



## **Material Safety Data Sheet**

**Adiponectin (Mouse) Total, HMW ELISA**

**Catalog Number: 47-ADPMS-E01**

## Safety Data Sheet

The content and format of this SDS is accordant with 29 CFR 1910.1200 (OSHA standard)

### 1. Identification of the substance/preparation and of the company/undertaking

**Product details:**

**Product name:** Mouse Adiponectin ELISA kit for Total and HMW

**Reagents:** ①Wash buffer concentrate (10-fold), ②Sample Pre-treatment buffer, ③Dilution buffer, ④MoAb coated wells, ⑤Calibrator, ⑥Biotin labeled-PoAb, ⑦Enzyme labeled streptavidin, ⑧Substrate (lyophilized), ⑨Substrate buffer, ⑩Stop reagent, ⑪Protease solution concentrate (10-fold), ⑫Protease buffer

**Note:** Reagent④are solid molded article, not applicable for safety data sheet.

**Recommended use of the chemical and restrictions on use:** Reagents for research use.

Restrictions on use: Do NOT use it in an application which may contaminate food or do harm to human health.

**Manufacturer/Supplier:** SEKISUI MEDICAL CO., LTD.

Address: 1-3, Nihonbashi 2-chome, Chuo-ku, Tokyo 103-0027 Japan

Tel.: +81-3-3272-0679

Fax: +81-3-3272-0678

**Further information obtainable from:** SEKISUI MEDICAL CO., LTD.

**Information in case of emergency:** +81-3-3272-0679

### 2. Hazards identification

#### ①Wash buffer concentrate (10-fold)

**.GHS classification:**

Physical hazards	Health hazards	Environmental hazards

Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation - not classified Respiratory sensitizer-not classified Skin sensitizer-1 Germ cell mutagenicity- not classified Carcinogenicity- not classified Toxic to reproduction- not classified Effects on or via lactation-not classified Specific target organ toxicity, single Exposure- 2 (Respiratory organs, heart) Specific target organ toxicity, repeated exposure - not classified Aspiration hazard-not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified
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**Signal Word:** Warning

**Symbol :**



**Hazard Statements:**

H317: May cause an allergic skin reaction.

H371: May cause damage to organs (Respiratory organs, heart).

**Precautionary Statements:**

P260: Do not breathe mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves.

**Response Precautionary Statements:**

P302+P352: IF ON SKIN: Wash with soap and water.

P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

P309+P311: IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician.

**Storage precautionary statements :**

P405: Store locked up.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.

**②Sample Pre-treatment buffer**

**.GHS classification:**

Physical hazards	Health hazards	Environmental hazards
Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation -not classified Respiratory sensitizer-not classified Skin sensitizer- not classified Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction-1B Effects on or via lactation-not classified STOT SE-not classified STOT RE- not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified

**Signal Word:** Warning

**Symbol :**



**Hazard Statements:**

H360: May damage fertility or the unborn child.

**Precautionary Statements:**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P281: Use personal protective equipment as required.

**Response Precautionary Statements:**

P308+P313: IF exposed or concerned: Get medical advice/attention.

**Storage precautionary statements :**

P405: Store locked up.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.

**③Dilution buffer****.GHS classification:**

Physical hazards	Health hazards	Environmental hazards
Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation -not classified Respiratory sensitizer-not classified Skin sensitizer-1 Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-not classified STOT RE- not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified

**Signal Word:** Warning

**Symbol :**

**Hazard Statements:**

H317: May cause an allergic skin reaction.

**Precautionary Statements:**

P261: Avoid breathing mist/vapours/spray.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves.

**Response Precautionary Statements:**

P302+P352: IF ON SKIN: Wash with soap and water.

P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

**Storage precautionary statements :**

No relevant classification.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.

**⑤Calibrator**

**.GHS classification:**

Physical hazards	Health hazards	Environmental hazards
Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation -not classified Respiratory sensitizer-not classified Skin sensitizer-1 Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-not classified STOT RE- not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified

**Signal Word:** Warning

**Symbol :**

**Hazard Statements:**

H317: May cause an allergic skin reaction.

**Precautionary Statements:**

P261: Avoid breathing mist/vapours/spray.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves.

**Response Precautionary Statements:**

P302+P352: IF ON SKIN: Wash with soap and water.

P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

**Storage precautionary statements :**

No relevant classification.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.

**⑥Biotin labeled-PoAb****.GHS classification:**

Physical hazards	Health hazards	Environmental hazards

Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation -not classified Respiratory sensitizer-not classified Skin sensitizer-1 Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-not classified STOT RE- not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified
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**Signal Word:** Warning

**Symbol :**



**Hazard Statements:**

H317: May cause an allergic skin reaction.

**Precautionary Statements:**

P261: Avoid breathing mist/vapours/spray.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves.

**Response Precautionary Statements:**

P302+P352: IF ON SKIN: Wash with soap and water.

P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

**Storage precautionary statements :**

No relevant classification.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.



**⑦Enzyme labeled streptavidin****.GHS classification:**

Physical hazards	Health hazards	Environmental hazards
Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation -not classified Respiratory sensitizer-not classified Skin sensitizer-1 Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-not classified STOT RE- not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified

**Signal Word:** Warning**Symbol :****Hazard Statements:**

H317: May cause an allergic skin reaction.

**Precautionary Statements:**

P261: Avoid breathing mist/vapours/spray.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves.

**Response Precautionary Statements:**

P302+P352: IF ON SKIN: Wash with soap and water.

P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

**Storage precautionary statements :**

No relevant classification.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.

**⑧Substrate (lyophilized)****.GHS classification:**

Physical hazards	Health hazards	Environmental hazards
Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)-5 Acute toxicity (dermal)-not classified Acute toxicity (inhalation)- not classified Skin corrosion/irritation- 2 Serious eye damage/eye irritation -2A Respiratory sensitizer-not classified Skin sensitizer-1 Germ cell mutagenicity- 2 Carcinogenicity-2 Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-1(Blood), 2 (Respiratory, nervous system) STOT RE- 2 (Blood) Aspiration hazard- not classified	Acute hazards to the aquatic environment-2 Chronic hazards to the aquatic environment-2 Hazard to the ozone layer-not classified

**Signal Word: Danger****Symbol :****Hazard Statements:**

H303: May be harmful if swallowed.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H341: Suspected of causing genetic defects.

H351: Suspected of causing cancer.

H370: Causes damage to organs (Blood).

H371: May cause damage to organs (Respiratory, nervous system).

H373: May cause damage to organs through prolonged or repeated exposure (Blood).

H401: Toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

**Precautionary Statements:**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe dust/fume.

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/ eye protection/face protection.

P261: Avoid breathing dust/fume.

P270: Do not eat, drink or smoke when using this product.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P281: Use personal protective equipment as required.

**Response Precautionary Statements:**

P302+P352: IF ON SKIN: Wash with soap and water.

P311: Call a POISON CENTER or doctor/physician.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

P363: Wash contaminated clothing before reuse.

P305+P351+P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical advice/attention.

P308+P313: IF exposed or concerned: Get medical advice/attention.

P309+ P311: IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician.

P391: Collect spillage.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage precautionary statements :**

P405: Store locked up.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.

**⑨Substrate buffer**

**.GHS classification:**

Physical hazards	Health hazards	Environmental hazards

Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- 3 Serious eye damage/eye irritation -not classified Respiratory sensitizer-not classified Skin sensitizer-not classified Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-not classified STOT RE- not classified Aspiration hazard- not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified
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**Signal Word:** Warning

**Symbol :** Not applicable

**Hazard Statements:**

H316: Causes mild skin irritation.

**Precautionary Statements:**

No relevant classification for this product.

**Response Precautionary Statements:**

P332 + P313: If skin irritation occurs: Get medical advice/attention.

**Storage precautionary statements :**

No relevant classification.

**Disposal precautionary statements :**

No relevant classification for this product.

**⑩Stop reagent**

**.GHS classification:**

Physical hazards	Health hazards	Environmental hazards

Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-1	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- 1A Serious eye damage/eye irritation-1 Respiratory sensitizer-not classified Skin sensitizer- not classified Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-1 (Respiratory) STOT RE-1 (Respiratory) Aspiration hazard-not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified
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**Signal Word:** Danger

**Symbol :**



**Hazard Statements:**

H290: May be corrosive to metals.

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H370: Causes damage to organs (Respiratory organs).

H372: Causes damage to organs through prolonged or repeated exposure (Respiratory organs).

**Precautionary Statements:**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P234: Keep only in original container.

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.

**Response Precautionary Statements:**

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363: Wash contaminated clothing before reuse.

P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse continuously 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.

P390: Absorb spillage to prevent material damage.

P307+P311: IF exposed: Call a POISON CENTER or doctor/physician.

#### **Storage precautionary statements :**

P405: Store locked up.

P406: Store in a corrosive resistant/container with a resistant inner liner.

#### **Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.

### **①Protease solution concentrate (10-fold)**

#### **.GHS classification:**

<b>Physical hazards</b>	<b>Health hazards</b>	<b>Environmental hazards</b>
Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation -not classified Respiratory sensitizer-not classified Skin sensitizer-1 Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-not classified STOT RE- not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified

**Signal Word:** Warning

**Symbol :**



**Hazard Statements:**

H317: May cause an allergic skin reaction.

**Precautionary Statements:**

P261: Avoid breathing mist/vapours/spray.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves.

**Response Precautionary Statements:**

P302+P352: IF ON SKIN: Wash with soap and water.

P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

**Storage precautionary statements :**

No relevant classification.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.

**⑫Protease buffer**

**.GHS classification:**

Physical hazards	Health hazards	Environmental hazards

Explosives-not classified Flammable gases-not classified Flammable aerosols-not classified Gases under pressure- not classified Flammable liquids- not classified Flammable solids-not classified Self-reactive substances and mixtures-not classified Pyrophoric liquids-not classified Pyrophoric solids-not classified Self-heating substances and mixtures-not classified Substances and mixtures, which in contact with water, emit flammable gases-not classified Oxidizing liquids-not classified Oxidizing solids-not classified Organic peroxides-not classified Corrosive to metals-not classified	Acute toxicity (oral)- not classified Acute toxicity (dermal)-not classified Acute toxicity (inhalation)-not classified Skin corrosion/irritation- not classified Serious eye damage/eye irritation -not classified Respiratory sensitizer-not classified Skin sensitizer-1 Germ cell mutagenicity- not classified Carcinogenicity-not classified Toxic to reproduction- not classified Effects on or via lactation-not classified STOT SE-not classified STOT RE- not classified	Acute hazards to the aquatic environment-not classified Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified
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**Signal Word:** Warning

**Symbol :**



**Hazard Statements:**

H317: May cause an allergic skin reaction.

**Precautionary Statements:**

P261: Avoid breathing mist/vapours/spray.

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves.

**Response Precautionary Statements:**

P302+P352: IF ON SKIN: Wash with soap and water.

P333+P313: If skin irritation or a rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

**Storage precautionary statements :**

No relevant classification.

**Disposal precautionary statements :**

P501: Dispose of contents/container according to relevant local and national regulations.



### 3. Composition/information on ingredients

#### ① Wash buffer concentrate (10-fold)

**Product description:** substance (); preparation/mixture (√)

Ingredient (s)	CAS No.	EC No.	% by weight
Potassium chloride	7447-40-7	231-211-8	5.59
Dipotassium hydrogenphosphate	7758-11-4	231-834-5	2.59
Potassium dihydrogen phosphate	7778-77-0	231-913-4	0.70
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	500-018-3	0.50
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone	55965-84-9	Not available	0.0036

#### ② Sample Pre-treatment buffer

**Product description:** substance (); preparation/mixture (√)

Ingredient (s)	CAS No.	EC No.	% by weight
Boric acid	10043-35-3	233-139-2	0.62

#### ③ Dilution buffer

**Product description:** substance (); preparation/mixture (√)

Ingredient (s)	CAS No.	EC No.	% by weight
Sodium chloride	7647-14-5	231-598-3	0.88
Disodium Hydrogenphosphate	7558-79-4	231-448-7	0.22
Potassium dihydrogen phosphate	7778-77-0	231-913-4	0.06
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	500-018-3	0.05
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone	55965-84-9	Not available	0.0036

#### ⑤ Calibrator

**Product description:** substance (); preparation/mixture (√)

Ingredient (s)	CAS No.	EC No.	% by weight
Sodium chloride	7647-14-5	231-598-3	0.88
Disodium Hydrogenphosphate	7558-79-4	231-448-7	0.22
Potassium dihydrogen phosphate	7778-77-0	231-913-4	0.06
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	500-018-3	0.05
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with	55965-84-9	Not available	0.0036

2-methyl-3(2H)-isothiazolone

**⑥Biotin labeled-PoAb****Product description:** substance (); preparation/mixture (✓)

Ingredient (s)	CAS No.	EC No.	% by weight
Sodium chloride	7647-14-5	231-598-3	0.88
Disodium Hydrogenphosphate	7558-79-4	231-448-7	0.22
Potassium dihydrogen phosphate	7778-77-0	231-913-4	0.06
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	500-018-3	0.05
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone	55965-84-9	Not available	0.0036

**⑦Enzyme labeled streptavidin****Product description:** substance (); preparation/mixture (✓)

Ingredient (s)	CAS No.	EC No.	% by weight
Sodium chloride	7647-14-5	231-598-3	0.88
Disodium Hydrogenphosphate	7558-79-4	231-448-7	0.22
Potassium dihydrogen phosphate	7778-77-0	231-913-4	0.06
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	500-018-3	0.05
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone	55965-84-9	Not available	0.0036
Phenol	108-95-2	203-632-7	0.001

**⑧Substrate (lyophilized)****Product description:** substance (); preparation/mixture (✓)

Ingredient (s)	CAS No.	EC No.	% by weight
Trisodium citrate dihydrate	6132-04-3	Not applicable	45.81
DEXTRAN	9004-54-0	232-677-5	21.71
o-Phenylenediamine	95-54-5	202-430-6	19.54
Citric Acid Monohydrate	5949-29-1	Not applicable	12.94

**⑨Substrate buffer****Product description:** substance (); preparation/mixture (✓)

Ingredient (s)	CAS No.	EC No.	% by weight
Citric Acid Monohydrate	5949-29-1	200-662-2	1.49
Hydrogen peroxide	7722-84-1	231-765-0	0.02

**⑩Stop reagent****Product description:** substance (); preparation/mixture (✓)

Ingredient (s)	CAS No.	EC No.	% by weight
Sulfuric acid	7664-93-9	231-639-5	7.67
Ethylenediaminetetraacetic acid disodium salt, 2-hydrate	6381-92-6	205-358-3	0.04

**⑪Protease solution concentrate (10-fold)****Product description:** substance (); preparation/mixture (✓)

Ingredient (s)	CAS No.	EC No.	% by weight
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone	55965-84-9	Not available	0.0018

**⑫Protease buffer****Product description:** substance (); preparation/mixture (✓)

Ingredient (s)	CAS No.	EC No.	% by weight
Tris(hydroxymethyl)aminomethane	77-86-1	201-064-4	0.61
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone	55965-84-9	Not available	0.0018

**4. First aid measures****①Wash buffer concentrate (10-fold)****As a general rule, in case of doubt or if symptoms persist, always call a doctor:****In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.**Acute effect and delayed effect:** Acute effect: May cause an allergic skin reaction. May cause damage to organs. Delayed effect: not found.**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.**②Sample Pre-treatment buffer****As a general rule, in case of doubt or if symptoms persist, always call a doctor:****In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** No special measures as there is no hazard for normal contact. Wash with water and soap when necessary.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: Not found. Delayed effect: May damage fertility or the unborn child.

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Use personal protective equipment as required. Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

### ③Dilution buffer

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: May cause an allergic skin reaction. Delayed effect: Not found.

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

### ⑤Calibrator

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: May cause an allergic skin reaction. Delayed effect: Not found.

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

### ⑥Biotin labeled-PoAb

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: May cause an allergic skin reaction. Delayed effect: Not found.

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

#### ⑦Enzyme labeled streptavidin

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do-continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: May cause an allergic skin reaction. Delayed effect: Not found.

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

#### ⑧Substrate (lyophilized)

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: May be harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Causes damage to organs (Blood). May cause damage to organs (Respiratory, nervous system).

Delayed effect: Suspected of causing genetic defects. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure (Blood).

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or dusty environment.

#### ⑨Substrate buffer

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**In the event of exposure by inhalation:** No special measures as there is no hazard for normal contact.

**In the event of swallowing:** do not induce vomiting without professional instruction. Get medical attention if necessary.

**Acute effect and delayed effect:** Acute effect: Causes mild skin irritation. Delayed effect: Not found.

**Personal protective equipment:** No special requirements under normal conditions. Recommend wearing general working clothing.

#### ⑩Stop reagent

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**In the event of splashes or contact with skin:** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: Causes severe skin burns and eye damage. Causes serious eye damage. Causes damage to organs (Respiratory organs). Delayed effect: Causes damage to organs through prolonged or repeated exposure (Respiratory organs).

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

#### ⑪Protease solution concentrate (10-fold)

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: May cause an allergic skin reaction. Delayed effect: Not found.

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

#### ⑫Protease buffer

**As a general rule, in case of doubt of if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Wash with soap and water. If skin irritation or a rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: May cause an allergic skin reaction. Delayed effect: Not found.

**Personal protective equipment:** Recommend wearing protective gloves (e.g. rubber gloves). Wear respirators and safety goggles when exposure limits are exceeded or liquid may splash.

## 5. Fire-fighting measures

### ① Wash buffer concentrate (10-fold)

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**Unusual Fire and Explosion Hazards:** Not found.

**Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

### ② Sample Pre-treatment buffer

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**Unusual Fire and Explosion Hazards:** Not found.

**Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.



**③Dilution buffer**

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**.Unusual Fire and Explosion Hazards:** Not found.

**.Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

**⑤Calibrator**

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**.Unusual Fire and Explosion Hazards:** Not found.

**.Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

**⑥Biotin labeled-PoAb**

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**.Unusual Fire and Explosion Hazards:** Not found.

**.Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).



For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

#### ⑦Enzyme labeled streptavidin

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**.Unusual Fire and Explosion Hazards:** Not found.

**.Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

#### ⑧Substrate (lyophilized)

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**.Unusual Fire and Explosion Hazards:** Not found.

**.Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

#### ⑨Substrate buffer

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**Unusual Fire and Explosion Hazards:** Not found.

**Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

#### ⑩Stop reagent

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**Unusual Fire and Explosion Hazards:** Not found.

**Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

#### ⑪Protease solution concentrate (10-fold)

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**Unusual Fire and Explosion Hazards:** Not found.

**Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

## ⑫Protease buffer

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

**Unusual Fire and Explosion Hazards:** Not found.

**Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

## 6. Accidental release measures

### ①Wash buffer concentrate (10-fold)

**Personal precautions:** Use proper personal protective equipment as indicated in Section 8.

**Measures for Cleaning/Collection:**

**Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material.

Build up dike or dig pit for collection. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

### ②Sample Pre-treatment buffer

**Personal precautions:** Use proper personal protective equipment as indicated in Section 8.

**Measures for Cleaning/Collection:**

**Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material.

Build up dike or dig pit for collection. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

### ③Dilution buffer

**Personal precautions:** Use proper personal protective equipment as indicated in Section 8.

#### Measures for Cleaning/Collection:

##### Small Spill:

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

##### Large Spill:

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material.

Build up dike or dig pit for collection. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

### ⑤Calibrator

**Personal precautions:** Use proper personal protective equipment as indicated in Section 8.

#### Measures for Cleaning/Collection:

##### Small Spill:

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

##### Large Spill:

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material.

Build up dike or dig pit for collection. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

### ⑥Biotin labeled-PoAb

**Personal precautions:** Use proper personal protective equipment as indicated in Section 8.

#### Measures for Cleaning/Collection:

##### Small Spill:

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

##### Large Spill:

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material.

Build up dike or dig pit for collection. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

**⑦Enzyme labeled streptavidin****Personal precautions:** Use proper personal protective equipment as indicated in Section 8.**Measures for Cleaning/Collection:****Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material. Keep away from heat and sources of ignition.

Build up dike or dig pit for collection. Spray fog water to cool down and dilute vapor. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.**⑧Substrate (lyophilized)****Personal precautions:** Use proper personal protective equipment as indicated in Section 8.**Measures for Cleaning/Collection:****Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material.

Build up dike or dig pit for collection. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.**⑨Substrate buffer****Personal precautions:** Use proper personal protective equipment as indicated in Section 8.**Measures for Cleaning/Collection:****Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material. Keep away from heat and sources of ignition.

Build up dike or dig pit for collection. Spray fog water to cool down and dilute vapor. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.**⑩Stop reagent****Personal precautions:** Use proper personal protective equipment as indicated in Section 8.**Measures for Cleaning/Collection:****Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material.

Build up dike or dig pit for collection. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

**⑪Protease solution concentrate (10-fold)**

**Personal precautions:** Use proper personal protective equipment as indicated in Section 8.

**Measures for Cleaning/Collection:****Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material.

Build up dike or dig pit for collection. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

**⑫Protease buffer**

**Personal precautions:** Use proper personal protective equipment as indicated in Section 8.

**Measures for Cleaning/Collection:****Small Spill:**

Mop up or absorb with an inert dry material (e.g. sand, dry lime) and place in an appropriately labeled waste disposal container.

**Large Spill:**

Isolate contaminated area and set up a warning board. The persons handling emergency are recommended wearing protective clothing. Do NOT touch spilled material. Keep away from heat and sources of ignition.

Build up dike or dig pit for collection. Spray fog water to cool down and dilute vapor. Collect the spilled material with appropriate tools into an appropriate container and transport the waste to the disposal place.

**Environmental Precautions:** Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

**7. Handling and storage****①Wash buffer concentrate (10-fold)**

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Do not breathe mist/vapours/spray.

Wash hands thoroughly after handling.

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

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

**②Sample Pre-treatment buffer**

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Use personal protective equipment as required.

Wash hands thoroughly after handling.

Avoid damage of packaging or containers during handling.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

**③Dilution buffer**

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Avoid breathing mist/vapours/spray.

Wear protective gloves.

Wash hands thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Avoid damage of packaging or containers during handling.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

**⑤Calibrator**

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Avoid breathing mist/vapours/spray.

Wear protective gloves.

Wash hands thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Avoid damage of packaging or containers during handling.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

#### ⑥Biotin labeled-PoAb

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Avoid breathing mist/vapours/spray.

Wear protective gloves.

Wash hands thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Avoid damage of packaging or containers during handling.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

#### ⑦Enzyme labeled streptavidin

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Avoid breathing mist/vapours/spray.

Wear protective gloves.

Wash hands thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Avoid damage of packaging or containers during handling.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

#### ⑧Substrate (lyophilized)

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume.

Wash hands thoroughly after handling.

Wear protective gloves/ eye protection/face protection.

Avoid breathing dust/fume.

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

Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.



Use personal protective equipment as required.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

Store locked up.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

### ⑨Substrate buffer

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Do not breathe fumes/ vapour/spray.

Wear suitable protective clothing.

If you feel unwell, seek medical attention and show the label when possible.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

### ⑩Stop reagent

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep only in original container.

Do not breathe mist/vapours/spray.

Wash hands thoroughly after handling.

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

Wear protective gloves.

Avoid damage of packaging or containers during handling.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

### ⑪Protease solution concentrate (10-fold)

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Avoid breathing mist/vapours/spray.

Wear protective gloves.

Wash hands thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Avoid damage of packaging or containers during handling.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

## ⑫Protease buffer

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Avoid breathing mist/vapours/spray.

Wear protective gloves.

Wash hands thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Avoid damage of packaging or containers during handling.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store it in a well-ventilated, cool and dry store room.

**Information about storage in one common storage facility:** The storeroom should be equipped with proper facilities for accidental fire.

**Further information about storage condition:** None.

## 8. Exposure controls/personal protection

### ①Wash buffer concentrate (10-fold)

**Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
No ingredients have an exposure limit	Not available	Not available

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):**

**Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.



**Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

**Protection of Body:**

Recommend wearing general working clothing.

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

**②Sample Pre-treatment buffer****Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
Boric acid (CAS: 10043-35-3)	Not applicable	2mg/m <sup>3</sup>

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):****Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.

**Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

**Protection of Body:**

Recommend wearing general working clothing.

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

**③Dilution buffer****Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
No ingredients have an exposure limit	Not available	Not available

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):****Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.

**Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

**Protection of Body:**

Recommend wearing general working clothing.

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

### ⑤ Calibrator

#### Control parameters:

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
No ingredients have an exposure limit	Not available	Not available

#### Engineering Control:

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

#### Personal Protective Equipment (for workers):

##### Protection of Hands:

Recommend wearing protective gloves for industrial hygienic purpose.



##### Protection of Eyes:

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.



##### Protection of Body:

Recommend wearing general working clothing.



#### General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

### ⑥ Biotin labeled-PoAb

#### Control parameters:

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
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No ingredients have an exposure limit

Not available

Not available

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):****Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.

**Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

**Protection of Body:**

Recommend wearing general working clothing.

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

**⑦Enzyme labeled streptavidin****Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
Phenol (CAS: 108-95-2)	5ppm	5ppm

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):****Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.



#### Protection of Eyes:

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.



#### Protection of Body:

Recommend wearing general working clothing.



#### General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

### ⑧Substrate (lyophilized)

#### Control parameters:

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
Trisodium citrate dehydrate (CAS: 6132-04-3)	Not available	Not available
DEXTRAN (CAS: 9004-54-0)	Not available	Not available
o-Phenylenediamine (CAS: 95-54-5)	Not available	0.1 mg/m <sup>3</sup>
Citric Acid Monohydrate (CAS: 5949-29-1)	Not available	Not available

#### Engineering Control:

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

#### Personal Protective Equipment (for workers):

##### Protection of Hands:

Recommend wearing protective gloves for industrial hygienic purpose.

**Protection of Eyes:**

Wear safety glasses and face protection when working in a dusty environment.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

**Protection of Body:**

Recommend wearing general working clothing.

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

**⑨Substrate buffer****Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
Hydrogen peroxide (CAS: 7722-84-1)	1ppm	1ppm

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):****Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.

**Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may splash.





**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.



**Protection of Body:**

Recommend wearing general working clothing.



**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

**⑩ Stop reagent**

**Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
Sulfuric acid (CAS: 7664-93-9)	0.1 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):**

**Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.



**Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

**Protection of Body:**

Recommend wearing general working clothing.

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

**① Protease solution concentrate (10-fold)****Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
No ingredients have an exposure limit	Not available	Not available

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):****Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.

**Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

**Protection of Body:**

Recommend wearing general working clothing.

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and broken skin.

**⑫Protease buffer****Control parameters:**

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
No ingredients have an exposure limit	Not available	Not available

**Engineering Control:**

Handle the product only under conditions where sufficient ventilation is provided.

Install eye washer and safety shower near handling and storage area.

**Personal Protective Equipment (for workers):****Protection of Hands:**

Recommend wearing protective gloves for industrial hygienic purpose.

**Protection of Eyes:**

No special requirements under normal conditions. Wear safety glasses when liquid may splash.



**Respiratory Protection:** Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.

**Protection of Body:**

Recommend wearing general working clothing.

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.  
Avoid contact with eyes and broken skin.

## 9 Physical and chemical properties

### ①Wash buffer concentrate (10-fold)

General Information	
Form	Liquid
Colour	Colourless
Odour	No data available
pH Value	No data available
Boiling Range	No data available
Melting point/Melting range	No data available
Flash point	No data available
Flammable/Explosive Limits-Lower Vol %	Not applicable
Flammable/Explosive Limits-Upper Vol %	Not applicable
Density	No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	No data available
n-octanol/Water Partition Coefficient	No data available
Self-igniting Temperature	No data available
Decomposition Temperature	No data available
Odour Threshold Value	No data available
Evaporation Rate	No data available
Flammability (solid, gas, etc.)	This product is not classified as flammable liquid

### ②Sample Pre-treatment buffer

General Information	
Form	Liquid
Colour	Colourless
Odour	No data available
pH Value	No data available
Boiling Range	No data available
Melting point/Melting range	No data available
Flash point	No data available
Flammable/Explosive Limits-Lower Vol %	Not applicable
Flammable/Explosive Limits-Upper Vol %	Not applicable
Density	No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	Soluble in water

<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

### ③Dilution buffer

<b>General Information</b>	
<b>Form</b>	Liquid
<b>Colour</b>	Colorless to clear yellowish
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available
<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available
<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable
<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Solubility</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

### ⑤Calibrator

<b>General Information</b>	
<b>Form</b>	Liquid
<b>Colour</b>	Colorless to clear yellowish
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available
<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available
<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable
<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available

<b>Vapour pressure</b>	No data available
<b>Solubility</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

#### ⑥Biotin labeled-PoAb

<b>General Information</b>	
<b>Form</b>	Liquid
<b>Colour</b>	Colorless to clear yellowish
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available
<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available
<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable
<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Solubility</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

#### ⑦Enzyme labeled streptavidin

<b>General Information</b>	
<b>Form</b>	Liquid
<b>Colour</b>	Colorless to clear yellowish
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available
<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available
<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable

<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Solubility</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

#### ⑧Substrate (lyophilized)

General Information	
<b>Form</b>	Solid (powder)
<b>Colour</b>	White
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available
<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available
<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable
<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Solubility</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable solid.

#### ⑨Substrate buffer

General Information	
<b>Form</b>	Liquid
<b>Colour</b>	Colourless
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available
<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available

<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable
<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Solubility</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

#### ⑩Stop reagent

<b>General Information</b>	
<b>Form</b>	Liquid
<b>Colour</b>	Colourless
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available
<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available
<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable
<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Solubility</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

#### ⑪Protease solution concentrate (10-fold)

<b>General Information</b>	
<b>Form</b>	Liquid
<b>Colour</b>	Colourless
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available



<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available
<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable
<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Solubility</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

## ⑫Protease buffer

### General Information

<b>Form</b>	Liquid
<b>Colour</b>	Colourless
<b>Odour</b>	No data available
<b>pH Value</b>	No data available
<b>Boiling Range</b>	No data available
<b>Melting point/Melting range</b>	No data available
<b>Flash point</b>	No data available
<b>Flammable/Explosive Limits-Lower Vol %</b>	Not applicable
<b>Flammable/Explosive Limits-Upper Vol %</b>	Not applicable
<b>Density</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Solubility in/Miscibility with Water</b>	No data available
<b>n-octanol/Water Partition Coefficient</b>	No data available
<b>Self-igniting Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Odour Threshold Value</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas, etc.)</b>	This product is not classified as flammable liquid

## 10. Stability and reactivity

### ①Wash buffer concentrate (10-fold)

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

## ②Sample Pre-treatment buffer

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

## ③Dilution buffer

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

## ⑤Calibrator

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

## ⑥Biotin labeled-PoAb

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

## ⑦Enzyme labeled streptavidin

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

**⑧Substrate (lyophilized)**

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

**⑨Substrate buffer**

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

**⑩Stop reagent**

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

**⑪Protease solution concentrate (10-fold)**

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

**⑫Protease buffer**

**Chemical stability:** This product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions:** No information available.

**Conditions to Avoid:** Long time exposure to direct sunlight or rain.

**Incompatible materials:** No special requirement for this product.

**Hazardous decomposition products:** No hazardous decomposition products are found.

## 11. Toxicological information

### ①Wash buffer concentrate (10-fold)

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Potassium chloride	7447-40-7	Acute toxicity (Oral ) LD <sub>50</sub> : 2,600mg/kg (rat) Data source: IUCLID ( <a href="http://ecb.jrc.it/esis">http://ecb.jrc.it/esis</a> )
Dipotassium hydrogenphosphate	7758-11-4	Acute toxicity (Oral ) LD <sub>50</sub> : 1,700mg/kg (rat) Data sources: IUCLID
Potassium dihydrogen phosphate	7778-77-0	Acute toxicity (Oral ) LD <sub>50</sub> : 1,700mg/kg (rat) Data source: IUCLID Acute toxicity (dermal) LD <sub>50</sub> >4,640mg/kg (rabbit) Data source: National Library of Medicine(NLM) ( <a href="http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM">http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM</a> )
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	Acute toxicity (Oral ) LD <sub>50</sub> : 36,700mg/kg (rat) Data source: ChemIDPlus
Mixture, 3(2H)-isothiazolone,5-chloro-2-methyl - with 2-methyl-3(2H)-isothiazolone	55965-84-9	Acute toxicity (Oral) LD <sub>50</sub> : 53mg/kg (rat) Data source: ChemIDPlus

**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** No classification for this product.

**Respiratory /Skin sensitizer:** This product is classified as Category 1. This product contains mixture, 3(2H)-isothiazolone,5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) which is classified as Category 1 by EC CLP(C $\geq$ 0,0015%). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** This product is classified as Category 2 (respiratory organs, heart). This product contains Potassium chloride (CAS: 7447-40-7). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 2. Data source: ICSC

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

### ②Sample Pre-treatment buffer

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Boric acid	10043-35-3	Acute toxicity (Oral) LD <sub>50</sub> : 2,660mg/kg (rat)

		Acute toxicity (dermal) LD <sub>50</sub> > 2,000mg/kg (rabbit)
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**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** No classification for this product.

**Respiratory /Skin sensitizer:** No classification for this product.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** This product is classified as 1B. This product contains Boric acid (CAS: 10043-35-3) which is classified as 1B (NTP DB (Access on May, 2006)). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as 1B.

**STOT-single exposure:** No classification for this product.

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

### ③Dilution buffer

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Sodium chloride	7647-14-5	Acute toxicity (Oral ) LD <sub>50</sub> : 3,000mg/kg (rat) Data source: IUCLID
Disodium Hydrogenphosphate	7558-79-4	Acute toxicity (Oral ) LD <sub>50</sub> > 2,000mg/kg (rat) Data sources: IUCLID
Potassium dihydrogen phosphate	7778-77-0	Acute toxicity (Oral ) LD <sub>50</sub> : 1,700mg/kg (rat) Data source: IUCLID Acute toxicity (dermal) LD <sub>50</sub> > 4,640 mg/kg (rabbit) Data source: National Library of Medicine(NLM) ( <a href="http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM">http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM</a> )
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	Acute toxicity (Oral ) LD <sub>50</sub> : 36,700mg/kg (rat) Data source: ChemIDPlus
Mixture, 3(2H)-isothiazolone,5-chloro-2-methyl - with 2-methyl-3(2H)-isothiazolone	55965-84-9	Acute toxicity (Oral) LD <sub>50</sub> : 53mg/kg (rat) Data source: ChemIDPlus

**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** No classification for this product.

**Respiratory /Skin sensitizer:** This product is classified as Category 1. This product contains mixture, 3(2H)-isothiazolone,5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) which is classified as Category 1 by EC CLP(C<sub>50</sub>≥0,0015%). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** No classification for this product.

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

#### ⑤ Calibrator

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Sodium chloride	7647-14-5	Acute toxicity (Oral ) LD <sub>50</sub> : 3,000mg/kg (rat) Data source: IUCLID
Disodium Hydrogenphosphate	7558-79-4	Acute toxicity (Oral ) LD <sub>50</sub> >2,000mg/kg (rat) Data sources: IUCLID
Potassium dihydrogen phosphate	7778-77-0	Acute toxicity (Oral ) LD <sub>50</sub> : 1,700mg/kg (rat) Data source: IUCLID Acute toxicity (dermal) LD <sub>50</sub> >4,640 mg/kg (rabbit) Data source: National Library of Medicine(NLM) ( <a href="http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM">http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM</a> )
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	Acute toxicity (Oral ) LD <sub>50</sub> : 36,700mg/kg (rat) Data source: ChemIDPlus
Mixture, 3(2H)-isothiazolone,5-chloro-2-methyl - with 2-methyl-3(2H)-isothiazolone	55965-84-9	Acute toxicity (Oral) LD <sub>50</sub> : 53mg/kg (rat) Data source: ChemIDPlus

**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** No classification for this product.

**Respiratory /Skin sensitizer:** This product is classified as Category 1. This product contains mixture, 3(2H)-isothiazolone,5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) which is classified as Category 1 by EC CLP(C<sub>50</sub>≥0,0015%). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** No classification for this product.

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

#### ⑥ Biotin labeled-PoAb

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
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Sodium chloride	7647-14-5	Acute toxicity (Oral ) LD <sub>50</sub> : 3,000mg/kg (rat) Data source: IUCLID
Disodium Hydrogenphosphate	7558-79-4	Acute toxicity (Oral ) LD <sub>50</sub> >2,000mg/kg (rat) Data sources: IUCLID
Potassium dihydrogen phosphate	7778-77-0	Acute toxicity (Oral ) LD <sub>50</sub> : 1,700mg/kg (rat) Data source: IUCLID Acute toxicity (dermal) LD <sub>50</sub> >4,640 mg/kg (rabbit) Data source: National Library of Medicine(NLM) ( <a href="http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM">http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM</a> )
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	Acute toxicity (Oral ) LD <sub>50</sub> : 36,700mg/kg (rat) Data source: ChemIDPlus
Mixture, 3(2H)-isothiazolone,5-chloro-2-methyl - with 2-methyl-3(2H)-isothiazolone	55965-84-9	Acute toxicity (Oral) LD <sub>50</sub> : 53mg/kg (rat) Data source: ChemIDPlus

**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** No classification for this product.

**Respiratory /Skin sensitizer:** This product is classified as Category 1. This product contains mixture, 3(2H)-isothiazolone,5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) which is classified as Category 1 by EC CLP(C<sub>50</sub>≥0.0015%). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** No classification for this product.

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

#### ⑦Enzyme labeled streptavidin

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Sodium chloride	7647-14-5	Acute toxicity (Oral ) LD <sub>50</sub> : 3,000mg/kg (rat) Data source: IUCLID
Disodium Hydrogenphosphate	7558-79-4	Acute toxicity (Oral ) LD <sub>50</sub> >2,000mg/kg (rat) Data sources: IUCLID
Potassium dihydrogen phosphate	7778-77-0	Acute toxicity (Oral ) LD <sub>50</sub> : 1,700mg/kg (rat) Data source: IUCLID Acute toxicity (dermal) LD <sub>50</sub> >4,640 mg/kg (rabbit) Data source: National Library of Medicine(NLM)



		( <a href="http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM">http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM</a> )
Polyoxyethylene(20) Sorbitan Monolaurate	9005-64-5	Acute toxicity (Oral ) LD <sub>50</sub> : 36,700mg/kg (rat) Data source: ChemIDPlus
Mixture, 3(2H)-isothiazolone,5-chloro-2-methyl - with 2-methyl-3(2H)-isothiazolone	55965-84-9	Acute toxicity (Oral) LD <sub>50</sub> : 53mg/kg (rat) Data source: ChemIDPlus
Phenol	108-95-2	Acute toxicity (Oral ) LD <sub>50</sub> : 340mg/kg (rat) Acute toxicity (dermal) LD <sub>50</sub> : 670mg/kg (rabbit) Acute toxicity (inhalation) LD <sub>50</sub> : 0.316mg/L (rat) Data source: NLM; EHC 161 (1994)

**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** No classification for this product.

**Respiratory /Skin sensitizer:** This product is classified as Category 1. This product contains mixture, 3(2H)-isothiazolone,5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) which is classified as Category 1 by EC CLP(C $\geq$ 0,0015%). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** No classification for this product.

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

#### ⑧Substrate (lyophilized)

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
DEXTRAN	9004-54-0	Acute toxicity (Oral ) LD <sub>50</sub> >3,000mg/kg (rat) Data source: National Library of Medicine(NLM)
o-Phenylenediamine	95-54-5	Acute toxicity (Oral ) LD <sub>50</sub> : 660 mg/kg (rat) Data sources: ACGIH(2001) Acute toxicity (dermal) LD <sub>50</sub> >4,640 mg/kg (rat) Data sources: ACGIH(2001)

**Serious eye damage/eye irritation:** This product is classified as Category 2A. This product contains Trisodium citrate dehydrate (CAS: 6132-04-3)-2A (H319) and o-Phenylenediamine (CAS: 95-54-5) which is classified as Category 2A ( $\geq$ 10%). Considering the total percentage these two ingredients exceeds the classification criteria, the whole product is classified as Category 2A.

**Skin corrosion/irritation:** This product is classified as Category 2. This product contains o-Phenylenediamine (CAS: 95-54-5) and citric acid monohydrate (CAS: 5949-29-1) which is classified as Category 2 (C $\geq$ 10%). Considering the total percentage these two ingredients exceeds the classification criteria, the whole product is classified as Category 2.

**Respiratory /Skin sensitizer:** This product is classified as Category 1. This product contains o-Phenylenediamine (CAS:



95-54-5) which is classified as Category 1 ( $C \geq 0.1\%$ ). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**Germ cell mutagenicity:** This product is classified as Category 2. This product contains o-Phenylenediamine (CAS: 95-54-5) which is classified as Category 2 ( $C \geq 1.0\%$ ). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 2.

**Carcinogenicity:** This product is classified as Category 2. This product contains o-Phenylenediamine (CAS: 95-54-5) which is classified as Category 2 ( $C \geq 0.1\%$ ). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 2.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** This product is classified as Category 1(Blood), 2(Respiratory, nervous system). This product contains o-Phenylenediamine (CAS: 95-54-5) which is classified as Category 1 ( $C \geq 1.0\%$ ) and the ingredient o-Phenylenediamine (CAS: 95-54-5) which is classified as Category 2 ( $C \geq 1.0\%$ ). Considering the total percentage these two ingredients exceeds the classification criteria, the whole product is classified as Category 1 and 2.

**STOT-repeated exposure:** This product is classified as Category 2(Blood). This product contains o-Phenylenediamine (CAS: 95-54-5) which is classified as Category 2 ( $C \geq 1.0\%$ ). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 2.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

#### ⑨Substrate buffer

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Hydrogen peroxide	7722-84-1	Acute toxicity (Oral ) LD <sub>50</sub> : 311mg/kg (rat) Acute toxicity (dermal) LD <sub>50</sub> : 4,060 mg/kg (rat) Acute toxicity (inhalation) LC <sub>50</sub> : 1,980 ppm (rat) Data sources: EU-RAR (2003)

**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** This product is classified as Category 3. This product contains citric acid monohydrate (CAS: 5949-29-1) (Data source: ICSC, NLM) and which is classified as Category 2. Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 3.

**Respiratory /Skin sensitizer:** No classification for this product.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** No classification for this product.

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

#### ⑩Stop reagent

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Sulfuric acid	7664-93-9	Acute toxicity (Oral) LD <sub>50</sub> : 2,140 mg/kg (rat)

**Serious eye damage/eye irritation:** This product is classified as 1. This product contains Sulfuric acid (CAS: 7664-93-9) which is classified as 1. Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as 1.

**Skin corrosion/irritation:** This product is classified as 1A. This product contains Sulfuric acid (CAS: 7664-93-9) which is classified as 1A. Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as 1A.

**Respiratory /Skin sensitizer:** No classification for this product.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** This product is classified as 1(Respiratory). This product contains Sulfuric acid (CAS: 7664-93-9) which is classified as 1(Respiratory). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as 1(Respiratory organs).

**STOT-repeated exposure:** This product is classified as 1(Respiratory). This product contains Sulfuric acid (CAS: 7664-93-9) which is classified as 1(Respiratory). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as 1(Respiratory organs).

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

#### ⑪Protease solution concentrate (10-fold)

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Mixture, 3(2H)-isothiazolone,5-chloro-2-methyl - with 2-methyl-3(2H)-isothiazolone	55965-84-9	Acute toxicity (Oral) LD <sub>50</sub> : 53mg/kg (rat) Data source: ChemIDPlus

**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** No classification for this product.

**Respiratory /Skin sensitizer:** This product is classified as Category 1. This product contains mixture, 3(2H)-isothiazolone,5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) which is classified as Category 1 by EC CLP(C<sub>50</sub>≥0.0015%). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** No classification for this product.

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

**⑫Protease buffer**

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50
Tris(hydroxymethyl)aminomethane	77-86-1	Acute toxicity (Oral) LD <sub>50</sub> : 5,900 mg/kg Rabbit Data source: Corporate Solution From Thomson Micromedex
Mixture, 3(2H)-isothiazolone,5-chloro-2-methyl - with 2-methyl-3(2H)-isothiazolone	55965-84-9	Acute toxicity (Oral) LD <sub>50</sub> : 53mg/kg (rat) Data source: ChemIDPlus

**Serious eye damage/eye irritation:** No classification for this product.

**Skin corrosion/irritation:** No classification for this product.

**Respiratory /Skin sensitizer:** This product is classified as Category 1. This product contains mixture, 3(2H)-isothiazolone,5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) which is classified as Category 1 by EC CLP(C $\geq$ 0,0015%). Considering the total percentage this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**Germ cell mutagenicity:** No classification for this product.

**Carcinogenicity:** No classification for this product.

**Reproductive Toxicity:** No classification for this product.

**STOT-single exposure:** No classification for this product.

**STOT-repeated exposure:** No classification for this product.

**Aspiration hazard:** No classification for this product.

**Effects on or via lactation:** No classification for this product.

**12. Ecological information****①Wash buffer concentrate (10-fold)**

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Potassium chloride (CAS: 7447-40-7):

96h-LC<sub>50</sub>: 880mg/L, fish (Pimephales promelas)

Data source: OECD Screening Information Data Set (<http://cs3-hq.oecd.org/scripts/hpv/>)

48h-EC<sub>50</sub>: 177mg/L Crustaceans (Daphnia magna)

Data source: OECD Screening Information Data Set (<http://cs3-hq.oecd.org/scripts/hpv/>)

72h-EC<sub>50</sub> 2,500mg/L

Data source: IUCLID

Potassium dihydrogen phosphate (CAS: 7778-77-0):

28h-LC<sub>50</sub>: 2.4mg/L Crustaceans

Data source: Ecological Structure Activity Relationships(ECOSAR)

Mixture,3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

96h-LC<sub>50</sub>: 0.27mg/L, fish (Brachydanio rerio)

Data source: e-ChemPortal; HSNO

48h-LC<sub>50</sub>: 0.18mg/L Crustaceans (Daphnia magna)

Data source: e-ChemPortal; HSNO

**Persistence and Degradability:**

Ethylenediaminetetraacetic acid disodium salt,2-hydrate (CAS: 6381-92-6 ):

log Kow: -10.70 Data source: EPISUITE

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

log Kow 2.52 Data source: e-ChemPortal;EnvChem

**Bioaccumulative Potential:**

Ethylenediaminetetraacetic acid disodium salt,2-hydrate (CAS: 6381-92-6 ):

BCF: 3.16 Data source: EPISUITE

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

BCF 114 Data source: e-ChemPortal; HSNO

**Mobility in Soil:**

Ethylenediaminetetraacetic acid disodium salt,2-hydrate (CAS: 6381-92-6 ):

Koc: 312.7 Data source: EPISUITE

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

**②Sample Pre-treatment buffer**

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Boric acid (CAS: 10043-35-3):

96h-LC<sub>50</sub>: 78mg/L, fish (Brachydanio rerio)

Data source: EHC204 1998

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No information available.

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

**③Dilution buffer**

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Sodium chloride (CAS: 7647-14-5):

96h-LC<sub>50</sub>: 1,294.6mg/L fish (Lepomis macrochirus)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

48h-EC<sub>50</sub> : 402.6 mg/L Crustaceans (Daphnia magna)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

Disodium Hydrogenphosphate (CAS: 7558-79-4):

48h-LC<sub>50</sub>: 3,580 mg/L Crustaceans (Daphnia magna)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

Potassium dihydrogen phosphate (CAS: 7778-77-0):

28h-LC<sub>50</sub>: 2.4 mg/L Crustaceans

Data source: Ecological Structure Activity Relationships(ECOSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

96h-LC<sub>50</sub>: 0.27mg/L, fish (Brachydanio rerio)

Data source: e-ChemPortal; HSNO

48h-LC<sub>50</sub>: 0.18 mg/L Crustaceans (Daphnia magna)

Data source: e-ChemPortal; HSNO

**Persistence and Degradability:**

Sodium chloride (CAS: 7647-14-5): log Kow -0.46

Data source: Quantitative Structure Activity Relation (QSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

log Kow 2.52 Data source: e-ChemPortal; EnviChem

**Bioaccumulative Potential:**

Sodium chloride (CAS: 7647-14-5): BCF 3.162

Data source: Quantitative Structure Activity Relation (QSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

BCF 114 Data source: e-ChemPortal; HSNO

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

**⑤ Calibrator**

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Sodium chloride (CAS: 7647-14-5):

96h-LC<sub>50</sub>: 1,294.6mg/L fish (Lepomis macrochirus)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

48h-EC<sub>50</sub> : 402.6 mg/L Crustaceans (Daphnia magna)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

Disodium Hydrogenphosphate (CAS: 7558-79-4):

48h-LC<sub>50</sub>: 3,580 mg/L Crustaceans (Daphnia magna)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

Potassium dihydrogen phosphate (CAS: 7778-77-0):

28h-LC<sub>50</sub>: 2.4 mg/L Crustaceans

Data source: Ecological Structure Activity Relationships(ECOSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

96h-LC<sub>50</sub>: 0.27mg/L, fish (Brachydanio rerio)

Data source: e-ChemPortal; HSNO

48h-LC<sub>50</sub>: 0.18 mg/L Crustaceans (Daphnia magna)

Data source: e-ChemPortal; HSNO

**Persistence and Degradability:**

Sodium chloride (CAS: 7647-14-5): log Kow -0.46

Data source: Quantitative Structure Activity Relation (QSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

log Kow 2.52 Data source: e-ChemPortal; EnviChem

**Bioaccumulative Potential:**

Sodium chloride (CAS: 7647-14-5): BCF 3.162

Data source: Quantitative Structure Activity Relation (QSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

BCF 114 Data source: e-ChemPortal; HSNO

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

**⑥Biotin labeled-PoAb**

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Sodium chloride (CAS: 7647-14-5):

96h-LC<sub>50</sub>: 1,294.6mg/L fish (*Lepomis macrochirus*)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

48h-EC<sub>50</sub> : 402.6 mg/L Crustaceans (*Daphnia magna*)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

Disodium Hydrogenphosphate (CAS: 7558-79-4):

48h-LC<sub>50</sub>: 3,580 mg/L Crustaceans (*Daphnia magna*)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

Potassium dihydrogen phosphate (CAS: 7778-77-0):

28h-LC<sub>50</sub>: 2.4 mg/L Crustaceans

Data source: Ecological Structure Activity Relationships(ECOSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

96h-LC<sub>50</sub>: 0.27mg/L, fish (*Brachydanio rerio*)

Data source: e-ChemPortal; HSNO

48h-LC<sub>50</sub>: 0.18 mg/L Crustaceans (*Daphnia magna*)

Data source: e-ChemPortal; HSNO

**Persistence and Degradability:**

Sodium chloride (CAS: 7647-14-5): log Kow -0.46

Data source: Quantitative Structure Activity Relation (QSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

log Kow 2.52 Data source: e-ChemPortal; EnviChem

**Bioaccumulative Potential:**

Sodium chloride (CAS: 7647-14-5): BCF 3.162

Data source: Quantitative Structure Activity Relation (QSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

BCF 114 Data source: e-ChemPortal; HSNO

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.



### ⑦Enzyme labeled streptavidin

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Disodium Hydrogenphosphate (CAS: 7558-79-4):

48h-LC<sub>50</sub>: 3,580mg/L Crustaceans (Daphnia magna)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

Sodium chloride (CAS: 7647-14-5):

96h-LC<sub>50</sub>: 1,294.6mg/L fish (Lepomis macrochirus)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

48h-EC<sub>50</sub>: 402.6 mg/L Crustaceans (Daphnia magna)

Data source: The ECOTOXicology database (ECOTOX) ([http://cfpub.epa.gov/ECOTOX/quick\\_query.htm](http://cfpub.epa.gov/ECOTOX/quick_query.htm))

Potassium dihydrogen phosphate (CAS: 7778-77-0):

28h-LC<sub>50</sub>: 2.4 mg/L Crustaceans

Data source: Ecological Structure Activity Relationships(ECOSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

96h-LC<sub>50</sub>: 0.27mg/L, fish (Brachydanio rerio)

Data source: e-ChemPortal; HSNO

48h-LC<sub>50</sub>: 0.18mg/L Crustaceans (Daphnia magna)

Data source: e-ChemPortal; HSNO

Phenol (CAS: 108-95-2):

48h-LC<sub>50</sub>: 3.1mg/L Crustaceans

#### **Persistence and Degradability:**

Sodium chloride (CAS: 7647-14-5): log Kow -0.46

Data source: Quantitative Structure Activity Relation (QSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

log Kow 2.52 Data source: e-ChemPortal;EnvChem

#### **Bioaccumulative Potential:**

Sodium chloride (CAS: 7647-14-5): BCF 3.162

Data source: Quantitative Structure Activity Relation (QSAR)

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

BCF 114 Data source: e-ChemPortal; HSNO

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

#### **General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

### ⑧Substrate (lyophilized)

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

o-Phenylenediamine (CAS: 95-54-5):

76h-EC<sub>50</sub> : 0.82 mg/L , Alga

Data source: Ecological impact test (2001), from Ministry of the Environment of Japan

#### **Persistence and Degradability:**

o-Phenylenediamine (CAS: 95-54-5):

log Kow 0.15

Data source: PHYSPROP Database (2005)

**Bioaccumulative Potential:** No information available.

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

### ⑨Substrate buffer

**Ecotoxicity:**

Hydrogen peroxide(CAS: 7722-84-1):

EC<sub>50</sub>: 2.4 mg/L 48 h for Crustaceans (Daphnia magna)

Data source: EU-RAR (2003)

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No data available

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

### ⑩Stop reagent

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Sulfuric acid (CAS: 7664-93-9):

96h-LC<sub>50</sub>: 16-28mg/L, fish (Bluegill)

**Persistence and Degradability:**

Ethylenediaminetetraacetic acid disodium salt,2-hydrate (CAS: 6381-92-6 ):

log Kow: -10.70 Data source: EPISUITE

**Bioaccumulative Potential:**

Ethylenediaminetetraacetic acid disodium salt,2-hydrate (CAS: 6381-92-6 ):

BCF: 3.16 Data source: EPISUITE

**Mobility in Soil:**

Ethylenediaminetetraacetic acid disodium salt,2-hydrate (CAS: 6381-92-6 ):

Koc: 312.7 Data source: EPISUITE

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

### ⑪Protease solution concentrate (10-fold)

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

96h-LC<sub>50</sub>: 0.27mg/L, fish (Brachydanio rerio)



Data source: e-ChemPortal; HSNO

48h-LC<sub>50</sub>: 0.18mg/L Crustaceans (Daphnia magna)

Data source: e-ChemPortal; HSNO

**Persistence and Degradability:**

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

log Kow 2.52 Data source: e-ChemPortal;EnviChem

**Bioaccumulative Potential:**

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

BCF 114 Data source: e-ChemPortal; HSNO

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

**⑫Protease buffer**

**Ecotoxicity:** No data available for the whole product. The data shown below is of each ingredient.

Tris (hydroxymethyl) aminomethane (CAS: 77-86-1):

96h -LC<sub>50</sub>: 955.892mg/l , fish Data source: ECOSAR

48h-EC<sub>50</sub>: 19.793mg/l , crustaceans Data source: ECOSAR

96h -EC<sub>50</sub> 163.053mg/l , birds Data source: ECOSAR

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

96h-LC<sub>50</sub>: 0.27mg/L, fish (Brachydanio rerio)

Data source: e-ChemPortal; HSNO

48h-LC<sub>50</sub>: 0.18 mg/L Crustaceans (Daphnia magna)

Data source: e-ChemPortal; HSNO

**Persistence and Degradability:**

Tris (hydroxymethyl) aminomethane (CAS:77-86-1):

log Kow: -1.56 Data source: HSDB

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

log Kow 2.52 Data source: e-ChemPortal;EnviChem

**Bioaccumulative Potential:**

Tris (hydroxymethyl) aminomethane (CAS:77-86-1):

BCF: 3 Data source: HSDB

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9):

BCF 114 Data source: e-ChemPortal; HSNO

**Mobility in Soil:** As it is in liquid status, it can move in soil.

**Results of PBT and vPvB Assessment:** No information available.

**General Notes:**

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

### 13. Disposal considerations

#### ① Wash buffer concentrate (10-fold)

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

#### ② Sample Pre-treatment buffer

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

#### ③ Dilution buffer

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

#### ⑤ Calibrator

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

#### ⑥ Biotin labeled-PoAb

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

#### ⑦ Enzyme labeled streptavidin

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

#### ⑧ Substrate (lyophilized)

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

**⑨Substrate buffer**

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

**⑩Stop reagent**

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

**⑪Protease solution concentrate (10-fold)**

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

**⑫Protease buffer**

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

**14. Transport Information****①Wash buffer concentrate (10-fold)**

**DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Not regulated

**Hazard Class:** Not applicable

**UN Code:** Not applicable

**Packing Group:** Not applicable

**Assigned Pictogram:** Not applicable

**Marine Pollutant (Yes/No):** No

**EMS NO.:** Not applicable

**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

**②Sample Pre-treatment buffer**

**DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Not regulated**Hazard Class:** Not applicable**UN Code:** Not applicable**Packing Group:** Not applicable**Assigned Pictogram:** Not applicable**Marine Pollutant (Yes/No):** No**EMS NO.:** Not applicable**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable**③Dilution buffer****DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:****Proper Shipping Name:** Not regulated**Hazard Class:** Not applicable**UN Code:** Not applicable**Packing Group:** Not applicable**Assigned Pictogram:** Not applicable**Marine Pollutant (Yes/No):** No**EMS NO.:** Not applicable**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable**⑤Calibrator****DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:****Proper Shipping Name:** Not regulated**Hazard Class:** Not applicable**UN Code:** Not applicable**Packing Group:** Not applicable**Assigned Pictogram:** Not applicable**Marine Pollutant (Yes/No):** No**EMS NO.:** Not applicable**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

#### ⑥Biotin labeled-PoAb

##### **DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Not regulated

**Hazard Class:** Not applicable

**UN Code:** Not applicable

**Packing Group:** Not applicable

**Assigned Pictogram:** Not applicable

**Marine Pollutant (Yes/No):** No

**EMS NO.:** Not applicable

##### **Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

#### ⑦Enzyme labeled streptavidin

##### **DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Not regulated

**Hazard Class:** Not applicable

**UN Code:** Not applicable

**Packing Group:** Not applicable

**Assigned Pictogram:** Not applicable

**Marine Pollutant (Yes/No):** No

**EMS NO.:** Not applicable

##### **Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

#### ⑧Substrate (lyophilized)

##### **DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Environmentally hazardous substances, solid, n.o.s.

**Hazard Class:** 9

**UN Code:** UN3077

**Packing Group:** III

**Assigned Pictogram:**



**Marine Pollutant (Yes/No):** Yes

**EMS NO.:** F-A, S-F

**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not available.

**⑨Substrate buffer**

**DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Not regulated

**Hazard Class:** Not applicable

**UN Code:** Not applicable

**Packing Group:** Not applicable

**Assigned Pictogram:** Not applicable

**Marine Pollutant (Yes/No):** No

**EMS NO.:** Not applicable

**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

**⑩Stop reagent**

**DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Corrosive, liquid, acidic, inorganic

**Hazard Class:** 8

**UN Code:** 3264

**Packing Group:** II

**Assigned Pictogram:**



**Marine Pollutant (Yes/No):** No

**EMS NO.:** F-A,S-B

**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

**⑪Protease solution concentrate (10-fold)****DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Not regulated

**Hazard Class:** Not applicable

**UN Code:** Not applicable

**Packing Group:** Not applicable

**Assigned Pictogram:** Not applicable

**Marine Pollutant (Yes/No):** No

**EMS NO.:** Not applicable

**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

**⑫Protease buffer****DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:**

**Proper Shipping Name:** Not regulated

**Hazard Class:** Not applicable

**UN Code:** Not applicable

**Packing Group:** Not applicable

**Assigned Pictogram:** Not applicable

**Marine Pollutant (Yes/No):** No

**EMS NO.:** Not applicable

**Special precautions for user:**

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

**Transport in bulk according to Annex II of MARPOL 73/78 and IBC code:** Not applicable

**15. Regulatory information****①Wash buffer concentrate (10-fold)**

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):**

Except mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9), the other ingredients are listed in the TSCA inventory list.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9)	23/24/25-34-43-50/53	(2-)26-28-36/37/39-45-60-61

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**②Sample Pre-treatment buffer**

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):** Boric acid (CAS: 10043-35-3) is listed in the TSCA inventory list.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Boric acid (CAS: 10043-35-3) is listed in Annex XVII Regulation List.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** WGK 1.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Not applicable	Not applicable	Not applicable

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**③Dilution buffer**

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):**



Except mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) , the other ingredients are listed in the TSCA inventory list.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9)	23/24/25-34-43-50/53	(2-)26-28-36/37/39-45-60-61

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

## ⑤ Calibrator

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):**

Except mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) , the other ingredients are listed in the TSCA inventory list.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9)	23/24/25-34-43-50/53	(2-)26-28-36/37/39-45-60-61

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**⑥Biotin labeled-PoAb**

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):**

Except mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) , the other ingredients are listed in the TSCA inventory list.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9)	23/24/25-34-43-50/53	(2-)26-28-36/37/39-45-60-61

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**⑦Enzyme labeled streptavidin**

**Section 355 (extremely hazardous substances):** Phenol (CAS: 108-95-2) is listed in Section 335.

**SARA 313:** Phenol (CAS: 108-95-2) is listed in SARA 313.

**Toxic Substances Control Act (TSCA):**

Except mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9), the other ingredients are listed in the TSCA inventory list.

**Clean Water Act:**

Phenol (CAS: 108-95-2) is listed as Hazardous Substances under the CWA.

Phenol (CAS: 108-95-2) is listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with	23/24/25-34-43-50/53	(2-)26-28-36/37/39-45-60-61

2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9)		
Phenol (CAS: 108-95-2)	23/24/25-34-48/20/21/22-68	(1/2-)24/25-26-28-36/37/39-45

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

### ⑧Substrate (lyophilized)

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** o-Phenylenediamine (CAS: 95-54-5) is listed by SARA 313.

**Toxic Substances Control Act (TSCA):**

DEXTRAN (CAS: 9004-54-0) and o-Phenylenediamine (CAS: 95-54-5) are listed by TSCA.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** o-Phenylenediamine (CAS: 95-54-5) is listed by ACGIH -A3 and CP65.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** WGK 2.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
o-Phenylenediamine (CAS: 95-54-5)	20/21-25-36-40-43-50/53-68	(1/2-)28-36/37-45-60-61
DEXTRAN (CAS: 9004-54-0)	No data available	No data available

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

### ⑨Substrate buffer

**Section 355 (extremely hazardous substances):** Hydrogen peroxide (CAS: 7722-84-1) is listed.

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):** Hydrogen peroxide (CAS: 7722-84-1) is listed in the TSCA inventory list.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Hydrogen peroxide(CAS: 7722-84-1)	R: 5-8-20/22-35	S: (1/2-)17-26-28-36/37/39-45

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**⑩ Stop reagent**

**Section 355 (extremely hazardous substances):** Sulfuric acid (CAS: 7664-93-9)

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):** The ingredients with specific CAS numbers are listed in the TSCA inventory list.

**Clean Water Act:**

Sulfuric acid (CAS: 7664-93-9) is listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** WGK 2.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Sulfuric acid (CAS: 7664-93-9)	35	(1/2-)26-30-45

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**⑪ Protease solution concentrate (10-fold)**

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):**

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) is not listed in the TSCA inventory list.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9)	23/24/25-34-43-50/53	(2-)26-28-36/37/39-45-60-61

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**12 Protease buffer**

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** This product does not contain SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):**

Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9) is not listed in the TSCA inventory list.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** Not listed by EPA, NTP, ACGIH and IARC.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**67/548/EEC Annex I :**

Ingredient(s)	Risk-phrase	Safety-phrase
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone (CAS: 55965-84-9)	23/24/25-34-43-50/53	(2-)26-28-36/37/39-45-60-61

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**16. Other information**

**DISCLAIMER:** Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**References:**

GHS Annex II

GHS SDS Instruction

ANSI Z400.1/Z129.1-2010

OSHA Hazard Communication Standard (HCS) 2012

**Full description of some acronyms:**

**CAS-Chemical Abstracts Service**

**EINECS-European Inventory of Existing Commercial Chemical Substances**

**IMO-International Maritime Organization**

**IMDG-International Maritime Dangerous Goods**

**IATA-International Air Transport Association**

**ICAO-International Civil Aviation Organization**  
**TSCA-Toxic Substance Control Act**  
**OSHA-Occupational Safety and Health Administration**  
**ACGIH- American Conference of Governmental Industrial Hygienists**

**The Issuing date:** January 8, 2016

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**SDS Version:** 2

\*\*\*\*\*The End\*\*\*\*\*