

06.08.2020 Kit components

•		
Product code	Description	
1705012 1705012EDU	Immun-Star™ Substrate Pack Kit	
Components:		
1705018	Immun-Star TM Substrate	
1705019	Immun-Star TM Enhancer	



phone: 852-2789-3300 fax: 852-2789-1290



Safety data sheet according to 1907/2006/EC. Article 31

Printing date 06.08.2020 Revision: 29.07.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- · 1.1 Product identifier
- · Trade name: Immun-Star™ Substrate
- · Article number: 1705018, 1705018EDU, 9702837, 9702838
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Laboratory chemicals
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Bio-Rad Pacific Ltd.

Unit 1101 DCH Commericial Centre

25 Westlands Road

Quarry Bay Hong Kong

· Information department: sales.hongkong@bio-rad.com · 1.4 Emergency telephone number: 852-2789-3300

SECTION 2: Hazards identification

· Emergency overview:

Colourless, Fluid, Causes mild skin irritation.

- · 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008

Skin Corr. 3 H316 Causes mild skin irritation.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

- · Hazard pictograms Not Applicable
- · Signal word Warning
- · Hazard statements

H316 Causes mild skin irritation.

· Precautionary statements

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

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: Substances
- · CAS No. Description:

7732-18-5 water

- · Identification number(s):
- · EC number: 231-791-2

(Contd. on page 2)





Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Substrate

(Contd. of page 1)

1-2.5%

· 3.2 Chemical characterisation: Mixtures

· Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 111-42-2 2,2'-iminodiethanol STOT RE 2, H373 EINECS: 203-868-0

Eye Dam. 1, H318

Acute Tox. 4, H302; Skin Irrit. 2, H315

· Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information No special measures required.
- · After inhalation Supply fresh air; consult doctor in case of complaints.
- · After skin contact Generally the product does not irritate the skin.
- · After eye contact Rinse opened eye for several minutes under running water.
- · After swallowing Rinse mouth with water. Seek medical attention and appropriate follow-up.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- · 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- · Suitable extinguishing agents Use fire fighting measures that suit the environment.
- · 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- **6.2 Environmental precautions:** Dilute with plenty of water.
- · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· 6.4 Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.

(Contd. on page 3)





Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Substrate

(Contd. of page 2)

- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: According to product specification
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · 8.1 Control parameters
- Components with limit values that require monitoring at the workplace:

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

- · Additional information: The lists that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment
- · General protective and hygienic measures Wash hands before breaks and at the end of work.
- · Breathing equipment: Not necessary if room is well-ventilated.
- · Protection of hands: Protective gloves.
- · Material of gloves Synthetic gloves
- Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses

Decomposition temperature:

SECTION 9: Ph	vsical and c	hemical	properties
OLUTION 3. I II	y Sicai ailu ci	IGIIIIGai	properties

SECTION 6.1 Hydrodir dried Strenmodir properties		
 9.1 Information on basic physical and General Information Appearance: Form: Colour: Odour: Odour threshold: 	nd chemical properties Fluid Colourless Odourless Not determined.	
- Cucui un conciu	not determined.	
· pH-value at 20 °C:	10.6	
· Change in condition Melting point/freezing point: Initial boiling point and boiling ran	0 °C nge: undetermined	
· Flash point:	Not applicable Not determined.	
· Flammability (solid, gaseous)	Not applicable.	

Not determined.

(Contd. on page 4)





Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Substrate

	(Contd. of page
Self igniting:	Product is not selfigniting.
Explosive properties:	Not determined.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density:	Not determined
Relative density	Not determined.
· Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
Solvent content:	
Organic solvents:	2.0 %
Water:	95.0 %
Solids content:	3.0 %
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- · LD/LC50 values that are relevant for classification:

111-42-2 2,2'-iminodiethanol

 Oral
 LD50
 710 mg/kg (rat)

 Dermal
 LD50
 12,200 mg/kg (rbt)

(Contd. on page 5)



Page 5/7

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Substrate

(Contd. of page 4)

- · Primary irritant effect:
- Skin corrosion/irritation
- Causes mild skin irritation.
- · Serious eye damage/irritation Based on available data, the classification criteria are not met.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure Based on available data, the classification criteria are not met.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes: Generally not hazardous for water.
- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of waste in accordance to applicable national, regional, or local regulations.

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

SECTION 14: Transport information

· 14.1 UN-Number

· ADR, ADN, IMDG, IATA Not Reguated

· 14.2 UN proper shipping name

· ADR Not Reguated
Not Reguated

(Contd. on page 6)





Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Substrate

	(Contd. of page 5)
· ADN, IMDG, IATA	Not Reguated
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA · Class	Not Reguated
· 14.4 Packing group · ADR, IMDG, IATA	Not Reguated
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.	
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Not Reguated

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · National regulations
- · Technical instructions (air):

Class	Share in %
NK	1-2.5

- · Water hazard class: Generally not hazardous for water.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Environmental Health and Safety.
- · Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

(Contd. on page 7)



Page 7/7

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Substrate

(Contd. of page 6)

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Acute Tox. 4: Acute toxicity - oral – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Skin Corr. 3: Skin corrosion/irritation – Category 3

Eye Dam. 1: Serious eye damage/eye irritation – Category 1 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

* Data compared to the previous version altered.





Printing date 06.08.2020 Revision: 29.07.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- · 1.1 Product identifier
- · Trade name: Immun-Star™ Enhancer
- · Article number: 1705019, 1705019EDU, 9702900
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Laboratory chemicals
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Bio-Rad Pacific Ltd.

Unit 1101 DCH Commericial Centre

25 Westlands Road

Quarry Bay Hong Kong

Hong Kong phone: 852-2789-3300 fax: 852-2789-1290

- · Information department: sales.hongkong@bio-rad.com
- · 1.4 Emergency telephone number: 852-2789-3300

SECTION 2: Hazards identification

· Emergency overview:

Colourless, Fluid, No Data Available

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008 The product is not classified, according to the CLP regulation.
- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008 Not Applicable
- · Hazard pictograms Not Applicable
- · Signal word Not Applicable
- · Hazard statements Not Applicable
- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: Substances
- · CAS No. Description:

7732-18-5 water

- · Identification number(s):
- · **EC number:** 231-791-2
- · 3.2 Chemical characterisation: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:

Poly(benzyltributyl)ammonium chloride

Acute Tox. 3, H301

1-2.5%

(Contd. on page 2)



Page 2/6

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Enhancer

(Contd. of page 1)

· Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information No special measures required.
- · After inhalation Supply fresh air; consult doctor in case of complaints.
- · After skin contact Generally the product does not irritate the skin.
- · After eye contact Rinse opened eye for several minutes under running water.
- · After swallowing Rinse mouth with water. Seek medical attention and appropriate follow-up.
- · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents Use fire fighting measures that suit the environment.
- · 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- 6.2 Environmental precautions: Dilute with plenty of water.
- 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· 6.4 Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

- · 7.1 Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: According to product specification
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

(Contd. on page 3)





Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Enhancer

(Contd. of page 2)

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

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · 8.1 Control parameters
- · Components with limit values that require monitoring at the workplace:

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

- · Additional information: The lists that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment
- · General protective and hygienic measures

The usual precautionary measures should be adhered to when handling chemicals.

- · Breathing equipment: Not required.
- · Protection of hands: Protective gloves.
- · Material of gloves Synthetic gloves
- · Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses

· Explosive properties:

OFOTIO	10 01			
	vo. Dave	COLONG	chamica	nronortice
	V 3. FIIVS			properties

SECTION 9: Physical and chemical properties		
 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: 	d chemical properties Fluid Colourless Odourless	
· Odour threshold:	Not determined.	
· pH-value at 20 °C:	9.5	
· Change in condition Melting point/freezing point: Initial boiling point and boiling range: undetermined		
· Flash point:	Not applicable Not determined.	
· Flammability (solid, gaseous)	Not applicable.	
· Decomposition temperature:	Not determined.	
· Self igniting:	Product is not selfigniting.	

Not determined.

(Contd. on page 4)





Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Enhancer

	(Contd. of page
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure at 20 °C:	23 hPa
· Density:	Not determined
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Water:	95.0 %
Solids content:	3.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · 10.3 Possibility of hazardous reactions No dangerous reactions known
- 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- · Primary irritant effect:
- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Based on available data, the classification criteria are not met.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure Based on available data, the classification criteria are not met.

(Contd. on page 5)





Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Enhancer

(Contd. of page 4)

- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes: Generally not hazardous for water.
- 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of waste in accordance to applicable national, regional, or local regulations.

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

SECTION 14: Transport information		
· 14.1 UN-Number	W. D	
· ADR, ADN, IMDG, IATA	Not Reguated	
· 14.2 UN proper shipping name		
· ADR	Not Reguated	
	Not Reguated	
· ADN, IMDG, IATA	Not Reguated	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA		
· Class	Not Reguated	
· 14.4 Packing group		
· ADR, IMDG, IATA	Not Reguated	
· 14.5 Environmental hazards:		
· Marine pollutant:	No	
		(Contd. on page 6





Printing date 06.08.2020 Revision: 29.07.2020

Trade name: Immun-Star™ Enhancer

	(Contd. of page 5)
· 14.6 Special precautions for user	Not applicable.
 14.7 Transport in bulk according to Annex II of Marpe and the IBC Code 	ol Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Not Reguated

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · National regulations
- · Water hazard class: Generally not hazardous for water.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Environmental Health and Safety.
- Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000 Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity - oral - Category 3

* Data compared to the previous version altered.