

SAFETY DATA SHEET



Seahorse XF Palmitate-BSA FAO Substrate, Part Number 102720-100

Section 1. Identification

Product identifier : Seahorse XF Palmitate-BSA FAO Substrate, Part Number 102720-100
Part No. (Chemical Kit) : 102720-100
Part No. : Palmitate-BSA Conjugate Not available.
 BSA Control Not available.

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

For research use only. Not for use in diagnostic procedures (RUO).

Palmitate-BSA Conjugate 3 x 2 mL
 BSA Control 3 x 2 mL

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Not classified.

<p>Palmitate-BSA Conjugate</p>	<p>Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%</p>
<p>BSA Control</p>	<p>Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%</p>
<p>Palmitate-BSA Conjugate</p>	<p>Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.2% Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.2%</p>
<p>BSA Control</p>	<p>Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.2%</p>

GHS label elements

Signal word : Palmitate-BSA Conjugate No signal word.
 BSA Control No signal word.

Hazard statements : Palmitate-BSA Conjugate No known significant effects or critical hazards.
 BSA Control No known significant effects or critical hazards.

Precautionary statements

Prevention : Palmitate-BSA Conjugate Not applicable.
 BSA Control Not applicable.

Response : Palmitate-BSA Conjugate Not applicable.
 BSA Control Not applicable.

Storage : Palmitate-BSA Conjugate Not applicable.
 BSA Control Not applicable.

Section 2. Hazard(s) identification

Disposal	: Palmitate-BSA Conjugate BSA Control	Not applicable. Not applicable.
Supplemental label elements	: Palmitate-BSA Conjugate BSA Control	Not applicable. Not applicable.
Other hazards which do not result in classification	: Palmitate-BSA Conjugate BSA Control	None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	: Palmitate-BSA Conjugate BSA Control	Mixture Mixture
--------------------------	--	--------------------

CAS number/other identifiers

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Palmitate-BSA Conjugate	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	BSA Control	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: Palmitate-BSA Conjugate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	BSA Control	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: Palmitate-BSA Conjugate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	BSA Control	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Palmitate-BSA Conjugate	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	BSA Control	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

Eye contact	: Palmitate-BSA Conjugate BSA Control	No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: Palmitate-BSA Conjugate BSA Control	No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Palmitate-BSA Conjugate BSA Control	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: Palmitate-BSA Conjugate BSA Control	No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>		
Eye contact	: Palmitate-BSA Conjugate BSA Control	No specific data. No specific data.
Inhalation	: Palmitate-BSA Conjugate BSA Control	No specific data. No specific data.
Skin contact	: Palmitate-BSA Conjugate BSA Control	No specific data. No specific data.
Ingestion	: Palmitate-BSA Conjugate BSA Control	No specific data. No specific data.
<u>Indication of immediate medical attention and special treatment needed, if necessary</u>		
Notes to physician	: Palmitate-BSA Conjugate BSA Control	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Palmitate-BSA Conjugate BSA Control	No specific treatment. No specific treatment.
Protection of first-aiders	: Palmitate-BSA Conjugate BSA Control	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: Palmitate-BSA Conjugate BSA Control	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Palmitate-BSA Conjugate BSA Control	None known. None known.
Specific hazards arising from the chemical	: Palmitate-BSA Conjugate BSA Control	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: Palmitate-BSA Conjugate BSA Control	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide

Section 5. Firefighting measures

Special protective actions for fire-fighters	: Palmitate-BSA Conjugate	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	BSA Control	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: Palmitate-BSA Conjugate	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	BSA Control	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Palmitate-BSA Conjugate	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	BSA Control	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	: Palmitate-BSA Conjugate	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	BSA Control	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	: Palmitate-BSA Conjugate	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	BSA Control	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
<u>Methods and material for containment and cleaning up</u>		
Methods for cleaning up	: Palmitate-BSA Conjugate	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	BSA Control	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an

Section 6. Accidental release measures

inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	: Palmitate-BSA Conjugate	Put on appropriate personal protective equipment (see Section 8).
	BSA Control	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: Palmitate-BSA Conjugate	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	BSA Control	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities	: Palmitate-BSA Conjugate	Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
	BSA Control	Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 8. Exposure controls and personal protection

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state	: Palmitate-BSA Conjugate	Liquid.
	: BSA Control	Liquid.
Colour	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
Odour	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
Odour threshold	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
pH	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
Melting point	: Palmitate-BSA Conjugate	0°C (32°F)
	: BSA Control	0°C (32°F)
Boiling point	: Palmitate-BSA Conjugate	100°C (212°F)
	: BSA Control	100°C (212°F)
Flash point	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
Evaporation rate	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
Flammability (solid, gas)	: Palmitate-BSA Conjugate	Not applicable.
	: BSA Control	Not applicable.
Lower and upper explosive (flammable) limits	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
Vapour pressure	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
Vapour density	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.
Relative density	: Palmitate-BSA Conjugate	Not available.
	: BSA Control	Not available.

Section 9. Physical and chemical properties

Solubility	: Palmitate-BSA Conjugate	Easily soluble in the following materials: cold water and hot water.
	BSA Control	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Palmitate-BSA Conjugate	Not available.
	BSA Control	Not available.
Auto-ignition temperature	: Palmitate-BSA Conjugate	Not available.
	BSA Control	Not available.
Decomposition temperature	: Palmitate-BSA Conjugate	Not available.
	BSA Control	Not available.
Viscosity	: Palmitate-BSA Conjugate	Not available.
	BSA Control	Not available.

Section 10. Stability and reactivity

Reactivity	: Palmitate-BSA Conjugate	No specific test data related to reactivity available for this product or its ingredients.
	BSA Control	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Palmitate-BSA Conjugate	The product is stable.
	BSA Control	The product is stable.
Possibility of hazardous reactions	: Palmitate-BSA Conjugate	Under normal conditions of storage and use, hazardous reactions will not occur.
	BSA Control	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Palmitate-BSA Conjugate	No specific data.
	BSA Control	No specific data.
Incompatible materials	: Palmitate-BSA Conjugate	May react or be incompatible with oxidising materials.
	BSA Control	May react or be incompatible with oxidising materials.
Hazardous decomposition products	: Palmitate-BSA Conjugate	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	BSA Control	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Section 11. Toxicological information

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Palmitate-BSA Conjugate Not available.
BSA Control Not available.

Potential acute health effects

Eye contact : Palmitate-BSA Conjugate No known significant effects or critical hazards.
BSA Control No known significant effects or critical hazards.

Inhalation : Palmitate-BSA Conjugate No known significant effects or critical hazards.
BSA Control No known significant effects or critical hazards.

Skin contact : Palmitate-BSA Conjugate No known significant effects or critical hazards.
BSA Control No known significant effects or critical hazards.

Ingestion : Palmitate-BSA Conjugate No known significant effects or critical hazards.
BSA Control No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Palmitate-BSA Conjugate No specific data.
BSA Control No specific data.

Inhalation : Palmitate-BSA Conjugate No specific data.
BSA Control No specific data.

Skin contact : Palmitate-BSA Conjugate No specific data.
BSA Control No specific data.

Ingestion : Palmitate-BSA Conjugate No specific data.
BSA Control No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Palmitate-BSA Conjugate No known significant effects or critical hazards.
BSA Control No known significant effects or critical hazards.

Carcinogenicity : Palmitate-BSA Conjugate No known significant effects or critical hazards.
BSA Control No known significant effects or critical hazards.

Mutagenicity : Palmitate-BSA Conjugate No known significant effects or critical hazards.
BSA Control No known significant effects or critical hazards.

Section 11. Toxicological information

Teratogenicity	: Palmitate-BSA Conjugate BSA Control	No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Palmitate-BSA Conjugate BSA Control	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Palmitate-BSA Conjugate BSA Control	No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information	: Palmitate-BSA Conjugate BSA Control	Not available. Not available.
--------------------------	--	----------------------------------

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc})	: Not available.
---	------------------

Other adverse effects	: No known significant effects or critical hazards.
------------------------------	---

Section 13. Disposal considerations

Disposal methods	: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
-------------------------	--

Section 14. Transport information

ADG / IMDG / IATA	: Not regulated as Dangerous Goods according to the ADG Code .
--------------------------	--

Special precautions for user	: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
-------------------------------------	---

Section 14. Transport information

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
Malaysia	: Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision	: 31/05/2017
Date of previous issue	: 25/04/2016.
Version	: 2

Section 16. Any other relevant information

Key to abbreviations : ADG = Australian Dangerous Goods
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

Classification	Justification
Not classified.	

References : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.