MATERIAL SAFETY DATA SHEET IB43050, -051

IBI UltraPure dNTP Solution

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Title: UltraPure dNTP Solution, 10mM each

Item number: IB43050 and IB43051

Document Number: IBI UltraPure dNTP Solution-MSDS Rev. 2

Relevant identified uses of the substance or mixture and uses advised against

Application of the substance / the mixture Details of the supplier of the safety data sheet

Manufacturer/Supplier: IBI SCIENTIFIC 9861 Kapp Court Peosta, IA 52068 U.S.A. 1-800-253-4942 info@ibisci.com

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients (specific)

%

CAS Number

n/a

SECTION 3 — HAZARDS IDENTIFICATION

Classification of the substance or mixture Classification according to the Hazard Communication Standard (HCS).

The product is not classified as hazardous according to the HCS regulation.

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void Signal word Void

Hazard statements Void

Classification system: NFPA ratings (scale 0 - 4)

Health = 0Fire = 0Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0Fire = 0Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable

Target Organ(s): Not applicable or unknown

Other hazards This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

Results of PBT and vPvB assessment

PBT: Not applicable. vPvB: Not applicable

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SECTION 4 — FIRST AID MEASURES

Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints. After skin contact: Generally the product does not irritate the skin.

After eve contact: Rinse opened eve for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed None

Indication of any immediate medical attention and special treatment needed. No further relevant information available

SECTION 5 — FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture None known

Advice for firefighters No special advice

Protective equipment: No special measures required.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Not required.

Environmental precautions: Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Reference to other sections No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

SECTION 7 — HANDLING AND STORAGE

Handling:

Precautions for safe handling No special measures required.

Information about protection against explosions and fires: The product is not flammable.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.

Specific end use(s) No further relevant information available.



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SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Control parameters

Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment: General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

Protective gloves Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation **Material of gloves** The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Goggles recommended during refilling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

General Information

Appearance: Form: Fluid Color: Colorless Odor: Odorless

Odour threshold: Not Determined pH-value at 20 °C (68 °F): 8.5 Change in condition

Melting point/Melting range: 0 $^{\circ}\text{C}$

Boiling point/Boiling range: Not determined

Flash point: Not applicable

Flammability (solid, gaseous): Not applicable Ignition temperature: Not determined Decomposition temperature: Not determined Auto igniting: Product is not self-igniting

Danger of explosion: Product does not present an explosion hazard

Explosion limits: Lower: Not determined Upper: Not determined

Vapor pressure at 20 °C (68 °F): Not determined Density at 20 °C (68 °F): Not determined

Relative density. Not determined Vapour density Not determined Evaporation rate Not determined

Solubility in / Miscibility with Water: Fully miscible Partition coefficient (n-octanol/water): Not determined

Viscosity:

Dynamic: Not determined **Kinematic**: Not determined

Solvent content: Organic Solvents: 0.0% Water: 97.9% Solids content: 10.0%

Other information No further relevant information available.

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SECTION 10 — STABILITY AND REACTIVITY

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11 — TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification: No data available

Primary irritant effect: on the skin: No irritant effect. on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information: The product is not subject to classification according to internally approved calculation methods for

preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the

information provided to us.

Carcinogenic categories IARC (International Agency for Research on Cancer)

None of the ingredients are listed NTP (National Toxicology Program) None of the ingredients are listed.

SECTION 12 — ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity: Not harmful to the aquatic environment

Persistence and degradability Not available Behavior in environmental systems: Bioaccumulative potential Not known

Mobility in soil No further relevant information available.

Ecotoxical effects: Remark: Not available

Additional ecological information:

General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to

reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

PBT: Not applicable. **vPvB:** Not applicable.

Other adverse effects No further relevant information available.

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SECTION 13 — DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation: Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees. Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14 — TRANSPORT INFORMATION

UN-Number None DOT, ADR, ADN, IMDG, IATA n/a **UN proper shipping name** None DOT, ADR, ADN, IMDG, IATA n/a Transport hazard class(es) None DOT, ADR, ADN, IMDG, IATA Class n/a Packing group None DOT, ADR, IMDG, IATA n/a **Environmental hazards:**

Marine pollutant: No

Special precautions for user Not applicable

Transport in bulk according to Annex II of MARPOL73/78 and the IBC code Not applicable

UN "Model Regulation":

SECTION 15 — REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture Sara Section 355 (extremely hazardous substances): None of the ingredients are listed.

Section 313 (Specific toxic chemical listings): None of the ingredients are listed.

TSCA (Toxic Substances Control Act): All of the ingredients are listed.

Proposition 65

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency) None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH) None of the ingredients are listed.

MAK (German Maximum Workplace Concentration) None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration) None of the ingredients are listed.

National regulations:

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Chemical safety assessment: A Chemical Safety Assessment has not been carries out.



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SECTION 16 — OTHER INFORMATION

 Issuing Date:
 20-Jan-2014

 Revision Date:
 17-Jun-2014

Revision Note: Update to GHS Standard Recommended Restrictions: Update to GHS Standard No information available

Disclaimer: The information provided on this MSDS 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.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International

Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation **IATA**: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50

* Data compared to the previous version altered.