



Material Data Safety Sheet

AutoGen, Inc.
84 October Hill Rd.
Holliston, MA 01746
(800) 292-5678

Date revised: 02-11-04
Emergency Telephone Number: (800) 424-9300
Agent: CHEMTREC

Section 1 – Product and Company Information

Product Name: AGF Star/3000 Tissue DNA - Tissue Digestion Solution A
Product Number: AGF-M1

Company: AutoGen, Inc.
Address: 84 October Hill Rd.
Holliston, MA 01746
Phone: (800) 292-5678
Fax: (508) 429-9765

Section 2 – Composition/Information on Ingredients

<u>Chemical name</u>	<u>CAS #</u>
Tris	77-86-1

Section 3 - Hazards Identification

Emergency overview

Highly Toxic
Suspected Carcinogen
Target organs: Nerves, Liver, Heart, CNS, Kidneys, and Teeth

Section 4- First Aid Measures

Ingestion
Get medical attention immediately



Inhalation

Remove to fresh air. If breathing is impaired give oxygen. If breathing has stopped, give artificial respiration and contact emergency medical personnel.

Skin Contact

Wash with copious amounts of water. Remove contaminated clothing and contact a physician.

Eye contact

Flush with water for 15 minutes and contact a physician.

Wash contaminated clothing before reuse.

Section 5- Fire Fighting Measures

Extinguishing Media

Carbon dioxide, Dry Chemical Powder, or appropriate foam

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Special Procedures

Use water spray to cool fire-exposed containers

Specific Hazards

Vapor may travel a considerable distance to source of ignition and flashback

Section 6 – Accidental Release Measures



Procedures in case of accidental leak or spill

Evacuate area

Shut off all sources of ignition

Personal Precaution Equipment

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves

Clean-up procedures

Cover with dry-lime, sand or soda ash. Place in covered containers, using non-sparking tools. Transport outdoors. Ventilate area and wash spill site after material pick-up is complete.

Section 7 – Handling and Storage

Handling

Wear appropriate safety equipment. Especially chemical resistant gloves, safety goggles, and other protective clothing. In very special cases, NIOSH/MSHA-approved respirator may be required. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Do not breathe vapor.

Storage

Place at 4°C for storage under 1 month. Place at -20°C for long-term storage. Keep tightly closed. Keep away from heat, sparks, and open flame.

Section 8 – Exposure controls/Personal Protection

Personal Protective Equipment

Respiratory

NIOSH-approved respirator

Hand

Compatible chemical-resistant gloves

Eye

Chemical safety goggles



General hygiene measures

Wash hands thoroughly after handling

Section 9 – Physical and Chemical Properties

Appearance

Physical State: liquid

Color: dilute yellow

Form: N/A

Characteristics

Molecular weight:

BP/BP range:

MP/MP range:

Freezing point:

Vapor Pressure:

Vapor Density:

Saturated vapor conc.:

SG/Density:

Bulk density:

Odor Threshold:

Volatile%:

V O C Content:

Water Content:

Solvent Content:

Evaporation Rate:

Viscosity:

Partition Coefficient:

Decomposition Temp.:

Flash Point F:

Flash Point C:

Explosion limits:

Flammability:

Autoignition Temp:



Section 10 – Stability and Reactivity

Stability

Stable

Incompatible agents

Oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia

Hazardous decomposition products

Carbon monoxide, carbon dioxide.

Hazardous polymerization

Will not occur.

Section 11 – Toxicological Information

RETCS

<u>Component</u>	<u>Number</u>
Tris	TY2900000

Routes of exposure

May be harmful by inhalation, ingestion, or skin absorption

Possible effects

Irritation of the skin, eyes, mucous membranes, and upper respiratory tract. CNS depression. Nausea, headache and vomiting. Narcotic effects. Damage to the heart.

Target organs

Nerves, Liver, Heart, Kidneys, CNS, and Teeth.

Section 12 – Ecological Information

Data not available.



Section 13 – Disposal Considerations

General Instructions

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting, as this material is highly flammable.

Observe all Federal, State, and Local environmental regulations.

Section 14 – Transport Information

Not Regulated.

Section 15 – Regulatory Information

EU Directives Classification

Risk Statements

R: 36/37/38

Irritant. Irritating to eyes, respiratory system, and skin.

Safety Statements

S: 36/37/39

Wear suitable protective clothing, gloves, and eye/face protection.

Section 16 – Other Information

Disclaimer

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Warranty

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Material Data Safety Sheet

AutoGen, Inc.
84 October Hill Rd.
Holliston, MA 01746
(800) 292-5678

Date revised: 02-11-04
Emergency Telephone Number: (800) 424-9300
Agent: CHEMTREC

Section 1 – Product and Company Information

Product Name: AGF Star/3000 Tissue DNA - Tissue Digestion Solution B
Product Number: AGF-M2

Company: AutoGen, Inc.
Address: 84 October Hill Rd.
Holliston, MA 01746
Phone: (800) 292-5678
Fax: (508) 429-9765

Section 2 – Composition/Information on Ingredients

<u>Chemical name</u>	<u>CAS #</u>
Tris	77-86-1
EDTA	6381-92-6
Sarcosine	107-97-1
Dextran	9004-54-0

Section 3 - Hazards Identification

Emergency overview

Highly Toxic
Suspected Carcinogen
Target organs: Nerves, Liver, Heart, CNS, Kidneys, and Teeth

Section 4- First Aid Measures



Ingestion

Get medical attention immediately

Inhalation

Remove to fresh air. If breathing is impaired give oxygen. If breathing has stopped, give artificial respiration and contact emergency medical personnel.

Skin Contact

Wash with copious amounts of water. Remove contaminated clothing and contact a physician.

Eye contact

Flush with water for 15 minutes and contact a physician.

Wash contaminated clothing before reuse.

Section 5- Fire Fighting Measures

Extinguishing Media

Carbon dioxide, Dry Chemical Powder, or appropriate foam

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Special Procedures

Use water spray to cool fire-exposed containers

Specific Hazards

Vapor may travel a considerable distance to source of ignition and flashback

Section 6 – Accidental Release Measures



Procedures in case of accidental leak or spill

Evacuate area

Shut off all sources of ignition

Personal Precaution Equipment

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves

Clean-up procedures

Cover with dry-lime, sand or soda ash. Place in covered containers, using non-sparking tools. Transport outdoors. Ventilate area and wash spill site after material pick-up is complete.

Section 7 – Handling and Storage

Handling

Wear appropriate safety equipment. Especially chemical resistant gloves, safety goggles, and other protective clothing. In very special cases, NIOSH/MSHA-approved respirator may be required. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Do not breathe vapor.

Storage

Place at 4°C for storage under 1 month. Place at -20°C for long-term storage. Keep tightly closed. Keep away from heat, sparks, and open flame.

Section 8 – Exposure controls/Personal Protection

Personal Protective Equipment

Respiratory

NIOSH-approved respirator

Hand

Compatible chemical-resistant gloves

Eye

Chemical safety goggles



General hygiene measures

Wash hands thoroughly after handling

Section 9 – Physical and Chemical Properties

Appearance

Physical State: liquid

Color: dilute yellow

Form: N/A

Characteristics

Molecular weight:

BP/BP range:

MP/MP range:

Freezing point:

Vapor Pressure:

Vapor Density:

Saturated vapor conc.:

SG/Density:

Bulk density:

Odor Threshold:

Volatile%:

V O C Content:

Water Content:

Solvent Content:

Evaporation Rate:

Viscosity:

Partition Coefficient:

Decomposition Temp.:

Flash Point F:

Flash Point C:

Explosion limits:

Flammability:

Autoignition Temp:



Section 10 – Stability and Reactivity

Stability

Stable

Incompatible agents

Oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia

Hazardous decomposition products

Carbon monoxide, carbon dioxide.

Hazardous polymerization

Will not occur.

Section 11 – Toxicological Information

RETCS

<u>Component</u>	<u>Number</u>
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Routes of exposure

May be harmful by inhalation, ingestion, or skin absorption

Possible effects

Irritation of the skin, eyes, mucous membranes, and upper respiratory tract. CNS depression. Nausea, headache and vomiting. Narcotic effects. Damage to the heart.

Target organs

Nerves, Liver, Heart, Kidneys, CNS, and Teeth.

Section 12 – Ecological Information

Data not available.

Section 13 – Disposal Considerations



General Instructions

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting, as this material is highly flammable.

Observe all Federal, State, and Local environmental regulations.

Section 14 – Transport Information

UN number:

Proper shipping name:

Hazard Class:

Hazard subclass:

Packing group:

Section 15 – Regulatory Information

EU Directives Classification

Risk Statements

R: 10 26/27/28 34 45

Flammable. Very toxic by Inhalation, contact with skin and ingestion. Causes Burns. May cause cancer.

Safety Statements

S: 15 36/37/38

Wear suitable protective clothing, gloves, and eye/face protection. Keep away from heat.

Section 16 – Other Information

Disclaimer

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Holliston, MA 01746
(800) 292-5678

Date revised: 02-11-04
Emergency Telephone Number: (800) 424-9300
Agent: CHEMTREC

Section 1 – Product and Company Information

Product Name: AGF Star/3000 Tissue DNA - Resuspension Solution A
Product Number: AGF-R3

Company: AutoGen, Inc.
Address: 84 October Hill Rd.
Holliston, MA 01746
Phone: (800) 292-5678
Fax: (508) 429-9765

Section 2 – Composition/Information on Ingredients

<u>Chemical name</u>	<u>CAS #</u>
Tris-HCl	77-86-1
EDTA	6381-92-6

Section 3 - Hazards Identification

Emergency overview

Highly Toxic
Suspected Carcinogen
Target organs: Nerves, Liver, Heart, CNS, Kidneys, and Teeth

Section 4- First Aid Measures

Ingestion

Get medical attention immediately



Inhalation

Remove to fresh air. If breathing is impaired give oxygen. If breathing has stopped, give artificial respiration and contact emergency medical personnel.

Skin Contact

Wash with copious amounts of water. Remove contaminated clothing and contact a physician.

Eye contact

Flush with water for 15 minutes and contact a physician.

Wash contaminated clothing before reuse.

Section 5- Fire Fighting Measures

Extinguishing Media

Carbon dioxide, Dry Chemical Powder, or appropriate foam

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Special Procedures

Use water spray to cool fire-exposed containers

Specific Hazards

Vapor may travel a considerable distance to source of ignition and flashback

Section 6 – Accidental Release Measures



Procedures in case of accidental leak or spill

Evacuate area

Shut off all sources of ignition

Personal Precaution Equipment

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves

Clean-up procedures

Cover with dry-lime, sand or soda ash. Place in covered containers, using non-sparking tools. Transport outdoors. Ventilate area and wash spill site after material pick-up is complete.

Section 7 – Handling and Storage

Handling

Wear appropriate safety equipment. Especially chemical resistant gloves, safety goggles, and other protective clothing. In very special cases, NIOSH/MSHA-approved respirator may be required. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Do not breathe vapor.

Storage

Place at 4°C for storage under 1 month. Place at -20°C for long-term storage. Keep tightly closed. Keep away from heat, sparks, and open flame.

Section 8 – Exposure controls/Personal Protection

Personal Protective Equipment

Respiratory

NIOSH-approved respirator

Hand

Compatible chemical-resistant gloves

Eye

Chemical safety goggles



General hygiene measures

Wash hands thoroughly after handling

Section 9 – Physical and Chemical Properties

Appearance

Physical State: liquid

Color: dilute yellow

Form: N/A

Characteristics

Molecular weight:

BP/BP range:

MP/MP range:

Freezing point:

Vapor Pressure:

Vapor Density:

Saturated vapor conc.:

SG/Density:

Bulk density:

Odor Threshold:

Volatile%:

V O C Content:

Water Content:

Solvent Content:

Evaporation Rate:

Viscosity:

Partition Coefficient:

Decomposition Temp.:

Flash Point F:

Flash Point C:

Explosion limits:

Flammability:

Autoignition Temp:



Section 10 – Stability and Reactivity

Stability

Stable

Incompatible agents

Oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia

Hazardous decomposition products

Carbon monoxide, carbon dioxide.

Hazardous polymerization

Will not occur.

Section 11 – Toxicological Information

RETCS

<u>Component</u>	<u>Number</u>
Tris	TY2900000
EDTA	AH4375000

Routes of exposure

May be harmful by inhalation, ingestion, or skin absorption

Possible effects

Irritation of the skin, eyes, mucous membranes, and upper respiratory tract. CNS depression. Nausea, headache and vomiting. Narcotic effects. Damage to the heart.

Target organs

Nerves, Liver, Heart, Kidneys, CNS, and Teeth.

Section 12 – Ecological Information

Data not available.



Section 13 – Disposal Considerations

General Instructions

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting, as this material is highly flammable.

Observe all Federal, State, and Local environmental regulations.

Section 14 – Transport Information

Not Regulated

Section 15 – Regulatory Information

EU Directives Classification

Risk Statements

R: 36/37/38

Irritant. Irritating to eyes, respiratory system and skin.

Safety Statements

S: 36/37/39

Wear suitable protective clothing, gloves, and eye/face protection.

Section 16 – Other Information

Disclaimer

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Warranty

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Holliston, MA 01746
(800) 292-5678

Date revised: 02-19-05
Emergency Telephone Number: (800) 424-9300
Agent: CHEMTREC

Section 1 – Product and Company Information

Product Name: AGF Star/3000 Tissue DNA – DNA Precipitation Solution A
Product Number: AGF-R4

Company: AutoGen, Inc.
Address: 84 October Hill Rd.
Holliston, MA 01746
Phone: (800) 292-5678
Fax: (508) 429-9765

Section 2 – Composition/Information on Ingredients

<u>Chemical name</u>	<u>CAS #</u>
Isopropanol	66-63-0

Section 3 - Hazards Identification

Emergency overview

Highly Toxic
Suspected Carcinogen
Target organs: Nerves, Liver, Heart, CNS, Kidneys, and Teeth

Section 4- First Aid Measures

Ingestion

Get medical attention immediately

Inhalation

Remove to fresh air. If breathing is impaired give oxygen. If breathing has stopped, give artificial respiration and contact emergency medical personnel.

Skin Contact

Wash with copious amounts of water. Remove contaminated clothing and contact a physician.



Eye contact

Flush with water for 15 minutes and contact a physician.

Wash contaminated clothing before reuse.

Section 5- Fire Fighting Measures

Extinguishing Media

Carbon dioxide, Dry Chemical Powder, or appropriate foam

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Special Procedures

Use water spray to cool fire-exposed containers

Specific Hazards

Vapor may travel a considerable distance to source of ignition and flashback

Section 6 – Accidental Release Measures

Procedures in case of accidental leak or spill

Evacuate area

Shut off all sources of ignition

Personal Precaution Equipment

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves

Clean-up procedures

Cover with dry-lime, sand or soda ash. Place in covered containers, using non-sparking tools. Transport outdoors. Ventilate area and wash spill site after material pick-up is complete.

Section 7 – Handling and Storage

Handling

Wear appropriate safety equipment. Especially chemical resistant gloves, safety goggles, and other protective clothing. In very special cases, NIOSH/MSHA-



approved respirator may be required. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Do not breathe vapor.

Storage

Place at 4°C for storage under 1 month. Place at -20°C for long-term storage. Keep tightly closed. Keep away from heat, sparks, and open flame.

Section 8 – Exposure controls/Personal Protection

Personal Protective Equipment

Respiratory

NIOSH-approved respirator

Hand

Compatible chemical-resistant gloves

Eye

Chemical safety goggles

General hygiene measures

Wash hands thoroughly after handling

Section 9 – Physical and Chemical Properties

Appearance

Physical State: liquid

Color: dilute yellow

Form: N/A

Characteristics

Molecular weight:

BP/BP range:

MP/MP range:

Freezing point:

Vapor Pressure:

Vapor Density:

Saturated vapor conc.:

SG/Density:

Bulk density:

Odor Threshold:

Volatile%:

V O C Content:

Water Content:

Solvent Content:



Evaporation Rate:

Viscosity:

Partition Coefficient:

Decomposition Temp.:

Flash Point F:

Flash Point C:

Explosion limits:

Flammability:

Autoignition Temp:

Section 10 – Stability and Reactivity

Stability

Stable

Incompatible agents

Oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia

Hazardous decomposition products

Carbon monoxide, carbon dioxide.

Hazardous polymerization

Will not occur.

Section 11 – Toxicological Information

RETCS

<u>Component</u>	<u>Number</u>
Isopropanol	

Routes of exposure

May be harmful by inhalation, ingestion, or skin absorption

Possible effects

Irritation of the skin, eyes, mucous membranes, and upper respiratory tract. CNS depression. Nausea, headache and vomiting. Narcotic effects. Damage to the heart.

Target organs

Nerves, Liver, Heart, Kidneys, CNS, and Teeth.

Section 12 – Ecological Information



Data not available.

Section 13 – Disposal Considerations

General Instructions

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting, as this material is highly flammable.

Observe all Federal, State, and Local environmental regulations.

Section 14 – Transport Information

UN number: UN1993

Proper shipping name: flammable liquid, n.o.s

Hazard Class: 3

Hazard subclass: N/A

Packing group: II

Section 15 – Regulatory Information

EU Directives Classification

Risk Statements

R: 11 36 57

Flammable. Very toxic by Inhalation, contact with skin and ingestion. Causes Burns. May cause cancer.

Safety Statements

S: 7 16 24/25 26

Wear suitable protective clothing, gloves, and eye/face protection. Keep away from heat.

Section 16 – Other Information

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Warranty

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Material Data Safety Sheet

AutoGen, Inc.
84 October Hill Rd.
Holliston, MA 01746
(800) 292-5678

Date revised: 02-19-05
Emergency Telephone Number: (800) 424-9300
Agent: CHEMTREC

Section 1 – Product and Company Information

Product Name: AGF Star/3000 Tissue DNA – DNA Wash Solution A
Product Number: AGF-R5

Company: AutoGen, Inc.
Address: 84 October Hill Rd.
Holliston, MA 01746
Phone: (800) 292-5678
Fax: (508) 429-9765

Section 2 – Composition/Information on Ingredients

<u>Chemical name</u>	<u>CAS #</u>
Ethyl alcohol	64-17-5

Section 3 - Hazards Identification

Emergency overview

Flammable
Irritant
Target organs: Nerves, Liver.

HMIS Rating

Health: 2 (additional chronic hazards present)
Flammability: 3
Reactivity: 1

NFPA Rating

Health: 2
Flammability: 3
Reactivity: 1



Section 4- First Aid Measures

Ingestion

Wash mouth with water. Call physician.

Inhalation

Remove to fresh air. If breathing is impaired give oxygen. If breathing has stopped, give artificial respiration and contact emergency medical personnel.

Skin Contact

Wash with copious amounts of water. Remove contaminated clothing and contact a physician.

Eye contact

Flush with water for 15 minutes and contact a physician.

Wash contaminated clothing before reuse.

Section 5- Fire Fighting Measures

Extinguishing Media

Water spray, Carbon dioxide, Dry Chemical Powder, or appropriate foam

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Special Procedures

Use water spray to cool fire-exposed containers

Specific Hazards

Explosion hazard. Flashback hazard.

Section 6 – Accidental Release Measures

Procedures in case of accidental leak or spill

Evacuate area

Shut off all sources of ignition

Personal Precaution Equipment

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves



Clean-up procedures

Cover with dry-lime, sand or soda ash. Place in covered containers, using non-sparking tools. Transport outdoors. Ventilate area and wash spill site after material pick-up is complete.

Section 7 – Handling and Storage

Handling

Wear appropriate safety equipment. Especially chemical resistant gloves, safety goggles, and other protective clothing. In very special cases, NIOSH/MSHA-approved respirator may be required. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Do not breathe vapor.

Storage

Room temperature. Keep tightly closed. Keep away from heat, sparks, and open flame.

Section 8 – Exposure controls/Personal Protection

Personal Protective Equipment

Respiratory

NIOSH-approved respirator

Hand

Compatible chemical-resistant gloves

Eye

Chemical safety goggles

General hygiene measures

Wash hands thoroughly after handling

Section 9 – Physical and Chemical Properties

Appearance

Physical State: liquid

Color: colorless

Form: N/A

Characteristics

Molecular weight: 46.07

BP/BP range: 78-80°C

MP/MP range: -144°C



Freezing point: N/A
Vapor Pressure: 44.6 mmHg @ 20°C
Vapor Density: N/A
Saturated vapor conc.: N/A
SG/Density: 0.79 g/cm³
Bulk density: N/A
Odor Threshold: N/A
Volatile%: N/A
V O C Content: N/A
Water Content:
Solvent Content: N/A
Evaporation Rate: 3
Viscosity: 2.27 Pas @ 20°C
Partition Coefficient: Log Kow: 0.05
Decomposition Temp: N/A
Flash Point F: 57°F
Flash Point C: 14°C
Explosion limits: lower 3.3%
Upper 19%
Flammability: N/A
Autoignition Temp: 363°C

Section 10 – Stability and Reactivity

Stability

Stable (may form peroxides of unknown stability).

Incompatible agents

Alkali metals, Ammonia, oxidizing agents, peroxides.

Hazardous decomposition products

Unknown

Hazardous polymerization

Will not occur.

Section 11 – Toxicological Information

RETCS

<u>Component</u>	<u>Number</u>
Ethyl Alcohol	KQ6300000

Routes of exposure

May be harmful by inhalation, ingestion, or skin absorption



Possible effects

Irritation of the skin, eyes, mucous membranes, and upper respiratory tract. CNS depression. Nausea, headache and vomiting. Narcotic effects.

Target organs

Nerves, Liver, Heart.

Section 12 – Ecological Information

Data not available.

Section 13 – Disposal Considerations

General Instructions

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting, as this material is highly flammable.

Observe all Federal, State, and Local environmental regulations.

Section 14 – Transport Information

UN number: UN1993

Proper shipping name: flammable liquid, n.o.s

Hazard Class: 3

Hazard subclass: N/A

Packing group: II

Section 15 – Regulatory Information

EU Directives Classification

Risk Statements

R: 11

Highly Flammable.

Safety Statements

S: 7 16

Wear suitable protective clothing, gloves, and eye/face protection. Keep away from sources of ignition.

Section 16 – Other Information



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Warranty

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Material Data Safety Sheet

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84 October Hill Rd.
Holliston, MA 01746
(800) 292-5678

Date revised: 03-19-05
Emergency Telephone Number: (800) 424-9300
Agent: CHEMTREC

Section 1 – Product and Company Information

Product Name: AGF Star/3000 Tissue DNA – Deproteinizing Solution B
Product Number: AGF-R7

Company: AutoGen, Inc.
Address: 84 October Hill Rd.
Holliston, MA 01746
Phone: (800) 292-5678
Fax: (508) 429-9765

Section 2 – Composition/Information on Ingredients

<u>Chemical name</u>	<u>CAS #</u>
Phenol	108-95-2
Chloroform	67-66-3
Isoamyl alcohol	123-51-3
Acetic Acid	64-19-7

Section 3 - Hazards Identification

Emergency overview

Highly Toxic
Suspected Carcinogen
Target organs: Nerves, Liver, Heart, CNS, Kidneys, and Teeth

Section 4- First Aid Measures

Ingestion

Get medical attention immediately

Inhalation

Remove to fresh air. If breathing is impaired give oxygen. If breathing has stopped, give artificial respiration and contact emergency medical personnel.



Skin Contact

Wash with copious amounts of water. Remove contaminated clothing and contact a physician.

Eye contact

Flush with water for 15 minutes and contact a physician.

Wash contaminated clothing before reuse.

Section 5- Fire Fighting Measures

Extinguishing Media

Carbon dioxide, Dry Chemical Powder, or appropriate foam

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Special Procedures

Use water spray to cool fire-exposed containers

Specific Hazards

Vapor may travel a considerable distance to source of ignition and flashback

Section 6 – Accidental Release Measures

Procedures in case of accidental leak or spill

Evacuate area

Shut off all sources of ignition

Personal Precaution Equipment

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves

Clean-up procedures

Cover with dry-lime, sand or soda ash. Place in covered containers, using non-sparking tools. Transport outdoors. Ventilate area and wash spill site after material pick-up is complete.

Section 7 – Handling and Storage



Handling

Wear appropriate safety equipment. Especially chemical resistant gloves, safety goggles, and other protective clothing. In very special cases, NIOSH/MSHA-approved respirator may be required. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Do not breathe vapor.

Storage

Place at 4°C for storage under 1 month. Place at -20°C for long-term storage. Keep tightly closed. Keep away from heat, sparks, and open flame.

Section 8 – Exposure controls/Personal Protection

Personal Protective Equipment

Respiratory

NIOSH-approved respirator

Hand

Compatible chemical-resistant gloves

Eye

Chemical safety goggles

General hygiene measures

Wash hands thoroughly after handling

Section 9 – Physical and Chemical Properties

Appearance

Physical State: liquid

Color: dilute yellow

Form: N/A

Characteristics

Molecular weight:

BP/BP range:

MP/MP range:

Freezing point:

Vapor Pressure:

Vapor Density:

Saturated vapor conc.:

SG/Density:

Bulk density:

Odor Threshold:



Volatile%:
V O C Content:
Water Content:
Solvent Content:
Evaporation Rate:
Viscosity:
Partition Coefficient:
Decomposition Temp.:
Flash Point F:
Flash Point C:
Explosion limits:
Flammability:
Autoignition Temp:

Section 10 – Stability and Reactivity

Stability

Stable

Incompatible agents

Oxidizing agents, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia

Hazardous decomposition products

Carbon monoxide, carbon dioxide.

Hazardous polymerization

Will not occur.

Section 11 – Toxicological Information

RETCS

<u>Component</u>	<u>Number</u>
Phenol	SJ3325000
Chloroform	FS9100000
Isoamyl alcohol	EL5425000
Glacial acetic acid	AF1225000

Routes of exposure

May be harmful by inhalation, ingestion, or skin absorption



Possible effects

Irritation of the skin, eyes, mucous membranes, and upper respiratory tract. CNS depression. Nausea, headache and vomiting. Narcotic effects. Damage to the heart.

Target organs

Nerves, Liver, Heart, Kidneys, CNS, and Teeth.

Section 12 – Ecological Information

Data not available.

Section 13 – Disposal Considerations

General Instructions

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting, as this material is highly flammable.

Observe all Federal, State, and Local environmental regulations.

Section 14 – Transport Information

UN number: UN2810

Proper shipping name: toxic liquid, organic, n.o.s.

Hazard Class: 6.1

Hazard subclass:

Packing group: III

Section 15 – Regulatory Information

EU Directives Classification

Risk Statements

R: 10 26/27/28 34 45

Flammable. Very toxic by Inhalation, contact with skin and ingestion. Causes Burns. May cause cancer.

Safety Statements

S: 15 36/37/38

Wear suitable protective clothing, gloves, and eye/face protection. Keep away from heat.

Section 16 – Other Information



Disclaimer

For R&D use only. Not for drug, household, or other uses.

Warranty

The factual information contained in this material safety data sheet is believed to be accurate and reflects, to the best of our knowledge, the currently available data pertaining to the chemicals. This information may be incomplete and is used only as a guide. Users are encouraged to investigate the suitability of the information with respect to their application. AutoGen, Inc. assumes no responsibility resulting from the use or handling of this compound.