

SAFETY DATA SHEET

In accordance with ISO 11014: 2009

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product code 1-DP1-001

Product name ITEA Der p 1 ELISA Kit

A. Capture antibody coated microplate

B. Standard (lyophilized)

C. Enzyme-labeled antibody

D. TMB SolutionE. Stop solutionF. Dilute solution

G. Washing solution (20x concentrated)

Manufacture/supplier

Manufacture/supplier Institute of Tokyo Environmental Allergy, ITEA Inc.

Department in Charge Quality Assurance Sec.

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Recommended use and restriction on use

Recommended use Research reagent

Restrictions on use This product should not be used for applications other than those recommended.

Section 2: HAZARDS IDENTIFICATION

Important hazards

GHS classification

Physical Hazards Not classified

Health Hazards

A. Capture antibody coated microplate
B. Standard (lyophilized)
C. Enzyme-labeled antibody
D. TMB Solution
F. Dilute solution
G. Washing solution (20x concentrated)
Not classified
Not classified
Not classified

E. Stop solution

Skin irritation/corrosion: Category 1
Eye damage/irritation: Category 1

Specific target organ toxicity Category 2 (respiratory system)

(single exposure):

Specific target organ toxicity Category 2 (respiratory system)

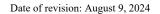
(repeated exposure):

Environmental Hazards Not classified

Label Elements

- A. Capture antibody coated microplate
- B. Standard (lyophilized)
- C. Enzyme-labeled antibody
- D. TMB Solution







F. Dilute solution

G. Washing solution (20x concentrated)

Pictogram Not classified
Signal word Not classified
Hazard Statements Not classified
Precautionary Statements Not classified

E. Stop solution

Pictogram





Signal word Danger

Hazard Statements Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause damage to respiratory system.

May cause damage to respiratory system through prolonged or repeated

exposure.

Precautionary Statements

[Prevention] Do not breathe dust/fume/gas/mist/vapours/spray.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

[Emergency response] IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for

breathing.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Call a POISON CENTER/doctor.

Immediately call a POISON CENTER/doctor. Get medical advice/attention if you feel unwell. Wash contaminated clothing before reuse.

[Storage] Store locked up.

[Disposal] Dispose of contents/container in accordance with related laws and

local/regional regulations.

Other hazards No information

Important symptoms and an outline of an anticipated emergency

A. Capture antibody coated microplate

B. Standard (lyophilized)

C. Enzyme-labeled antibody

D. TMB Solution

F. Dilute solution

G. Washing solution (20x concentrated)

No information

No information

No information

E. Stop solution Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause damage to respiratory system.

May cause damage to respiratory system through prolonged or

repeated exposure.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture

Mixture



Compositions

E. Stop solution

Chemical name/ Generic name	CAS number	Concentration (wt %)
Water	7732-18-5	95.32
Sulfuric acid	7664-93-9	4.68

The following components do not contain hazardous ingredients.

- A. Capture antibody coated microplate
- B. Standard (lyophilized)
- C. Enzyme-labeled antibody
- D. TMB Solution
- F. Dilute solution
- G. Washing solution (20x concentrated)

Section 4: FIRST-AID MEASURES

First aid procedures

IF INHALED Remove victim to fresh air and keep at rest in a position

comfortable for breathing.

If you feel unwell, get medical advice/attention immediately and at rest.

IF ON SKIN Rinse with plenty of water.

If abnormality, immediately get medical advice/attention.

IF IN EYES Immediately rinse cautiously with water for 15 - 20 minutes.

Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately get medical advice/attention.

IF SWALLOWED Rinse mouth. Immediately get medical advice/attention.

Anticipated acute effects, anticipated delayed effects and most important symptoms/effects

A. Capture antibody coated microplate
C. Enzyme-labeled antibody
D. TMB Solution
No information
No information
F. Dilute solution
No information
No information
No information
No information

B. Standard (lyophilized) May cause skin, eyes and respiratory system irritation or cause allergic

reaction if contact with or inhaled this product.

E. Stop solution Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause damage to respiratory system.

May cause damage to respiratory system through prolonged or repeated

exposure.

Protection of first-aiders

Wear appropriate eyes and skin protective equipment.

Note to an attending physician

No information

Section 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

In case of fire, use water spray, dry extinguishant, fire foam or carbon dioxide.

Unsuitable extinguishing media

No restrictions on extinguishing media for this product.



Specific hazards arising from the chemical

A. Capture antibody coated microplate

B. Standard (lyophilized)

C. Enzyme-labeled antibody

D. TMB Solution

F. Dilute solution

Mo information

No information

E. Stop solution In case of fire, toxic decomposition products may be generated.

Take action from windward.

Keep out except responsible personnel.

Move container to a safe area if it can be done without risk.

Protective equipment and precautions for firefighters

Fire fighters should wear appropriate protective equipment and fireproof clothing.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment described in section "Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION".

Environmental precautions

Prevent to flowing into drains, sewers, basements or closed areas.

Methods and materials for containment and cleaning up

- C. Enzyme-labeled antibody
- D. TMB Solution
- F. Dilute solution
- G. Washing solution (20x concentrated)

Absorb into liquid absorbent, etc., and collect in an empty container.

B. Standard (lyophilized)

Sweep up scattered materials or vacuum them using a vacuum cleaner so as not to cause dust then collect them into an empty container.

E. Stop solution

Wear protective equipments and stop the leak after confirming that this product is not dangerous.

In case of small amounts, wipe off spilled material with waste or wiping cloth and collect it in an adequate waste container.

If case of large amounts, prevent leakage and enclose by embankment.

Secondary disaster prevention measures

No information

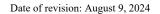
Section 7: HANDLING AND STORAGE

Handling

- A. Capture antibody coated microplate
- B. Standard (lyophilized)
- C. Enzyme-labeled antibody
- D. TMB Solution
- F. Dilute solution
- G. Washing solution (20x concentrated)

Technical measures

Install appropriate equipment and wear suitable protective apparatus described in section "Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION".





Precautions such as local Handle the product in a well-ventilated area.

/total ventilation In case of mist/vapours generation, use local ventilation.

Precautions for safe handling Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid the generation of dust regarding B. Standard (lyophilized).

Prevention of contact Avoid direct sunlight, high temperature and high humidity.

E. Stop solution

Technical measures Install appropriate equipment and wear suitable protective

apparatus described in section "Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION".

Precautions such as local Handle the product in a well-ventilated area.

/total ventilation In case of mist/vapours generation, use local ventilation.

Precautions for safe handling Do not handle container violently such that wiping out or dragging.

Prevent spill, leak or splash of the product to avoid vapour generation.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wash contaminated clothing before reuse.

Prevention of contact Avoid direct sunlight or high temperature.

Avoid contact with oxidizing agents or reducing agents.

Storage

Technical measures Store in a biomedical refrigerator at 2 - 8°C.

Incompatible materials and mixtures

A. Capture antibody coated microplate

B. Standard (lyophilized)

C. Enzyme-labeled antibody

D. TMB Solution

No information

No information

No information

E. Stop solution Oxidizing agents, reducing agents

F. Dilute solution No information
G. Washing solution (20x concentrated) No information

Conditions for safe storage Avoid direct sunlight. Store in a cool dark place.

Packing material

A. Capture antibody coated microplate Aluminium pouch with desiccant

B. Standard (lyophilized) Polypropylene

C. Enzyme-labeled antibody
 D. TMB Solution
 E. Stop solution
 High density polyethylene
 High density polyethylene

F. Dilute solution Polyethylene
G. Washing solution (20x concentrated) Polyethylene

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration

Occupational Exposure Limits

- A. Capture antibody coated microplate
- C. Enzyme-labeled antibody
- D. TMB Solution
- F. Dilute solution
- G. Washing solution (20x concentrated)

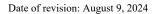
Does not contain ingredients for which occupational exposure limits have been established.

B. Standard (lyophilized)

ACGIH TLV-TWA (2018) 3 mg/m³ (respirable particles) 10 mg/m³ (inhalable particles)

ACGIH TLV-STEL (2018) Not applicable * This item is not an acceptable concentration for sensitization.

E. Stop solution





ACGIH TLV-TWA (2018) (Sulfuric acid) 0.2 mg/m^3

ACGIH TLV-STEL (2018) Not applicable

Engineering controls

In a work place where dusts generate, ensure to use sealed instrument or local ventilation.

Under high temperature or in case of mist generation, use ventilation.

Personal protective equipment

Respiratory protection Wear an appropriate protective mask.

Especially, wear gas mask for sulfurous acid gas as necessary regarding

E. Stop solution.

Hand protection Wear protective gloves. Eye protection Wear safety glasses.

Skin and body protection Wear protective safety cap, lab coat, apron or safety shoes if necessary.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, form and colour)

A. Capture antibody coated microplate Pre-blocked and coated microplates

B. Standard (lyophilized) White powder

C. Enzyme-labeled antibody Clear and colourless liquid D. TMB Solution Clear and colourless liquid E. Stop solution Clear and colourless liquid F. Dilute solution Clear and colourless liquid G. Washing solution (20x concentrated) Clear and colourless liquid

Odour

No information **Odour threshold** No information No information pН

A. Capture antibody coated microplate No information

B. Standard (lyophilized) 7.2 - 7.6 (after dissolving with distilled water)

C. Enzyme-labeled antibody No information D. TMB Solution No information E. Stop solution Strong acid F. Dilute solution 7.2 - 7.6

G. Washing solution (20x concentrated) 7.2 - 7.6 (after diluting with distilled water)

Melting point/ freezing point

Boiling point, initial boiling point and boiling range No information **Flashpoint** No information No information **Evaporation rate** Flammability No information Upper/lower explosive limits No information No information Vapour pressure Vapour density No information Specific gravity No information

Every component other than A. Capture antibody coated microplate is **Solubility**

No information

miscible with water.

B. Standard (lyophilized) may cause turbidity.

n-octanol/water partition coefficient No information Auto-ignition temperature No information No information **Decomposition temperature** Viscosity No information Other information No information

Section 10: STABILITY AND REACTIVITY

Chemical stability Stable under normal handling condition.

Hazardous reactions No hazardous reaction expected under normal handling. Conditions to avoid Direct sunlight, high temperature and high humidity

Incompatible materials







A. Capture antibody coated microplate

B. Standard (lyophilized)

C. Enzyme-labeled antibody

D. TMB Solution

No information

No information

No information

E. Stop solution Oxidizing agents, reducing agents

F. Dilute solution No information
G. Washing solution (20x concentrated) No information

Hazardous decomposition products

A. Capture antibody coated microplate

B. Standard (lyophilized)

C. Enzyme-labeled antibody

D. TMB Solution

No information

No information

No information

E. Stop solution In case of fire, toxic decomposition products may be generated.

F. Dilute solution No information
G. Washing solution (20x concentrated) No information

Section 11: TOXICOLOGICAL INFORMATION

Toxicological information for product

No information

Toxicological information for ingredients

E. Stop solution

Sulfuric acid

Acute toxicity (oral): Rat $LD_{50} = 2,140 \text{ mg/kg}$ Acute toxicity (inhalation: dust/mist): Rat $4h LC_{50} = 0.375 \text{ mg/L}$

Skin irritation/corrosion: Since pH of concentrated sulfuric acid was 1 or less, it was judged

to be a corrosive substances with the GHS classification standards.

Eye damage/irritation: There is a description that the critical damage to the eye accompanied by

solutions of anterior chamber of eye was

acknowledged in example of accident in human.

Furthermore, there is a description that moderate irritation with 5% liquid and severe irritation with 10% liquid were acknowledged to the eye of a

rabbit.

Specific target organ toxicity

(single exposure):

There are reports that in the inhalation exposure of low

concentration in humans, airway irritation such as cough and breath shortness is identified, and at high exposure levels, acute effects such as cough, breath shortness and hemoptysis shedding etc., and permanent

effects such as functional depression of lungs,

fibrosis and emphysema were identified, and that hemorrhage in lungs and dysfunction were identified by 8-hour inhalation exposure in guinea pigs.

Specific target organ toxicity

(repeated exposure):

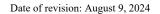
In the 28-day inhalation exposure test using rat, cell proliferation in laryngeal mucosa is acknowledged in guidance value of Category 1, and in the 14 to 139-day repetition inhalation exposure test using the guinea pigs of the concentration of guidance value within the limits of Category 1, respiratory and lung disorder, such as nasal-septum dropsy, pulmonary emphysema, atelectasis, hyperemia, dropsy, bleeding and thrombosis of bronchioles are recognized, and further in the 78-week inhalation exposure test using a cynomolgus, histological change as hyperplasia of a cell, the wall thickening, etc. in bronchioles of lungs was acknowledged in the dosage (0.048 mg/L, 23.5 Hr/Day) of the

range of the guidance value of Category 1.

Section 12: ECOLOGICAL INFORMATION

Ecological information for product

Ecotoxicity No information Persistence and degradability No information





Bioaccumulative potential No information
Mobility in soil No information
Hazardous to the ozone layer No information

Ecological information for ingredients

E. Stop solution Sulfuric acid

Ecotoxicity (acute) Fish (Bluegill) 96 h $LC_{50} = 16 - 28 \text{ mg/L}$

Ecotoxicity (chronic)

Persistence and degradability

Bioaccumulative potential

Mobility in soil

Hazardous to the ozone layer

No information

No information

No information

No information

Section 13: DISPOSAL CONSIDERATIONS

Remaining product

- A. Capture antibody coated microplate
- B. Standard (lyophilized)
- C. Enzyme-labeled antibody
- D. TMB Solution
- F. Dilute solution
- G. Washing solution (20x concentrated)

Dispose of waste in accordance with applicable local, regional and international regulations and standards.

E. Stop solution

Dispose of waste in accordance with applicable local, regional and international regulations and standards.

Neutralize with slaked lime, then discard it according to relevant law regulations.

In the absence of an appropriate processing facility, we consign processing to a waste disposal contractor approved by the prefectural governor.

Contaminated containers and packaging

When dispose of empty containers, contents should be removed completely and be recycled or dispose of in compliance with related laws and local regulations.

Section 14: TRANSPORT INFORMATION

International regulation

UN number 2796

UN proper shipping name SULPHURIC ACID with not more than 51% acid or BATTEERY

FLUID, ACID

Transport hazard class(es) 8
Subsidiary risk Packing group II

Marine pollutant Not applicable IBC Code Not applicable

When transporting, confirm no damage to containers. Avoid handling violently or leaking wet. Load to prevent fall or falling down containers and take preventive measures of collapse.

Section 15: REGULATORY INFORMATION

US Federal regulation

TSCA inventory: Registered Sodium chloride

Potassium dihydrogenphosphate

Potassium chloride

3(2H)-Isothiazolone, 2-methyl-

Sulfuric acid

[1,1'-Biphenyl]-4,4'-diamine, 3,3',5,5'-tetramethyl-







EU regulation

The product and its ingredients are not regulated by specific provisions related to protection of human health or the environment at EU level, e.g. not considered as SVHCs or POPs.

(EC) 1272/2008 (Annex VI, Table 3): Listed (Sulfuric acid)

Section 16: OTHER INFORMATION

Reference

Information of Institute of Tokyo Environmental Allergy, ITEA Inc.

NITE GHS classification results (http://www.safe.nite.go.jp/ghs/list.html). (2018)

ACGIH, American Conference of Governmental Industrial Hygienists (2018) TLVs and BEIs.

[Disclaimer]

This SDS has been prepared on the basis of laws, regulations and information available at this time. It is user's responsibility to modify or update any contents in this SDS regarding information on hazardous properties and/or instruction for safe handling of the product when they become available. Precautionary measures in this SDS are only applicable for normal handling conditions and it is necessary to take appropriate additional measures to ensure safe handling which depend on your specific use conditions or situations.