

This kit has two Safety Data Sheets associated with it, which correspond to the kit components which contain hazardous or carcinogenic ingredients in excess of threshold amounts.

<b>Components</b>	<b>SDS Number</b>
R01079 FL1 Fragmentation Buffer	R01079MSDS
R01080 FL3 Labeling Buffer	R01080MSDS

## 1. Product and Supplier Identification

### Product Identification

Product Name: FL1 Fragmentation Buffer  
Part Number: R01079, S01182  
Product Uses: Laboratory buffer solution  
Uses Advised Against: n/a

### Supplier Identification

Tecan Genomics, Inc.  
900 Chesapeake Dr,  
Redwood City, CA 94063  
650-590-3600

### Emergency Phone Number

800-255-3924 (CHEMTEL US)  
813-248-0585 (CHEMTEL INTERNATIONAL)

## 2. Hazards Identification

### Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 3), H331  
Carcinogenicity (Category 2), H351  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

### GHS Label elements, including precautionary statements

#### Pictograms



**Signal word**    Danger

#### Hazard statement(s)

H226	Flammable liquid and vapor.
H301 + H331	Toxic if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s)**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P281	Use personal protective equipment as required.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P370 + P235	Store in well-ventilated place. Keep cool.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified**

none

**3. Composition/Information on Ingredients**
**Hazardous Components**

Component	CAS#	EC #	Mol Wt	Classification	%
<b>N,N'-Dimethylethylenediamine</b> Formula: C <sub>4</sub> H <sub>12</sub> N <sub>2</sub>	110-70-3	203-793-3	88.15 g/mol	Flam. Liq. 3; Skin Corr. 1B; Eye Dam. 1; H226, H314	~2
<b>Sodium cacodylate trihydrate</b> Formula: C <sub>2</sub> H <sub>6</sub> AsNaO <sub>2</sub> · 3H <sub>2</sub> O	6131-99-3	204-708-2	214.03 g/mol	Acute Tox. 3; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H301 + H331, H351, H410	~1.3

#### 4. First Aid Measures

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Treat symptomatically. Move out of dangerous area.

**If inhaled**

Move the victim to a well ventilated area and rest. If breathing is difficult administer oxygen. If not breathing perform mouth to mouth resuscitation. Seek immediate medical attention.

**In case of skin contact**

Wash with copious amounts of water for at least 15 minutes and consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

If swallowed, rinse mouth with water and consult a physician. Never give anything by mouth to an unconscious person.

**Medical conditions generally aggravated by exposure:** central nervous system disorders, gastrointestinal tract, kidney disorders, liver disorders, skin disorders.

#### 5. Fire Fighting Measures

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides, nitrogen oxides, sodium oxides, arsenic oxides.

**Fire Fighting Procedures**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor.

#### 6. Accidental Release Measures

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment should be avoided.

## 7. Handling and Storage

**Handling:** Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Store above 16C (60F) to prevent freezing. Always add the caustic to water while stirring; never the reverse. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid). Do not store with aluminum or magnesium. Do not mix with acids or organic materials. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Do not ingest or inhale. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:** Keep away from sources of ignition. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

## 8. Exposure Controls / Personal Protection

### Components with Control Parameters

Component	CAS-No.	Value	Control parameters	Basis
Sodium cacodylate trihydrate	6131-99-3	TWA	0.5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants 1910.1000

### Exposure Controls

#### Engineering Controls

**Ventilation required:** Use under a chemical fume hood. Ensure adequate ventilation to keep airborne levels below recommended exposure limits.

#### Personal Protection Equipment

**Respiratory protection:** Use under a chemical fume hood or use process enclosures or other engineering controls to keep below exposure limits. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Protective gloves:** Neoprene. Skin protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

**Eye protection:** Wear Chemical Safety Goggles or face shield. Additional clothing and/or equipment: Rubber apron.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**9. Physical and Chemical Properties****Physical State:** Clear liquid**Color:** light yellow**Odor:** Not available**pH:** ~.4**Vapor Pressure:** Not available**Vapor Density:** Not available**Evaporation Rate:** Not available**Viscosity:** Not available**Freezing/Melting Point:** Not available**Decomposition Temperature:** Not available**Solubility in water:** Not available**Specific Gravity/Density:** .819g/cm<sup>3</sup>**10. Stability and Reactivity****Stability:** The product is stable.**Instability Temperature:** Not available.**Conditions of Instability:** Not available.**Incompatibility with various substances:** Not available.**Corrosivity:** Non-corrosive in presence of glass.**Special Remarks on Reactivity:** Not available.**Special Remarks on Corrosivity:** Not available.**Polymerization:** No**11. Toxicological Information****N,N'-Dimethylethylenediamine:** CAS# 110-70-3: KV4250000

LD50/LC50: RTECS: Not available.

Carcinogenicity: - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated.

**Sodium Cacodylate Trihydrate:** Results of component toxicity test performed:

Oral (Acute)

LD50: 2600 mg/kg for Rats.

Oral (Acute)

LD50: 4 mg/kg for Mouse.

Human experience: ND

This product does contain compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

**12. Ecological Information****Sodium Cacodylate Trihydrate:** Ecological Information: Toxic to aquatic life.

Chemical Fate Information: ND

**13. Disposal Considerations**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**14. Transportation Information**

**Hazard Class:** not known

**15. Regulatory Information****N,N'-Dimethylethylenediamine:**

Safety Phrases: S 16 Keep away from sources of ignition - No smoking.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Sodium Cacodylate Trihydrate:** Acute Health Hazard: Yes

Chronic Health Hazard: Yes

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactive Hazard: No

**16. Other Information**

The information contained herein is based on the data available to us and is believed to be correct. However NuGEN Technologies, Inc. makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

**1. Product and Supplier Identification****Product Identification**

Product Name: FL3 Labeling Buffer  
Part Number: R01080, S01184  
Product Uses: Laboratory buffer solution  
Uses Advised Against: n/a

**Supplier Identification**

Tecan Genomics, Inc.  
900 Chesapeake Dr,  
Redwood City, CA 94063  
650-590-3600

**Emergency Phone Number**

800-255-3924 (CHEMTEL US)  
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**GHS Label elements, including precautionary statements****Pictograms**

**Signal word** Danger

**Hazard statement(s)**

H301 + H331	Toxic if swallowed or if inhaled.
H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.



**Precautionary statement(s)**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in well-ventilated area.
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P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified**

none

**3. Composition/Information on Ingredients**
**Hazardous Components**

Component	CAS#	EC #	Mol Wt	Classification	%
<b>Sodium cacodylate trihydrate</b> Formula: $C_2H_6AsNaO_2 \cdot 3H_2O$	6131-99-3	204-708-2	214.03 g/mol	Acute Tox. 3; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H301 + H331, H351, H410	12

**4. First Aid Measures**
**General advice**

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**If inhaled**

Move the victim to a well ventilated area and rest. Seek immediate medical attention.

**In case of skin contact**

Wash with copious amounts of water for at least 15 minutes and consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

If swallowed, rinse mouth with water and consult a physician. Never give anything by mouth to an unconscious person.

**Medical conditions generally aggravated by exposure:** central nervous system disorders, gastrointestinal tract, kidney disorders, liver disorders, skin disorders.

## 5. Fire Fighting Measures

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides, nitrogen oxides, sodium oxides, arsenic oxides.

**Fire Fighting Procedures**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor.

## 6. Accidental Release Measures

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

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**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment should be avoided.

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**Storage:** Keep away from sources of ignition. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

## 8. Exposure Controls / Personal Protection

### Components with Control Parameters

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**Protective gloves:** Neoprene. Skin protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

**Eye protection:** Wear Chemical Safety Goggles or face shield. Additional clothing and/or equipment: Rubber apron.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

## 9. Physical and Chemical Properties

**Physical State:** Clear liquid

**Color:** light yellow

**Odor:** Not available

**pH:** ~.4

**Vapor Pressure:** Not available

**Vapor Density:** Not available

**Evaporation Rate:** Not available

**Viscosity:** Not available

**Freezing/Melting Point:** Not available

**Decomposition Temperature:** Not available

**Solubility in water:** Not available

**Specific Gravity/Density:** .819g/cm<sup>3</sup>

## 10. Stability and Reactivity

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Not available.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** No

## 11. Toxicological Information

**N,N'-Dimethylethylenediamine:** CAS# 110-70-3: KV4250000

LD50/LC50: RTECS: Not available.

Carcinogenicity: - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated.

**Sodium Cacodylate Trihydrate:** Results of component toxicity test performed:

Oral (Acute)

LD50: 2600 mg/kg for Rats.

Oral (Acute)

LD50: 4 mg/kg for Mouse.

Human experience: ND

This product does contain compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

## 12. Ecological Information

**Sodium Cacodylate Trihydrate:** Ecological Information: Toxic to aquatic life.

Chemical Fate Information: ND

**13. Disposal Considerations**

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**14. Transportation Information**

**Hazard Class:** not known

**15. Regulatory Information****N,N'-Dimethylethylenediamine:**

Safety Phrases: S 16 Keep away from sources of ignition - No smoking.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Sodium Cacodylate Trihydrate:** Acute Health Hazard: Yes

Chronic Health Hazard: Yes

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactive Hazard: No

**16. Other Information**

The information contained herein is based on the data available to us and is believed to be correct. However NuGEN Technologies, Inc. makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.