
SAFETY DATA SHEET

SDS

AEC Substrate/ Chromogen System

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: **AEC Substrate/ Chromogen System**

Other name of identification:

Product number: **NB314SCS**

Brand: **Innovex**

Manufacturer: Innovex Biosciences Inc.

REACH Registration No.: Registration numbers are not available for some or all of the substance ingredients of this mixture as the substance(s) or its uses are exempt from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

1.2 Relevant Identified uses of the substance or mixture and uses advised against

Identified uses: Use in laboratories - Professional.

1.3 Details of the supplier of the safety data sheet

Company name: Innovex Biosciences Inc.
1099 Essex Ave.
Richmond CA 94801
USA

Telephone: 1 800-622-7808

Fax: 510-234-4591

1.4 Emergency telephone number

Emergency Tel: 510-234-6600

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Skin irritation (Category 2), H315

Eye damage (Category 1), H318

For the full detail of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H315	Causes skin irritation.
H318	Causes eye damage.
H350	May cause cancer
H360	May damage fertility or the unborn child.

Precautionary statement(s)

P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.

2.3 Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Mixtures

Ingredients:

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
AEC	132-32-1	0.1-1	Acute Tox. 3 (H301) Carc. 1B (H350)
DMF	68-12-2	1-5	Eye Irrit. 2 (H319) Repr. 1B (H360D) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Flam Liq. 3 (H226)
Hydrogen peroxide	7722-84-1	<0.1	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Corr. 1A (H314) Eye Dam. 1 (H318)

For the full detail of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4.1 Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water. Consult a doctor.

Eye contact: Flush eyes with running water. Remove any contact lenses and continue flushing for 15 minutes. Seek medical advice.

Ingestion: Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a doctor.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Stomach pain and nausea may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of chest tightness.

Delayed / immediate effects: Effects can be seen immediately after short-term exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Not applicable.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media for the surrounding fire should be used.

5.2 Special hazards arising from the substance or mixture

In combustion emits toxic fumes.

5.3 Advice for fire-fighters

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

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

Turn leaking containers leak-side up to prevent the escape of liquid.

For personal protection see section 8.

6.2 Environmental precautions

Do not discharge into drains or rivers. Contain the spillage using bonding.

6.3 Methods and materials for containment and cleaning up

Clean-up procedures

Clean-up should be done only by a qualified personnel. Absorb into dry earth or sand. Transfer to a closable, labeled salvage container for disposal by an appropriate method.

- 6.4 Reference to other sections**
See section 8 and section 13 of SDS.

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling**
Avoid direct contact with the substance.
- 7.2 Conditions for safe storage, including any incompatibilities**
Store in cool, dry and well -ventilated area. Keep container tightly closed.

Recommended storage temperature: 2-8°C.
- 7.3 Specific end use(s)**
Use in laboratories - Professional.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure Guidelines:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm (vacated) TWA: 1.4 mg/m ³	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m ³
DMF 68-12-2	TWA: 10 ppm S*	TWA: 10 ppm (vacated) TWA: 30 mg/m ³ (vacated) S*	IDLH: 500 ppm TWA: 10 ppm TWA: 30 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health

DNEL/PNEC Values

DNEL / PNEC: No data available.

8.2 Exposure controls

Engineering measures: Maintain general industrial hygiene practice.
Ensure engineering measures mentioned in section 7 of SDS are in place.

Respiratory Protection: Respiratory protection must be made available in case of emergency.

Eye protection: Safety glasses with side shields. Ensure eye flushing at hand.

Skin protection: Protective clothing.

Hand protection: Handle with protective gloves.

Hygiene Measures: When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

Environmental: Observe all engineering measures mentioned in Section 7 of SDS. Prevent from entering into the immediate environment and into public sewers.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

State: Liquid

Odor: Odorless

pH: No data available

Evaporation Rate: No data available

Oxidizing Properties: No data available

Solubility in water: No data available

Melting point/range °C: No data available

Viscosity: No data available

Boiling point/range °C : No data available

Flammability (solid/gas): No data available

Flammability (upper/lower) limit: No data available

Flash point °C : No data available

Auto-ignition temperature °C : No data available

Relative density: No data available

VOC Content g/l : No data available

Partition coefficient: n-octanol/water: No data available

Vapor pressure: No data available

Explosive properties: No data available

9.2 **Other information:** Not applicable.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Heat

10.5 Incompatible Materials

No data available.

10.6 Hazardous decomposition products

In combustion emits toxic fumes.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxicity values:

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
DMF	200 mg/kg (Rat)	3.2 g/kg (Rat)	
AEC	144 mg/kg (Rat)		
Hydrogen peroxide	801 mg/kg (Rat)	4060 mg/kg (Rat) 2000 mg/kg (Rabbit)	2 mg/L (Rat) 4 h

Symptoms / routes of exposure

Skin contact: There may be irritation at the site of contact.

Eye contact: There may be irritation and redness, eyes may water excessively.

Inhalation: There may be irritation of the throat with a feeling of chest tightness.

Ingestion: There may be soreness and redness of the mouth and throat. Stomach pain may occur. There may be vomiting.

Delayed / immediate effects: Immediate effects can be expected after short –term exposure.

Other information: Not applicable

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity values:

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic
invertebrates DMF	500: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50	6300: 96 h <i>Lepomis macrochirus</i> mg/L LC50 9800: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 10410: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through	7500: 48 h <i>Daphnia magna</i> mg/L EC50 8485: 48 h <i>Daphnia magna</i> mg/L EC50 semi-static 6800 - 13900: 48 h <i>Daphnia magna</i> mg/L EC50 Static
Hydrogen peroxide	2.5: 72 h <i>Chlorella vulgaris</i> mg/L EC50	16.4: 96 h <i>Pimephales promelas</i> mg/L LC50 18-56: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 10.0-32.0: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static	7.7: 24 h <i>Daphnia magna</i> mg/L EC50 18 - 32: 48 h <i>Daphnia magna</i> mg/L EC50 Static

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal methods: Transfer to a suitable container and arrange for collection by licensed disposal company.

Contaminated packaging: Do not re-use empty containers.

Disposal of packaging: Arrange for collection by specialized disposal company.

The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name
Hydrogen peroxide

California Hazardous Waste Status
Toxic Corrosive Ignitable Reactive

14. TRANSPORT INFORMATION

Transport class: This product does not require a classification for transport.

DOT: Not dangerous goods.

IATA: Not dangerous goods.

ADR: Not dangerous goods.

14.1 to 14.7 subsections do not apply, but as with all chemicals, packages containing, this substance should be handled with methods that minimizes the risk of damage to and leakage from packages.

15. REGULATORY INFORMATION

SARA 313 Components

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No.
DMF	68-12-2

SARA 311/312 Hazards

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
DMF	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Hydrogen peroxide		1000 lb	

U.S. State Regulations**California Prop. 65 Components**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations**Massachusetts Right To Know Components**

DMF	CAS-No. 68-12-2
Hydrogen peroxide	7722-84-1

New Jersey Right To Know Components

DMF	CAS-No. 68-12-2
Hydrogen peroxide	7722-84-1

Pennsylvania Right To Know Components

DMF	CAS-No. 68-12-2
Hydrogen peroxide	7722-84-1

Illinois Right To Know Components

	CAS-No.
DMF	68-12-2

Rhoda Island Right To Know Components

CAS-No.

DMF	68-12-2
Hydrogen peroxide	7722-84-1

16. OTHER INFORMATION

Kit component

Liquid AEC Substrate/ Chromogen INNOVEX Biosciences NB314SCS
For immunohistochemistry

Full detail of the H-Statements mentioned in Section 2 and 3:

H315: Causes skin irritation.
H318: Causes serious eye damage.
H226 - Flammable liquid and vapor.
H301 - Toxic if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage
H319 - Causes serious eye irritation.
H350- May cause cancer if swallowed.
H360D - May damage the unborn child.

Hazard statements

H319 - Causes serious eye irritation.
H350 - May cause cancer.
H360 - May damage fertility or the unborn child

Abbreviations and acronyms used:

DNEL = Derived No Effect Level
PNEC - Predicted No Effect Concentration

Legal disclaimer:

The above information is believed to be correct but does not purport to be all-inclusive and shall only be used as a guide. Innovex Biosciences, Inc. shall not be held liable for any damage resulting from contact or from handling the above product. Users should make their own investigations to determine the suitability of the information for their specific purposes.