

• SAFETY DATA SHEET

Version 9.1
Revision Date 10/14/2025
Print Date 10/15/2025

SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : Leukocyte Alkaline Phosphatase Kit

Product Number : 86C

Brand : Sigma

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

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765

Fax : +1 800 325-5052

1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-
527-3887 CHEMTREC (International) 24
Hours/day; 7 Days/week

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

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SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards for the product as supplied

Corrosive to metals : Category 1

Acute toxicity (Oral) : Category 4

Skin irritation : Category 2

Eye irritation	: Category 2A
Skin sensitisation	: Category 1
Specific target organ toxicity - single exposure	: Category 3 (Respiratory system)
Short-term (acute) aquatic hazard	: Category 2
Long-term (chronic) aquatic hazard	: Category 2

Other hazards

None known.

GHS label elements

Hazard pictograms	:	
Signal Word	:	Warning
Hazard Statements	:	<p>H290 May be corrosive to metals. H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H411 Toxic to aquatic life with long lasting effects.</p>

Precautionary statements	:	Prevention: P234 Keep only in original packaging. P261 Avoid breathing mist or vapours. 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. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection.
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Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a

POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P390 Absorb spillage to prevent material damage.
P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P406 Store in a corrosion resistant container with a resistant inner liner.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Refer to component SDS

SECTION 4. FIRST AID MEASURES

Refer to component SDS

SECTION 5. FIREFIGHTING MEASURES

Refer to component SDS

SECTION 6. ACCIDENTAL RELEASE MEASURES

Refer to component SDS

SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

No metal containers.

Further information on storage conditions : Tightly closed.

Storage class	: 10, Combustible liquids
Recommended storage temperature	: 36 - 46 °F / 2 - 8 °C
Further information on storage stability	: Handle and open container with care.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to component SDS

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Refer to component SDS

SECTION 10. STABILITY AND REACTIVITY

Refer to component SDS

SECTION 11. TOXICOLOGICAL INFORMATION

Refer to component SDS

SECTION 12. ECOLOGICAL INFORMATION

Refer to component SDS

SECTION 13. DISPOSAL CONSIDERATIONS

Refer to component SDS

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	: UN 3316
Proper shipping name	: Chemical kit
Class	: 9
Packing group	: II
Labels	: Class 9 - Miscellaneous dangerous substances and articles
Packing instruction (cargo aircraft)	: 960
Packing instruction (passenger aircraft)	: 960

IMDG-Code

UN number	: UN 3316
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Proper shipping name : CHEMICAL KIT

Class : 9
Packing group : II
Labels : 9
EmS Code : F-A, S-P
Marine pollutant : no

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

National Regulations

49 CFR Road

UN/ID/NA number : UN 3316
Proper shipping name : Chemical kits

Class : 9
Packing group : II
Labels : Class 9 - Miscellaneous dangerous substances and articles
ERG Code : 171
Marine pollutant : no

Poison Inhalation Hazard : No

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium nitrite solution	Not Assigned	14492	14492

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Component TPQ (lbs)
Naphthol AS-BI Alkaline solution	Not Assigned	
FBB-Alkaline solution	Not Assigned	
Sodium nitrite solution	Not Assigned	
Citrate Solution	Not Assigned	
Neutral Red solution	Not Assigned	

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

SARA 313

: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Warning: Manufactured with Naphthol AS-BI Alkaline solution, FBB-Alkaline solution, Sodium nitrite solution, Citrate Solution, Neutral Red solution, a substance which harms public health and environment by destroying ozone in the upper atmosphere.

40 CFR Protection of :

Environment; Part 82

Protection of

Stratospheric Ozone -

CAA Section 602 Class I

SubstancesOzone-

Depletion Potential

40 CFR Protection of :

Environment; Part 82

Protection of

Stratospheric Ozone -

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Depletion Potential

40 CFR Protection of :

Environment; Part 82

Protection of

Stratospheric Ozone -

CAA Section 602 Class I

SubstancesOzone-

Depletion Potential

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

Citrate Solution	Not Assigned	$\geq 90 - \leq 100 \%$
FBB-Alkaline solution	Not Assigned	$\geq 90 - \leq 100 \%$
Sodium nitrite solution	Not Assigned	$\geq 90 - \leq 100 \%$
Neutral Red solution	Not Assigned	$\geq 90 - \leq 100 \%$
Naphthol AS-BI	Not Assigned	$\geq 90 - \leq 100 \%$
Alkaline solution		

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

Citrate Solution	Not Assigned	$\geq 90 - \leq 100 \%$
FBB-Alkaline solution	Not Assigned	$\geq 90 - \leq 100 \%$
Sodium nitrite solution	Not Assigned	$\geq 90 - \leq 100 \%$
Neutral Red solution	Not Assigned	$\geq 90 - \leq 100 \%$
Naphthol AS-BI	Not Assigned	$\geq 90 - \leq 100 \%$
Alkaline solution		

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Citrate Solution	Not Assigned	$\geq 90 - \leq 100 \%$
FBB-Alkaline solution	Not Assigned	$\geq 90 - \leq 100 \%$
Sodium nitrite solution	Not Assigned	$\geq 90 - \leq 100 \%$
Neutral Red solution	Not Assigned	$\geq 90 - \leq 100 \%$
Naphthol AS-BI	Not Assigned	$\geq 90 - \leq 100 \%$
Alkaline solution		

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Citrate Solution	Not Assigned	$\geq 90 - \leq 100 \%$
FBB-Alkaline solution	Not Assigned	$\geq 90 - \leq 100 \%$
Sodium nitrite solution	Not Assigned	$\geq 90 - \leq 100 \%$
Neutral Red solution	Not Assigned	$\geq 90 - \leq 100 \%$
Naphthol AS-BI	Not Assigned	$\geq 90 - \leq 100 \%$
Alkaline solution		

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Citrate Solution	Not Assigned	$\geq 90 - \leq 100 \%$
FBB-Alkaline solution	Not Assigned	$\geq 90 - \leq 100 \%$
Sodium nitrite solution	Not Assigned	$\geq 90 - \leq 100 \%$
Neutral Red solution	Not Assigned	$\geq 90 - \leq 100 \%$
Naphthol AS-BI	Not Assigned	$\geq 90 - \leq 100 \%$
Alkaline solution		

This product contains the following priority pollutants related to the U.S. Clean Water Act:

Citrate Solution	Not Assigned	$\geq 90 - \leq 100 \%$
FBB-Alkaline solution	Not Assigned	$\geq 90 - \leq 100 \%$

Sodium nitrite solution	Not Assigned	>= 90 - <= 100 %
Neutral Red solution	Not Assigned	>= 90 - <= 100 %
Naphthol AS-BI	Not Assigned	>= 90 - <= 100 %
Alkaline solution		

US State Regulations

Massachusetts Right To Know

Citrate Solution	Not Assigned
FBB-Alkaline solution	Not Assigned
Sodium nitrite solution	Not Assigned
Neutral Red solution	Not Assigned
Naphthol AS-BI Alkaline solution	Not Assigned

Pennsylvania Right To Know

FBB-Alkaline solution	Not Assigned
Sodium nitrite solution	Not Assigned
Naphthol AS-BI Alkaline solution	Not Assigned

Maine Chemicals of High Concern

Citrate Solution	Not Assigned
FBB-Alkaline solution	Not Assigned
Sodium nitrite solution	Not Assigned
Neutral Red solution	Not Assigned
Naphthol AS-BI Alkaline solution	Not Assigned

Vermont Chemicals of High Concern

Naphthol AS-BI Alkaline solution	Not Assigned
FBB-Alkaline solution	Not Assigned
Sodium nitrite solution	Not Assigned
Citrate Solution	Not Assigned
Neutral Red solution	Not Assigned

Washington Chemicals of High Concern

Naphthol AS-BI Alkaline solution	Not Assigned
FBB-Alkaline solution	Not Assigned
Sodium nitrite solution	Not Assigned
Citrate Solution	Not Assigned
Neutral Red solution	Not Assigned

The components of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

The following substance(s) is/are subject to a Significant New Use Rule:

Naphthol AS-BI Alkaline solution	Not Assigned
FBB-Alkaline solution	Not Assigned
Sodium nitrite solution	Not Assigned
Citrate Solution	Not Assigned
Neutral Red solution	Not Assigned

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:

Naphthol AS-BI Alkaline solution	Not Assigned
FBB-Alkaline solution	Not Assigned
Sodium nitrite solution	Not Assigned
Citrate Solution	Not Assigned
Neutral Red solution	Not Assigned

SECTION 16. OTHER INFORMATION

Kit Components:

Naphthol AS-BI Alkaline solution	Sigma	861
FBB-Alkaline solution	Sigma	863
Sodium nitrite solution	Sigma	914
Citrate Solution	Sigma	915
Neutral Red solution	Sigma	N6264

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-

Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Revision Date : 10/14/2025

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US / EN

Kit Components:

Naphthol AS-BI Alkaline solution					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary statements	Supplemental information
Sigma - 861		Warning	May be corrosive to metals. Causes skin irritation. Causes serious eye irritation.	Keep only in original packaging. IF ON SKIN: Wash with plenty of water. Store in a corrosion resistant container with a resistant inner liner. Wash skin thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wear protective gloves/ eye protection/ face protection. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. Absorb spillage to	

Sigma - 86C

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Millipore
Sigma

				prevent material damage.	
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FBB-Alkaline solution

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary statements	Supplemental information
Sigma - 863		Warning	<p>May be corrosive to metals. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.</p>	<p>Keep only in original packaging. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/ container to an approved waste disposal plant. Avoid breathing mist or vapours. IF ON SKIN: Wash with plenty of water. Store locked up. Wash skin thoroughly after handling. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. Store in a corrosion resistant container with a resistant inner liner. Do not eat, drink or smoke when using this product. IF IN EYES: Rinse</p>	

Sigma - 86C

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Millipore
Sigma

				cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Use only outdoors or in a well-ventilated area. If skin irritation occurs: Get medical advice/attention. Wear protective gloves/ eye protection/ face protection. If eye irritation persists: Get medical advice/attention. Absorb spillage to prevent material damage.	
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Sodium nitrite solution					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary statements	Supplemental information
Sigma - 914			Harmful to aquatic life.	Avoid release to the environment. Dispose of contents/ container to an approved waste disposal plant.	

Citrate Solution					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary statements	Supplemental information
Sigma - 915					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s)

Sigma - 86C

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				required.
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Neutral Red solution					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary statements	Supplemental information
Sigma - N6264		Warning	May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.	Avoid breathing mist or vapours. IF ON SKIN: Wash with plenty of water. Dispose of contents/container to an approved waste disposal plant. Contaminated work clothing must not be allowed out of the workplace. If skin irritation or rash occurs: Get medical advice/attention. Avoid release to the environment. Take off contaminated clothing and wash it before reuse. Wear protective gloves. Collect spillage.	