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Rev. 5

1. IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND THE COMPANY/UNDERTAKING

Product Name: RNA Denaturing Solution
Product Code: IB01015 (Part C)
Recommend Use: For further manufacturing use only
Not for human or animal drug use
Company: IBI SCIENTIFIC
7445 Chavenelle Road
Dubuque, IA 52002
Emergency Tele. Number: 3E Company (Acct# 9027) 1-800-451-8346 / (001) 760-602-8703
Company Tele. Number: 1-800-253-4942 / (001) 563-690-0484
E-Mail Address: info@ibisci.com

2. HAZARDOUS IDENTIFICATION

GHS – Classification

Classification: Skin Irritant 2 Eye Irritant 2 Skin Sensitizer 1 Flammable Liquid 4 Toxic to Reproduction 1B Carcinogen 2

Signal Word: Danger



Hazard Statements: H227-Combustible liquid * H315-Causes skin irritation * H317-May cause an allergic skin reaction * H319-Causes serious eye irritation * H351-Suspected of causing cancer * H360-May damage fertility or the unborn child * H303-May be harmful if swallowed.

Precautionary Statements: P210- Keep away from heat/sparks/open flames/hot surfaces – No smoking * P201- Obtain special instructions before use * P280-Wear protective gloves/protective clothing/eye protection/face protection * P302+P352-IF ON SKIN: Wash with plenty of soap and water * 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

	<u>Trade Secret 1</u>	<u>Trade Secret 2</u>	<u>Trade Secret 3</u>
Chemical Name:	Trade Secret 1	Trade Secret 2	Trade Secret 3
EC No.:	Listed	Listed	Listed
REACH Reg. No.:	Not Available	Not Available	Not Available
CAS No.:	-	-	-
Weight %:	60 – 70	0 – 10	0 - 10
Classification:	Repr.Cat.2: R61	T: R23/24/25 C: R34 Carc.Cat.3; R40 R43	F; R11 T; R23/24/25-39/ 23/24/25

4. FIRST AID MEASURES

Eye Contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact:	Wash off immediately with soap and plenty of water, removing all contaminated clothes and shoes.
Inhalation:	Move to fresh air. If breathing is difficult, give oxygen.
Ingestion:	Clean mouth with water and afterwards drink plenty of water.
Notes to Physician:	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammable Properties:	Combustible liquid
Flash Point:	Not determined
Suitable Extinguishing Media:	Dry chemical, CO ₂ , water spray, regular foam
Hazardous Combustion Products:	Carbon oxides
Explosion Data	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Protective Equip. & Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equiv.) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin, eyes, and clothing. Use personal protective equipment. Ensure adequate ventilation.
Methods for Containment:	Prevent further leakage or spillage, if safe to do so.
Methods for Cleaning Up:	Use non-sparking tools and equipment. Absorb with sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling:	Handle in accordance with good industrial hygiene and safety practice.
Storage:	Keep container tightly closed in a dry, cool, and well-ventilated place. Keep away from open flames, hot surfaces, and sources of ignition.
Incompatible Products:	Acids, Bases, Strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name:	<u>Trade Secret 1</u>	<u>Trade Secret 2</u>	<u>Trade Secret 3</u>
ACGIH TLV:	TWA: 10ppm	-	STEL: 250ppm TWA: 200ppm
OSHA PEL:	-	TWA: 0.75ppm	TWA: 200ppm TWA: 260 mg/m ³
NIOSH IDLH:	TWA: 10ppm TWA 15 mg/m ³	IDLH: 20ppm Ceiling: 0.1ppm TWA: 0.016ppm	IDLH: 6000ppm TWA: 200ppm TWA: 260 mg/m ³ STEL: 250ppm STEL: 325 mg/m ³

Engineering Measures: Showers, Eyewash Stations, Ventilation Systems

Personal Protective Equipment

Eye/Face Protection: Tight fitting safety goggles.
 Skin & Body Protection: Wear protective gloves/clothing.
 Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, colorless liquid
Odor:	No information available
Odor Threshold:	No information available
Decomposition Temp. °C:	No information available
Freezing Point:	No information available
Initial Boiling Point:	No information available
Physical State:	Liquid
pH:	No data available
Flash Point:	Not determined
Autoignition Temp. °C:	No data available
Boiling Point/Range:	No data available
Melting Point/Range:	No data available
Flammability Limits (Air):	<u>Upper</u> -No data available * <u>Lower</u> -No data available
Explosive Properties:	No information available
Oxidizing Properties:	No information available
Evaporation Rate:	No information available
MMHG @ 37.8°C:	No data available
Vapor Density:	No data available
Specific Gravity:	No data available
Solubility:	No information available
Partition Coefficient (n-octanol/water):	No data available
Viscosity:	No information available

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions
Incompatible Products:	Acids, Bases, Strong oxidizing agents
Conditions to Avoid:	Keep away from open flames, hot surfaces, and sources of ignition
Hazardous Decomposition Products:	Carbon oxides, Nitrogen oxides (NOx)
Hazardous Polymerization:	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information:	Causes skin and eye irritation. May be harmful if swallowed. Sensitizer.		
Chemical Name:	<u>Trade Secret 1</u>	<u>Trade Secret 2</u>	<u>Trade Secret 3</u>
LD50 Oral:	5000mg/kg (Rat)	500mg/kg (Rat)	5628mg/kg (Rat)
LD50 Dermal:	-	-	15800mg/kg (Rabbit)
LC50 Inhalation:	3900ppm (Rat) 6hr	0.578mg/L (Rat) 4hr 1000mg/m ³ (Rat) 0.5hr	64000ppm (Rat) 4hr 83.2mg/L (Rat) 4hr

Chronic Toxicity

Chronic Toxicity:	Suspected carcinogen, Suspected teratogen. May cause an allergic skin reaction.
Chemical Name:	Trade Secret
ACGIH:	-
IARC:	Group 1
NTP:	Reasonably anticipated
OSHA:	X

Target Organ Effects: None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Chemical Name:	<u>Trade Secret 1</u>
Toxicity to Algae:	EC50 > 500mg/L (72hr) * EC50 > 500mg/L (96hr)
Toxicity to Fish:	LC50 = 4600-9300mg/L <i>Leuciscus idus</i> (96h) LC50 = 9135mg/L <i>Brachydanio rerio</i> (96hr)
Microtox	-
Daphnia Magna (Water Flea):	EC50 = 500mg/L (48h)

Chemical Name:	<u>Trade Secret 2</u>
Toxicity to Algae:	-
Toxicity to Fish:	LC50 = 1510µg/L <i>Lepomis macrochirus</i> (96h) LC50 = 100-136mg/L <i>Oncorhynchus mykiss</i> (96hr) LC50 = 23.2-29.7mg/L <i>Pimephales promelas</i> (96hr) LC50 = 0.032 – 0.226ml/L <i>Oncorhynchus mykiss</i> (96hr) LC50 = 22.6 – 25.7mg/L <i>Pimephales promelas</i> (96hr) LC50 = 41mg/L <i>Brachydanio rerio</i> (96hr)
Microtox	-
Daphnia Magna (Water Flea):	-

Chemical Name:	<u>Trade Secret 3</u>
Toxicity to Algae:	-
Toxicity to Fish:	LC50 = 18-20ml/L <i>Oncorhynchus mykiss</i> (96h) LC50 > 100mg/L <i>Pimephales promelas</i> (96hr) LC50 = 13500-17600mg/L <i>Lepomis macrochirus</i> (96hr) LC50 = 19500-20700mg/L <i>Oncorhynchus mykiss</i> (96hr) LC50 = 28200mg/L <i>Pimephales promelas</i> (96hr)
Microtox	-
Daphnia Magna (Water Flea):	-

Log Pow -0.82 @ 25°C

13. DISPOSAL CONSIDERATIONS

Water Disposal Method: Dispose of material in accordance with all federal, state, and local regulations.
Contaminated Packaging: Dispose of in accordance with all federal, state, and local regulations.

14. TRANSPORT INFORMATION

IATA
Not regulated
US DOT
Not regulated

15. TOXICOLOGICAL INFORMATION

<u>REACH Title VII Restrictions</u>	No information available		
	<u>Trade Secret 1</u>	<u>Trade Secret 2</u>	<u>Trade Secret 3</u>
Chemical Name:	Not applicable	Not applicable	Not applicable
Dangerous Substances:	Not applicable	Not applicable	Not applicable
Organic Solvents:	Not applicable	Not applicable	Not applicable
Harmful Substances Whose Names are to be indicated on the Label:	Not applicable	Not applicable	Not applicable
Pollution Release and Transfer Registry (Class II):	Not applicable	Not applicable	Not applicable
Pollution Release and Transfer Registry (Class I):	Not applicable	Not applicable	Not applicable
Poison and Deleterious Substances Control Law:	Not applicable	Not applicable	Not applicable
ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying:	Not applicable	Not applicable	Not applicable
ISHA – Harmful Substances Requiring Permission:	Not applicable	Not applicable	Not applicable
Toxic Chemical Classification Listing (TCCL):	Not applicable	Not applicable	Not applicable
Toxic Release Inventory (TRI) – Group I:	Not applicable	Not applicable	Not applicable
Toxic Release Inventory (TRI) – Group II:	Not applicable	Not applicable	Not applicable

International Inventories

TSCA:	Complies
EINECS/ELINCS:	Complies
ENCS:	Complies
IECSC:	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

U.S. Federal Regulations
SARA 313 Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act & Title 40 of the Code of Federal Regulations, part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
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).

Clean Air Act

This product contains the following substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Chemical Name:	<u>Trade Secret</u>	<u>Trade Secret</u>
Weight (%):	60 – 70	0 - 10
HAPs Data:	-	-
VOC Chemicals:	Group II	Group I
Class 1 Ozone Depletors:	-	-
Class 2 Ozone Depletors:	-	-

CERCLA

Chemical Name:	<u>Trade Secret</u>	<u>Trade Secret</u>
Hazardous Substance RQs:	100lbs	5000lbs
Extremely Hazardous Substance RQs:	100lbs	-

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name:	Trade Secret
California Prop. 65:	Carcinogen

State

Massachusetts	X
New Jersey	X
Pennsylvania	X
Illinois	
Rhode Island	X

International Regulations

Mexico

Chemical Name:	Trade Secret	Trade Secret
Carcinogen Status:	-	-
Exposure Limits:	Mexico: TWA = 20ppm Mexico: TWA = 30mg/m ³	Mexico: TWA = 200ppm Mexico: TWA = 260mg/m ³

Canada

No information available

WHMIS Hazard Class

- B3 – Combustible liquid
- D2B – Toxic materials
- D2A – Very toxic materials



16. OTHER INFORMATION

Issuing Date:	13-Jan-1999
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Revision Note:	Updated address and logo
Recommended Restrictions:	No information available
Disclaimer:	The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release; and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the test.

End of Safety Data Sheet