

## SAFETY DATA SHEET

Version 5.4  
Revision Date 07/01/2014  
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**1. PRODUCT AND COMPANY IDENTIFICATION****1.1 Product identifiers**

Product name :  $\alpha$ -Naphthyl Butyrate Esterase, Lymphocyte  
Product Number : 181B  
Brand : Sigma

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

Identified uses : Laboratory chemicals, Manufacture of substances

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

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
Fax : +1 800-325-5052

**1.4 Emergency telephone number**

Emergency Phone # : (314) 776-6555

This is a summary MSDS for a kit, for the full MSDS for each of the components listed in section 16 please visit our website.

**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 3), H226  
Oxidizing liquids (Category 3), H272  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 4), H332  
Acute toxicity, Dermal (Category 4), H312  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318  
Carcinogenicity (Category 1B), H350  
Specific target organ toxicity - single exposure (Category 1), H370  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal word

Danger

Hazard statement(s)

H226 Flammable liquid and vapour.  
H272 May intensify fire; oxidiser.  
H301 Toxic if swallowed.

|                            |  |
|----------------------------|--|
| H312 + H332                | Harmful in contact with skin or if inhaled   |
| H314                       | Causes severe skin burns and eye damage.   |
| H350                       | May cause cancer.  |
| H370                       | Causes damage to organs.   |
| H410                       | Very toxic to aquatic life with long lasting effects.  |
| Precautionary statement(s) |  |
| P201                       | Obtain special instructions before use.  |
| P202                       | Do not handle until all safety precautions have been read and understood.  |
| P210                       | Keep away from heat/sparks/open flames/hot surfaces. - No smoking.   |
| P220                       | Keep/Store away from clothing/ combustible materials.  |
| P221                       | Take any precaution to avoid mixing with combustibles.   |
| P233                       | Keep container tightly closed.   |
| P240                       | Ground/bond container and receiving equipment.   |
| P241                       | Use explosion-proof electrical/ ventilating/ lighting/ equipment.  |
| P242                       | Use only non-sparking tools.   |
| P243                       | Take precautionary measures against static discharge.  |
| P260                       | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  |
| P264                       | Wash skin thoroughly after handling.   |
| P270                       | Do not eat, drink or smoke when using this product.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P273                       | Avoid release to the environment.  |
| P280                       | Wear protective gloves/ protective clothing/ eye protection/ face protection.  |
| P301 + P310                | IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.   |
| P301 + P330 + P331         | IF SWALLOWED: rinse mouth. Do NOT induce vomiting.   |
| P303 + P361 + P353         | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.                     |
| P304 + P340                | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.                                 |
| P305 + P351 + P338         | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310                       | Immediately call a POISON CENTER or doctor/ physician.   |
| P322                       | Specific measures (see supplemental first aid instructions on this label).   |
| P363                       | Wash contaminated clothing before reuse.   |
| P370 + P378                | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  |
| P391                       | Collect spillage.  |
| P403 + P235                | Store in a well-ventilated place. Keep cool.   |
| P405                       | Store locked up.   |
| P501                       | Dispose of contents/ container to an approved waste disposal plant.  |

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Refer to component MSDS

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### 4. FIRST AID MEASURES

Refer to component MSDS

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### 5. FIREFIGHTING MEASURES

Refer to component MSDS

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### 6. ACCIDENTAL RELEASE MEASURES

Refer to component MSDS

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to component MSDS

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Refer to component MSDS

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## 10. STABILITY AND REACTIVITY

Refer to component MSDS

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## 11. TOXICOLOGICAL INFORMATION

Refer to component MSDS

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## 12. ECOLOGICAL INFORMATION

Refer to component MSDS

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## 13. DISPOSAL CONSIDERATIONS

Refer to component MSDS

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## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 3316      Class: 9      Packing group: II

Proper shipping name: Chemical kits

Marine pollutant: No

Poison Inhalation Hazard: No

### IMDG

UN number: 3316      Class: 9      Packing group: II      EMS-No: F-A, S-P

Proper shipping name: CHEMICAL KIT

Marine pollutant: No

### IATA

UN number: 3316      Class: 9      Packing group: II

Proper shipping name: Chemical kit

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## 15. REGULATORY INFORMATION

### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

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## 16. OTHER INFORMATION

### Kit Components:

|                                      |       |      |   |
|--------------------------------------|-------|------|---|
| Citrate Solution                     | SIGMA | 915  |   |
| Pararosaniline solution              | SIGMA | 1804 | Skin Corr. 1B; Eye Dam. 1; Carc. 1B;<br>H314, H350  |
| Phosphate buffer solution            | SIGMA | 1805 |   |
| Methylene Blue solution              | SIAL  | 1808 | Flam. Liq. 2; H225  |
| Sodium nitrite                       | SIGMA | 1809 | Ox. Sol. 3; Acute Tox. 3; Eye Irrit. 2A;<br>Aquatic Acute 1; Aquatic Chronic 1;<br>H272, H301, H319, H410 |
| $\alpha$ -Naphthyl Butyrate solution | SIGMA | 1801 | Flam. Liq. 3; Acute Tox. 4; STOT SE<br>1; H226, H302 + H312 + H332, H370                                  |

### HMIS Rating

|                        |   |
|------------------------|---|
| Health hazard:         | 3 |
| Chronic Health Hazard: | * |
| Flammability:          | 3 |
| Physical Hazard        | 1 |

### NFPA Rating

|                    |   |
|--------------------|---|
| Health hazard:     | 3 |
| Fire Hazard:       | 3 |
| Reactivity Hazard: | 0 |

### Further information

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### Preparation Information

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

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