

DNA-HS12000 KIT ASSY (P/N 292-36800-91, 292-36800-10, 292-36800-30)
includes DNA-HS12000 Separation Buffer and DNA-HS12000 Marker solution.

Safety Data Sheet

Section 1: Identification of the substance or mixture and of the supplier

Product name:	DNA-HS12000 Separation Buffer
Name of supplier:	Shimadzu Corporation
Address:	1 Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto 604-8511, Japan
Section in charge:	Clinical & Infectious Disease Testing Business Unit, Diagnostics Management Department
Telephone:	+81-75-823-1351
FAX:	+81-75-823-1364
Use of the product:	This product is for analytical research use only. Not applicable for clinical and/or diagnostic purposes. Restricted to professional users.

Section 2: Hazard identification

GHS classification:	Reproductive toxicity Specific target organ toxicity (Single exposure)	Category 1B Category 2 (Central Nervous system, Digestive tract)
GHS label elements:		
	Signal word: DANGER	
Hazard statements:	H360: May damage fertility or the unborn child. H371: May cause damage to organs: Central nervous system, Digestive tract.	
Prevention:	P203: Obtain, read and follow all safety instructions before use. P260: Do not breathe mist/ vapours/ spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/ protective clothing/ eye protection.	
Response:	P308+P316: If exposed or concerned: Get emergency medical help immediately.	
Storage:	P405: Store locked up.	
Disposal:	P501: Dispose of contents/ container according to all federal, state and local environmental regulations.	

Section 3: Composition/information on ingredients

Substance/ mixture:	Mixture
General description:	Buffer solution including boric acid and tris(hydroxymethyl)aminomethane.
	tris(hydroxymethyl)aminomethane (CAS No. 77-86-1) < 5.0 %
	boric acid (CAS No. 10043-35-3) 3.0 %
	Other non-hazardous components < 1.0 %
	Water (CAS No. 7732-18-5) Balance to 100 %

* The exact concentration of composition has been withheld as confidential business information.

Section 4: First-aid measures

Inhalation:	Remove to uncontaminated area and supply fresh air. Promptly consult doctor, if needed.
Skin contact:	Take off contaminated clothing and wash skin with plenty of water.
Eye contact:	Flush eyes with plenty of water for at least 15 minutes and obtain medical attention.
Ingestion:	Drink plenty of water to induce vomiting and obtain medical attention.

Section 5: Fire-fighting measures

Suitable extinguishing media:	Use water mist, foam, powder, carbon dioxide, dry sand.
Specific hazards arising from firefighting:	Gases will form upon combustion of carbon monoxide, nitrogen oxides, and

Special fire-fighting measures: boric oxides.
In case of fire in the surrounding area, promptly move the container to a safe place.

Section 6: Accidental release measures

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective equipment.
Environmental precautions: Absorb as much of the material as possible with paper towel or sand.
Methods and materials for containment and cleaning up: Prevent leakage and soak up completely with absorbent material.

Section 7: Handling and storage

Handling: Wear personal protective equipment to prevent inhalation and the product from conducting eyes or skin.
Storage: Keep tightly closed in dark cool and well-ventilated place.

Section 8: Exposure controls/personal protection

Exposure limits: No occupational exposure limit values and/or biological limit values are established.
Permitted concentration: Japan Society for Occupational Health: Not established
ACGIH: (Boric Acid) TWA 2mg/m³(I), STEL 6mg/m³(I)
Equipment measures: Eyewash equipment
Respiratory protection: Not required
Hand protection: Wear impervious glove.
Eye protection: Wear tightly sealed goggles.
Skin and body protection: Wear laboratory coat.

Section 9: Physical and chemical properties

Physical state, color: Colorless, transparent liquid
Odor: Odorless
Melting/ Freezing point: No data available
Boiling point/ boiling range: No data available
Flammability: Not applicable
Lower/Upper explosion limit: Not classified as explosive.
Flash point: No data available
Auto-ignition temperature: The product does not combust spontaneously.
Decomposition temperature: No data available
pH: 8.2 at 20°C
Kinematic viscosity: No data available
Solubility: Readily soluble
Vapor pressure: No data available
Density and/or relative density: 1.02g/mL (25°C)
Relative vapor density: No data available
Particle characteristics: Not applicable

Section 10: Stability and reactivity

Reactivity: No information available
Chemical stability: Stable under standard ambient conditions.
Possibility of hazardous reactions: Hazardous reaction has not been reported.
Conditions to avoid: Avoid physical stress e.g. direct sunlight, excess heat or electrostatic discharge.
Incompatible materials: No information available
Hazardous decomposition products: No information available

Section 11: Toxicological information

No data available for the mixture.

Additional toxicological information on boric acid:

Acute toxicity:	Not classified (Oral LD50 value of 2,660-5,140mg/kg, Rat)
Skin corrosion/irritation:	Not classified (At 24 and 72 hours, moderate irritation was noted.)
Serious eye damage/eye irritation:	Not classified (Unknown toxic components in the mixture: $\geq 0.1\%$)
Reproductive or skin sensitization:	Not classified due to insufficient data.
Germ cell mutagenicity:	Not classified due to insufficient data.
Carcinogenicity:	Not classified due to insufficient data.
Reproductive toxicity:	Category 1B (Adverse effects on reproduction of parental animals and development of pups at doses producing no parental toxicity.
Specific target organ toxicity (single exposure):	Category 2 (Central nervous systems, digestion tract) Content in the mixture: $\geq 1.0\%$
Specific target organ toxicity (repeated exposure):	Not classified due to insufficient data.
Aspiration hazard:	Not classified (No kinematic viscosity data available.)

Section 12: Ecological information

No data available for the mixture.

Additional toxicological information on boric acid:

Toxicity	Hazardous to the aquatic environment (acute): Not applicable for classification. Hazardous to the aquatic environment (chronic): Not applicable for classification.
Persistence and degradability:	No information available
Bioaccumulative potential:	No information available
Mobility in soil:	No information available
Other adverse effects:	Ozone depletion potential, photochemical ozone creation potential and/or global Warming potential: Not classified (Not listed in Annexes of Montreal Protocol.)

Section 13: Disposal considerations

Residual waste:	Dispose of contents/ container according to all federal, state, and local environmental regulations.
Contaminated container:	After removing the contents, dispose of contents/ container according to all federal, state, and local environmental regulations.

Section 14: Transport information

US DOT, IMDG (sea), ADR/RID (land), ICAO/IATA (air): No classification assigned.
Prior to transport, make sure no leakage is observed from the bottle and stow a cargo without dropping and turning over.

Section 15: Regulatory information

U.S. TSCA Inventory: Boric acid

The composition/ information of ingredients is disclosed according to GHS. Comply with all countries, national and local regulation.

Section 16: Other information**References**

- 1) National Institute of Technology and Evaluation: GHS; http://www.safe.nite.go.jp/ghs/ghs_index.html
- 2) National Institute of Technology and Evaluation: CHRIP; http://www.nite.go.jp/chem/chrip/chrip_search/systemTop
- 3) Ministry of Economy, Trade and Industry: GHS Mixture Classification System ver. 6.0 (According to GHS, sixth revised edition, 2015)

Revision

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