

# SAFETY DATA SHEET



AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003

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

False

### 1.1 Product identifier

**Product name** : AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003  
**Part no. (chemical kit)** : 5190-8003  
**Part no.** : Reductant solution Not available.  
2-AB solution Not available.

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

**Material uses** :  Reagents and Standards for Analytical Chemistry Laboratory Use  
 Reductant solution 75 µl  
2-AB solution 75 µl

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** :  Reductant solution Mixture  
2-AB solution Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

##### Reductant solution

H300 ACUTE TOXICITY (oral) - Category 2  
H311 ACUTE TOXICITY (dermal) - Category 3  
H330 ACUTE TOXICITY (inhalation) - Category 2  
H314 SKIN CORROSION/IRRITATION - Category 1B  
H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

##### **2-AB solution**

H314 SKIN CORROSION/IRRITATION - Category 1B

**Ingredients of unknown toxicity** :  2-AB solution 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%



See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

**Date of issue/Date of revision** : 15/05/2018

## SECTION 2: Hazards identification

### 2.2 Label elements

<b>Hazard pictograms</b>	: Reductant solution	
	2-AB solution	
<b>Signal word</b>	: Reductant solution 2-AB solution	Danger Danger
<b>Hazard statements</b>	: Reductant solution	H300 + H330 - Fatal if swallowed or if inhaled. H311 - Toxic in contact with skin. H314 - Causes severe skin burns and eye damage. H411 - Toxic to aquatic life with long lasting effects.
	2-AB solution	H314 - Causes severe skin burns and eye damage.
<b>Precautionary statements</b>		
<b>Prevention</b>	: Reductant solution	P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection. P273 - Avoid release to the environment. P260 - Do not breathe vapour.
	2-AB solution	P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.
<b>Response</b>	: Reductant solution	P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. P303 + P361 + P353 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician. P305 + P310 - IF IN EYES: Immediately call a POISON CENTER or physician.
	2-AB solution	P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. P303 + P361 + P353 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician. P305 + P310 - IF IN EYES: Immediately call a POISON CENTER or physician.
<b>Storage</b>	: Reductant solution 2-AB solution	P405 - Store locked up. P405 - Store locked up.
<b>Disposal</b>	: Reductant solution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	2-AB solution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: Reductant solution 2-AB solution	- sodium cyanotrihydroborate - acetic acid - anthranilamide
<b>Supplemental label elements</b>	: Reductant solution 2-AB solution	Not applicable. Not applicable.

AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003

## SECTION 2: Hazards identification

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Reductant solution Not applicable.  
2-AB solution Not applicable.

### Special packaging requirements

**Tactile warning of danger** : Reductant solution Not applicable.  
2-AB solution Not applicable.

### 2.3 Other hazards

**Other hazards which do not result in classification** :  Reductant solution Causes digestive tract burns.  
2-AB solution Causes digestive tract burns.

## SECTION 3: Composition/information on ingredients

**3.1 Substances** :  Reductant solution Mixture  
2-AB solution Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<input checked="" type="checkbox"/> Reductant solution sodium cyanotrihydroborate	EC: 247-317-2 CAS: 25895-60-7	≥10 - <25	Flam. Sol. 1, H228 Acute Tox. 2, H300 Acute Tox. 2, H310 Acute Tox. 2, H330 Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) EUH032	[1]
<b>2-AB solution</b> acetic acid	EC: 200-580-7 CAS: 64-19-7 Index: 607-002-00-6	≥25 - ≤50	Flam. Liq. 3, H226 Skin Corr. 1A, H314	[1] [2]
anthranilamide	EC: 201-851-2 CAS: 88-68-6	≥10 - <25	Acute Tox. 4, H302 Eye Dam. 1, H318  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

There are no additional 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.

### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	: Reductant solution	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
	2-AB solution	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
<b>Inhalation</b>	: Reductant solution	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	2-AB solution	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Skin contact</b>	: Reductant solution	Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	2-AB solution	Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## SECTION 4: First aid measures

<b>Ingestion</b>	: Reductant solution	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	2-AB solution	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Protection of first-aiders</b>	: Reductant solution	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	2-AB solution	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### 4.2 Most important symptoms and effects, both acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: Reductant solution 2-AB solution	Causes serious eye damage. Causes serious eye damage.
<b>Inhalation</b>	: Reductant solution 2-AB solution	Fatal if inhaled. No known significant effects or critical hazards.
<b>Skin contact</b>	: Reductant solution 2-AB solution	Causes severe burns. Toxic in contact with skin. Causes severe burns.
<b>Ingestion</b>	: Reductant solution 2-AB solution	Fatal if swallowed. Corrosive to the digestive tract. Causes burns. Corrosive to the digestive tract. Causes burns.

#### Over-exposure signs/symptoms

## SECTION 4: First aid measures

<b>Eye contact</b>	: Reductant solution	Adverse symptoms may include the following: pain watering redness
	2-AB solution	Adverse symptoms may include the following: pain watering redness
<b>Inhalation</b>	: Reductant solution 2-AB solution	No specific data. No specific data.
<b>Skin contact</b>	: Reductant solution	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	2-AB solution	Adverse symptoms may include the following: pain or irritation redness blistering may occur
<b>Ingestion</b>	: Reductant solution	Adverse symptoms may include the following: stomach pains
	2-AB solution	Adverse symptoms may include the following: stomach pains

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	: Reductant solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	2-AB solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	: Reductant solution	No specific treatment.
	2-AB solution	No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: Reductant solution	Use an extinguishing agent suitable for the surrounding fire.
	2-AB solution	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: Reductant solution	None known.
	2-AB solution	None known.

### 5.2 Special hazards arising from the substance or mixture

<b>Hazards from the substance or mixture</b>	: Reductant solution	In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	2-AB solution	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	: Reductant solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
	2-AB solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide

## SECTION 5: Firefighting measures

nitrogen oxides  
sulfur oxides

### 5.3 Advice for firefighters

<b>Special precautions for fire-fighters</b>	: Reductant solution	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. 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.
	2-AB solution	
<b>Special protective equipment for fire-fighters</b>	: Reductant solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	2-AB solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: Reductant solution	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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	2-AB solution	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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: Reductant solution	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".
	2-AB solution	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".
<b>6.2 Environmental precautions</b>	: Reductant solution	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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
	2-AB solution	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).

AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003

## SECTION 6: Accidental release measures

### 6.3 Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	: Reductant solution	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.
	2-AB solution	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.

<b>6.4 Reference to other sections</b>	: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
--	---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	: Reductant solution	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	2-AB solution	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
<b>Advice on general occupational hygiene</b>	: Reductant solution	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.
	2-AB solution	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.

### 7.2 Conditions for safe storage, including any incompatibilities

<b>Storage</b>	: Reductant solution	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. Store locked up. 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
----------------	----------------------	--



AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003

## SECTION 7: Handling and storage

2-AB solution

avoid environmental contamination. See Section 10 for incompatible materials before handling or use.  
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. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

### Seveso Directive - Reporting thresholds (in tonnes)

#### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
<input checked="" type="checkbox"/> Reductant solution H2 E2	50 200	200 500

### 7.3 Specific end use(s)

<b>Recommendations</b>	: Reductant solution 2-AB solution	Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: Reductant solution 2-AB solution	Not applicable. Not applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
<input checked="" type="checkbox"/> 2-AB solution acetic acid	<b>EU OEL (Europe, 12/2017). Notes: list of indicative occupational exposure limit values</b> STEL: 20 ppm 15 minutes. STEL: 50 mg/m <sup>3</sup> 15 minutes.

<b>Recommended monitoring procedures</b>	: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
--	--

#### DNELs/DMELs

No DNELs/DMELs available.

#### PNECs

No PNECs available

### 8.2 Exposure controls

Date of issue/Date of revision : 15/05/2018

## SECTION 8: Exposure controls/personal protection

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### 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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

### 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**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.

**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 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: Reductant solution 2-AB solution	Liquid. Liquid.
<b>Colour</b>	: Reductant solution 2-AB solution	Colourless. Liquid. Clear.
<b>Odour</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Odour threshold</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>pH</b>	: Reductant solution 2-AB solution	7.5 8.8
<b>Melting point/freezing point</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Initial boiling point and boiling range</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Flash point</b>	: Reductant solution 2-AB solution	Not available. Closed cup: >93.3°C

**AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003**

## SECTION 9: Physical and chemical properties

<b>Evaporation rate</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Flammability (solid, gas)</b>	: Reductant solution 2-AB solution	Not applicable. Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Vapour pressure</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Vapour density</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Relative density</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Solubility(ies)</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Partition coefficient: n-octanol/water</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Auto-ignition temperature</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Decomposition temperature</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Viscosity</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Explosive properties</b>	: Reductant solution 2-AB solution	Not available. Not available.
<b>Oxidising properties</b>	: Reductant solution 2-AB solution	Not available. Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: Reductant solution 2-AB solution	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: Reductant solution 2-AB solution	The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Reductant solution 2-AB solution	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: Reductant solution 2-AB solution	No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: Reductant solution 2-AB solution	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: Reductant solution 2-AB solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Date of issue/Date of revision** : 15/05/2018

**11/17**

AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-AB solution acetic acid	LC50 Inhalation Vapour	Rat	11000 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	1060 mg/kg	-
	LD50 Oral	Rat	3310 mg/kg	-

#### Acute toxicity estimates

Route	ATE value
<b>Reductant solution</b> Oral Dermal Inhalation (dusts and mists)	25 mg/kg 250 mg/kg 0.25 mg/l
<b>2-AB solution</b> Oral	5000 mg/kg

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-AB solution acetic acid	Skin - Severe irritant	Rabbit	-	525 milligrams	-

#### Sensitiser

Conclusion/Summary : Not available.

#### Mutagenicity

Conclusion/Summary : Not available.

#### Carcinogenicity

Conclusion/Summary : Not available.

#### Reproductive toxicity

Conclusion/Summary : Not available.

#### Teratogenicity

Conclusion/Summary : 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

: Reductant solution  
2-AB solution

Routes of entry anticipated: Oral, Dermal, Inhalation.  
Routes of entry anticipated: Oral, Dermal, Inhalation.

#### Potential acute health effects

**Inhalation** : Reductant solution  
2-AB solution

Fatal if inhaled.  
No known significant effects or critical hazards.

**Ingestion** : Reductant solution  
2-AB solution

Fatal if swallowed. Corrosive to the digestive tract. Causes burns.

**Skin contact** : Reductant solution  
2-AB solution

Corrosive to the digestive tract. Causes burns.  
Causes severe burns. Toxic in contact with skin.  
Causes severe burns.

**Eye contact** : Reductant solution  
2-AB solution

Causes serious eye damage.  
Causes serious eye damage.

Date of issue/Date of revision : 15/05/2018

12/17

## SECTION 11: Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	: Reductant solution 2-AB solution	No specific data. No specific data.
<b>Ingestion</b>	: Reductant solution 2-AB solution	Adverse symptoms may include the following: stomach pains Adverse symptoms may include the following: stomach pains
<b>Skin contact</b>	: Reductant solution 2-AB solution	Adverse symptoms may include the following: pain or irritation redness blistering may occur Adverse symptoms may include the following: pain or irritation redness blistering may occur
<b>Eye contact</b>	: Reductant solution 2-AB solution	Adverse symptoms may include the following: pain watering redness Adverse symptoms may include the following: pain watering redness

### 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

<b>General</b>	: Reductant solution 2-AB solution	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: Reductant solution 2-AB solution	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: Reductant solution 2-AB solution	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Teratogenicity</b>	: Reductant solution 2-AB solution	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Developmental effects</b>	: Reductant solution 2-AB solution	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Fertility effects</b>	: Reductant solution 2-AB solution	No known significant effects or critical hazards. No known significant effects or critical hazards.

AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2-AB solution acetic acid	Acute EC50 73400 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 65000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
anthranilamide	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 75000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
	Acute LC50 395000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

### 12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-AB solution acetic acid	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
2-AB solution acetic acid	-0.17	3.16	low
anthranilamide	0.35	-	low

### 12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Mobility : Not available.

### 12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : 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.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003

## SECTION 13: Disposal considerations

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

**ADR/RID / IMDG / IATA** : Not regulated.

### Additional information

**Remarks** : De minimis quantities

**14.6 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.

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

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Reductant solution 2-AB solution Not applicable.  
Not applicable.

#### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Listed

#### Ozone depleting substances (1005/2009/EU)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Seveso Directive

This product is controlled under the Seveso Directive.

#### Danger criteria

##### Category

**Reductant solution**

H2  
E2

#### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

**AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003**

## SECTION 15: Regulatory information

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

<b>Australia</b>	: Not determined.
<b>Canada</b>	: At least one component is not listed in DSL but all such components are listed in NDSL.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <input checked="" type="checkbox"/> <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed or exempted.
<b>Viet Nam</b>	: <input checked="" type="checkbox"/> Not determined.

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PNEC = Predicted No Effect Concentration RRN = REACH Registration Number
-----------------------------------	---

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
<input checked="" type="checkbox"/> <b>Reductant solution</b> Acute Tox. 2, H300 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1B, H314 Aquatic Chronic 2, H411	Calculation method Calculation method Calculation method Calculation method Calculation method
<b>2-AB solution</b> Skin Corr. 1B, H314	Calculation method

**Date of issue/Date of revision** : 15/05/2018



**AdvanceBio 2-AB glycan labeling kit (24 samples), Part Number 5190-8003**

**SECTION 16: Other information**

Full text of abbreviated H statements

<p><b>Reductant solution</b>                  H228                  H300                  H310                  H311                  H314                  H330                  H400                  H410                  H411</p> <p><b>2-AB solution</b>                  H226                  H302                  H314                  H318</p>	<p>Flammable solid.                  Fatal if swallowed.                  Fatal in contact with skin.                  Toxic in contact with skin.                  Causes severe skin burns and eye damage.                  Fatal if inhaled.                  Very toxic to aquatic life.                  Very toxic to aquatic life with long lasting effects.                  Toxic to aquatic life with long lasting effects.</p> <p>Flammable liquid and vapour.                  Harmful if swallowed.                  Causes severe skin burns and eye damage.                  Causes serious eye damage.</p>
--	--

Full text of classifications [CLP/GHS]

<p><b>Reductant solution</b>                  Acute Tox. 2, H300                  Acute Tox. 2, H310                  Acute Tox. 2, H330                  Acute Tox. 3, H311                  Aquatic Acute 1, H400                  Aquatic Chronic 1, H410                  Aquatic Chronic 2, H411                  EUH032                  Flam. Sol. 1, H228                  Skin Corr. 1B, H314</p> <p><b>2-AB solution</b>                  Acute Tox. 4, H302                  Eye Dam. 1, H318                  Flam. Liq. 3, H226                  Skin Corr. 1A, H314                  Skin Corr. 1B, H314</p>	<p>ACUTE TOXICITY (oral) - Category 2                  ACUTE TOXICITY (dermal) - Category 2                  ACUTE TOXICITY (inhalation) - Category 2                  ACUTE TOXICITY (dermal) - Category 3                  SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1                  LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1                  LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2                  Contact with acids liberates very toxic gas.                  FLAMMABLE SOLIDS - Category 1                  SKIN CORROSION/IRRITATION - Category 1B</p> <p>ACUTE TOXICITY (oral) - Category 4                  SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1                  FLAMMABLE LIQUIDS - Category 3                  SKIN CORROSION/IRRITATION - Category 1A                  SKIN CORROSION/IRRITATION - Category 1B</p>
--	---

**Date of issue/ Date of revision** : 15/05/2018

**Date of previous issue** : 27/10/2016

**Version** : 2

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.