data are not sufficient for classification.

Respiratory Sensitization
For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity
For the component/components, either no data are currently available or the data are not sufficient for classification.

Carcinogenicity
For the component/components, either no data are currently available or the data are not sufficient for classification.

Reproductive Toxicity

Reproductive and/or Developmental Effects
For the component/components, either no data are currently available or the data are not sufficient for classification.

Target Organ(s)

Specific Target Organ Toxicity - single exposure
For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure
For the component/components, either no data are currently available or the data are not sufficient for classification.

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
This material is not listed on the TSCA inventory and should be used for research and development purposes only under the direct supervision of a technically qualified individual.

Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 1 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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