

**SAFETY DATA SHEET (SDS)**

**SECTION 1: IDENTIFICATION OF PRODUCT (MIXTURE) AND SUPPLIER**

**Product Name:** EIA Stopping Solution

**Product Number:** 25260 (5 bottle kit)

**Intended Use:** These are **replacement** or **separately purchased** components, identical to those found in the kits, which are to be used exclusively with these Bio-Rad Laboratories products:  
 GS HIV-1/HIV-2 *PLUS O* EIA, Catalog Number 32588, 32589  
 GS HBsAg EIA 3.0, Catalog Number 32591, 32592  
 GS HIV Combo Ag/Ab EIA, Catalog Number 26217  
 GS HIV-2 EIA, Catalog Number 32536  
 MONOLISA™ Anti-HBc IgM EIA, Catalog Number 26174  
 MONOLISA™ Anti-HBc EIA, Catalog Number 26186  
 MONOLISA™ Anti-HBs EIA, Catalog Number 26220  
 MONOLISA™ Anti-HAV IgM, Catalog Number 72495  
 MONOLISA™ Anti-HAV, Catalog Number 72496  
 Catalog Number 26192  
 Refer to the Bio-Rad Laboratories product SDSs and kit instructions for safe handling of this kit optional material in the assay process.

**Manufactured by:** Bio-Rad Laboratories, Inc.

**Address:** 6565 185th Avenue NE  
 Redmond, WA 98052-5039, USA

**Website:** [www.bio-rad.com](http://www.bio-rad.com)

**Phone Number:** 1-800-2-BIORAD (1-800-224-6723); or 1-425-881-8300 (daytime PT)

**SDS e-mail contact:** [ro-sds@bio-rad.com](mailto:ro-sds@bio-rad.com)


**Technical Information Contacts:** Bio-Rad provides a toll free line for technical assistance, available 24 hours a day, 7 days a week. In the United States of America and Puerto Rico, call toll free 1-800-2-BIORAD (1-800-224-6723). Outside the U.S.A., please contact your regional Bio-Rad office for assistance. *Refer to section 16 for non-US local Bio-Rad agent contact information.*

**Authorized Representative in the European Community:** *FRANCE: Bio-Rad*  
 3 boulevard Raymond Poincaré  
 92430 Marnes-la-Coquette  
 Phone: +33 (0) 1 47 95 60 00 / Fax: +33 (0) 1 47 41 91 33  
[\[fds-msds.fr@bio-rad.com\]](mailto:fds-msds.fr@bio-rad.com)

**Emergency Phone Number:** **This SDS is listed with CHEMTREC 1-800-424-9300 (US) / 001-703-527-3887** (international – can be called collect). Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product.

**SECTION 2: HAZARDS IDENTIFICATION -- HAZARDOUS COMPONENTS**

This test kit should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards. Specific warnings are given in the instructions for use. The absence of a specific warning should not be interpreted as an indication of safety. The following information is furnished for those product hazardous constituents that require regulatory control or disclosure at the concentration found in the product. Refer to Section 16 for the full text of any solely abbreviated or coded hazard statements provided below and for the Key / legend to abbreviations and acronyms.

Component	Content
<b>EIA Stopping Solution</b> 5 bottles (120 mL)    <b>DANGER!</b>	- <b>1N Sulfuric Acid</b> (4.4% w/w H <sub>2</sub> SO <sub>4</sub> ), CAS# 7664-93-9, EC No 231-639-5[pH < 2, clear liquid]; severely irritating to skin, corrosive to eyes. GHS \ US HCS \ EC CLP: DANGER! GHS05; H314; P280; P301 + P330 + P331, P305 + P351 + P338; P501.

**Markings according to the United Nations (UN) Globally Harmonized System (GHS), United States Hazard Communication Standard (US HCS), and European Community (EC) 2008/1272/EC (EC CLP) guidelines and analogous GHS-based global regulations:**

This product has been conservatively classified and labeled in accordance with applicable United Nations (UN) GHS, United States Hazard Communication Standard (US HCS), and related European Community (EC) 2008/1272/EC (EC CLP) guidelines and applicable analogous GHS-based global regulations. The following regulated hazardous chemical concentrations are found in product component(s):

**1N H<sub>2</sub>SO<sub>4</sub>** [4.4% w/w Sulfuric acid], CAS# 7664-93-9, EC No 231-639-5 (pH ≤ 2); severely irritating to skin, corrosive to eyes. [This STOP solution has been evaluated with the CORROSITEX® test method to determine its corrosive potential and classification. The results of this testing classified this STOP solution as Class: 8, Packing group II (UN2796)]

**Comprehensive GHS Based Classification:** Skin Corrosive Category 1B  
Serious eye damage (Category 1)



Label(s):

Signal Word:

**DANGER!**

Label Hazard Statements:

**H314 Causes severe skin burns and eye damage.**

Precautionary Statements (statements for product intended use and as codified on the product label):

P280 Wear protective gloves / protective clothing / eye protection / face protection.  
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.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P501 This material and its container must be disposed of as hazardous waste.

Supplemental Precautionary Statements (additional precautions to consider relative to specific customer use):

P260 Do not breathe mist / vapours / spray.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P308 + P313 If exposed or concerned: Get medical advice/ attention.  
P405 Store locked up.

[Source: Raw Material vendor SDS, CCOHS databases and regulatory research]

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

The following information is furnished for those product hazardous constituents that require regulatory control or disclosure regardless of the concentration found in the product. Note that the information here is often based on data from the chemical raw material safety data sheet and literature (LD<sub>50</sub>, exposure limits, etc.). Chemical constituents that do not require regulatory disclosure are not generally included here. This product contains a significantly diluted concentration in an aqueous solution; thus, the assessment below has not considered the dilution reduction effect on the hazard. That hazard communication information is provided in Section 2 above. Some components were tested at the concentration found in the kit. In that case, the assessment is provided for the chemical dilution tested, and the tested concentration will be provided at the beginning of the *Chemical Ingredient Data/Information* box. The GHS, US HCS, EC CLP, and analogous GHS-based global regulation classifications were made according to the existing editions and expanded upon from company and literature data. Refer to section 16 for the full text of any *Comprehensive GHS-based Classification* statements coded below, for the list of sources utilized in the assessment and for the Key / legend to abbreviations and acronyms.

**Chemical Ingredient Data / Information**

**Chemical Ingredient: Sulfuric acid**

Chemical concentrations found in this product: **1 N (< 5% H<sub>2</sub>SO<sub>4</sub> in water)**

**Data for Concentrated / 100% chemical used in the product mixture (concentration tested):**

CAS#: 7664-93-9 (Conc. sulfuric acid 100%)	LD <sub>50</sub> (oral-rat): 2,140 mg/kg (100%)
EC No: 231-639-5 (100%)	LC <sub>50</sub> (inhalation-rat): 510 mg/m <sup>3</sup> /2H (100%)
Index No: 016-020-00-8 (100%)	LD <sub>50</sub> (skin-rabbit): NE (100%)
Registration No: 01-2119458838-20-XXXX	LC <sub>50</sub> (96 hr-fish): Gambusia affinis (Mosquito fish) – 42 mg/l (100%)
RTECS#: WS5600000 (100%)	pH value: 1.2 at 5 g/L

Skin corrosion/irritation: Skin - rabbit - Extremely corrosive and destructive to tissue.  
 Serious eye damage/eye irritation: Eyes - rabbit - Severe eye irritation  
 Chemical Formula: H<sub>2</sub>SO<sub>4</sub> (100%)  
 Molecular weight: 98.08 g/mol (100%)  
 Synonyms/Trade Names: Acide sulfurique;Acido solforico; BOV; Battery acid; Dihydrogen sulfate; Dipping acid; Electrolyte acid; Mattling acid; Oil of vitriol; Schwefelsaureloesungen; Strong inorganic acid mists containing sulfuric acid; Sulfuric acid; Sulfuric acid, aerosol; Sulphuric acid; Vitriol Brown Oil; Zwavelzuuroplossingen

**Raw Material GHS / US HCS / EC CLP Classification (100%):**

**DANGER!**

Skin Corr. Cat. 1A, Eye Damage. Cat. 1, Aquatic Acute Cat. 3, Aquatic Chronic Cat. 3

H314, H412

P264, P273, P280, P301 + P330 + P331, P303 + P361 + P353, P304 + P340, P305 + P351 + P338, P310, P363, P405, P501

[Source: Raw Material vendor SDS, CCOHS databases and regulatory research]



NA: Not Applicable.

NE: Not Established or Unknown (unable to locate data); typically for concentrate form unless otherwise specified.

**Related product information:**

- ◆ Refer to Section 16 for the full text of any *Comprehensive GHS-based Classification* statements coded above. Refer to Section 16 for the list of sources utilized in the assessment and the Key / legend to abbreviations and acronyms.
- ◆ Do not eat, drink, or smoke when using this product.
- ◆ Wear protective gloves / protective clothing / eye protection / face protection. Take off contaminated clothing and wash before reuse.

**SECTION 4: EMERGENCY FIRST AID MEASURES**

Health Effects:	Symptoms of over exposure may include headache and congestion. Causes severe skin burns and eye damage. Severely irritating or corrosive to eyes; greater exposures can cause eye damage, including permanent impairment of vision. Risk of serious damage to eyes. May cause ingestion corrosive effects, including burning throat, mouth, and stomach.
Eye Contact:	Flush eyes with copious water for at least 15 minutes. Ensure adequate flushing by separating the eyelids with fingers while flushing with water. <b>OBTAIN MEDICAL ATTENTION.</b>
Skin Contact:	Remove contaminated clothing. Flush skin with copious water and wash affected area with soap and water. If blood-to-blood contact occurs, or if more severe symptoms develop, consult a physician.
Inhalation:	Remove person from exposure area to fresh air. Generally, this aqueous product is not a significant inhalation hazard in the kit volumes and concentrations present. If breathing becomes difficult, immediately call for emergency medical assistance. Treat symptomatically and supportively.
If Swallowed:	If ingested, rinse out mouth thoroughly with water, provided the person is conscious, and <b>OBTAIN MEDICAL ATTENTION.</b> Rinse mouth. Do NOT induce vomiting. Call a physician or the local poison control center. Treat symptomatically and supportively. If vomiting occurs, keep head lower than hips to prevent aspiration.

**SECTION 5: FIREFIGHTING MEASURES**

Extinguishing Media:	Use extinguishing media appropriate for the surrounding fire.
Hazardous Combustion Products:	May release toxic oxides of carbon, nitrogen, and sulfur gas.
Special Firefighting Procedures:	Conventional firefighting full protective equipment (with NIOSH-approved self-contained breathing apparatus) and procedures appropriate for the surrounding fire should be sufficient.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

- ◆ Avoid direct contact with skin, eyes, mucous membranes, and clothing by wearing appropriate lab Personal Protective Equipment (PPE), including gloves, lab coat, and eye/face protection.
- ◆ In the event of a hazardous material spill, contain the spill if it is safe to do so and immediately move to a safe area, free from potential aerosols, to decontaminate and/or safely remove any contaminated clothing, as necessary. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Isolate the hazard area and ventilate if appropriate. Ensure that appropriate spill cleanup materials and PPE are available and used.
- ◆ Prevent material from entering sewers, waterways, or confined spaces.
- ◆ Follow established laboratory policy and applicable CDC/NIH biosafety and/or OSHA/WISHA hazardous material spill and/or NFPA/Fire Code guidelines for appropriate hazardous chemical and/or biological material spill response and cleanup. Avoid release to the environment.
- ◆ Wear appropriate PPE. Immediately, and on-site if possible: Neutralize corrosive acidic spills with the appropriate *Acid neutralization / adsorbent* product.
- ◆ Clean the spill area with water and wipe dry. Spills can also be absorbed with an appropriate inert material (e.g., spill pillows, absorbent pads), which are secured in an appropriate, labeled, sealed container. Material used to absorb the spill may require hazardous material waste disposal. Infectious, Chemical, and Laboratory wastes must be handled and discarded in accordance with all local, regional, national, and international regulations.
- ◆ Refer to Sections 8 and 13 for more specifics.

**SECTION 7: HANDLING AND STORAGE INFORMATION**

Handling:	<p>This test kit should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards. Follow proper Good Laboratory Practices and safety guidelines for handling chemical, biological, and laboratory hazards.</p> <p>Do not smoke, eat, or drink in areas where patient samples and kit reagents are handled. Wash your hands after use. Wear appropriate personal protective equipment (PPE) including gloves, lab coat or equivalent, and eye/face protection.</p> <p>Keep containers tightly closed; avoid splashing, spills, and the generation of aerosols.</p> <p>Handle all human source materials, specimens, and equipment used to perform the operations as though they were capable of transmitting infectious disease, as per <i>Standard</i> and <i>Universal Precautions</i>.</p> <p>All personal protective equipment should be removed before leaving the work area. Refer to Section 8 for more specifics.</p> <p>Avoid release to the environment. Do not allow undiluted product hazardous chemical ingredient or large quantities of it to reach ground water or water course.</p> <p>Consult with your Environmental Health &amp; Safety Office for assistance.</p>
Storage:	Store according to product and label instructions (generally at 2-8 °C).
Caution, consult accompanying documents. Read and follow all the precautions and warnings in the kit product instructions for use.	
These are separately purchased components, identical to those found in the kits, which are to be used exclusively with the Bio-Rad Laboratories products listed in Section 1.	

### SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION MEASURES

**Control Parameters – Component chemicals with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Chemical	CAS-No.	Value	Control parameter	Update	Basis
<i>Sulfuric acid</i>	7664-93-9	TWA – TLV	0.2 mg/m <sup>3</sup> (thoracic fraction)	2004-01-01	USA. ACGIH Threshold Limit Values (TLV)
		TWA – PEL	1 mg/m <sup>3</sup> *	1993-06-30	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		REL IDLH	1 mg/m <sup>3</sup> 15 mg/m <sup>3</sup>	2005-149 [SEP-2007]	USA. National Institute for Occupational Safety and Health (NIOSH)
<p>* The value in mg/m<sup>3</sup> is approximate  <b>Remarks:</b> TLV CARCINOGENICITY DESIGNATION A2 – Suspected Human Carcinogen: Substance is carcinogenic in laboratory animals under conditions that are considered relevant to worker exposure. Available human studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans. Worker exposure to an A2 carcinogen should be controlled to levels as low as reasonably achievable below the TLV.                      The A2 Carcinogenicity Designation refers to sulfuric acid contained in <b>strong inorganic acid mists</b>.</p>					

*Additional information:* The lists that were valid during the creation were used as basis.

The following personal protective equipment (PPE) is recommended to prevent blood or other potentially infectious or hazardous materials from reaching the user's work or street clothes, skin, mouth, mucous membranes and eyes, or hazard inhalation, under normal conditions of use and for the time during which the protective equipment is utilized:

Ventilation:	Adequate lab ventilation is required.
Eye / Face Protection:	Wear ANSI approved safety glasses, goggles or face shield with safety glasses or goggles. Contact lenses should not be worn when handling lab hazards.
Protective Gloves:	<p>Suitable gloves must be worn at all times when handling kit reagents or patient samples to provide skin protection from splash and intermittent contact. Synthetic gloves, such as Nitrile, Neoprene, and Vinyl, are recommended because they are sturdy, effective, and contain no natural latex ingredients associated with latex glove allergic reactions. Disposable (single use) gloves should be changed often and never be reused. Wash hands thoroughly after removing gloves.</p> <p>Guidelines for <i>Sulfuric Acid</i>, less than 30%:                      RECOMMENDED (resistance to breakthrough longer than 8 hours): Butyl rubber, natural rubber, neoprene, polyethylene, polyvinyl chloride, Viton<sup>®</sup>, Viton<sup>®</sup>/Butyl rubber, Barrier (PE/PA/PE), Silver Shield/4H<sup>™</sup> (polyethylene/ethylene vinyl alcohol), Trelchem<sup>®</sup> HPS, Trelchem<sup>®</sup> VPS, Tychem<sup>®</sup> SL (Saranex<sup>®</sup>), Tychem<sup>®</sup> CPF 3, Tychem<sup>®</sup> F, Tychem<sup>®</sup> BR/LV, Tychem<sup>®</sup> Responder<sup>™</sup>, Tychem<sup>®</sup> TK.                      RECOMMENDED (resistance to breakthrough longer than 4 hours): Nitrile rubber.                      NOT RECOMMENDED for use (resistance to breakthrough less than 1 hour): Polyvinyl alcohol.  <i>Source: CHEMINFO 12-2013</i></p>
Protective Clothing:	Wear a lab coat, clinic jacket, gown, apron, and/or smock. Disposable clothing is strongly recommended when handling biohazardous material. If reusable clothing is used, procedures for handling potentially infectious laundry under the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030) are required.
Respiratory Protection:	Do not breathe mist / vapors/vapours / spray.
Other:	All personal protective equipment should be removed before leaving the work area and placed in an appropriately designated area or container for storage, processing, decontamination, or disposal.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear aqueous liquid.		
<b>Odor / odour:</b>	No applicable information was found.	<b>Odor/odour threshold:</b>	Not Established.

<b>pH:</b>	pH ≤ 2.		
<b>Boiling point:</b>	Undetermined.	<b>Melting point:</b>	Undetermined.
<b>Flash point:</b>	Not Applicable. Flammable limits: LEL/LFL is <u>Not Applicable</u> ; UEL/UFL is <u>Not Applicable</u>		
<b>Evaporation rate:</b>	No applicable information was found.		
<b>Fire hazard:</b>	Although the components have not been tested for fire hazard and explosion data, being water-based, they are not expected to be fire hazards, but some of the kit packaging materials may burn under fire conditions.		
<b>Vapor/vapour pressure:</b>	No applicable information was found.		
<b>Vapor/vapour density:</b>	No applicable information was found.		
<b>Relative density:</b>	Approximately 1.		
<b>Solubility:</b>	Soluble in all proportions with generation of heat.		
<b>Partition coefficient (n-octanol/water):</b>	No applicable information was found.		
<b>Auto igniting:</b>	Product is not known to be self-igniting.		
<b>Decomposition temperature:</b>	No applicable information was found.		
<b>Viscosity:</b>	No applicable information was found.		
<b>Danger of explosion:</b>	Product is not known to present an explosion hazard.		
No other standard characteristics applicable to the identification or hazards of the product are known.			

### SECTION 10: STABILITY AND REACTIVITY INFORMATION

NOTE: Chemical reactions that could result in a hazardous situation (e.g., generation of flammable or toxic chemicals, fire, or detonation) are listed here. Although not intended to be complete, an overview of important reactions involving common chemicals is provided to assist in the development of safe work practices.

Chemical Stability / Reactivity:	Stable with no known inherent significant reactivity, except being an <b>acidic solution</b> , it may react exothermically with certain chemicals, particularly strong bases and reducing agents.
Conditions to Avoid:	None known when used as intended.
Materials to Avoid:	Do not allow the acidic <b>Stop Solution</b> to come in contact with strong bases or reducing agents (may lead to a violent exothermic reaction). <b>Sulfuric Acid</b> - Bases, Halides, Organic materials, Carbides, fulminates, Nitrates, picrates, Cyanides, Chlorates, alkali halides, Zinc salts, permanganates, e.g. potassium permanganate, Hydrogen peroxide, Azides, Perchlorates., Nitromethane, phosphorous, Reacts violently with: cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous(III) oxide, Powdered metals
Incompatible materials:	<b>Sulfuric acid:</b> Although concentrated <b>sulfuric acid</b> is referred to as an oxidizing agent in some sources, it is not a very strong oxidizing agent. The 98% acid has some oxidizing ability when hot. <b>Sulfuric acid</b> does not polymerize and does not form peroxides. <b>Sulfuric acid</b> is a very reactive substance. The concentrated acid dehydrates, or sulfonates most organic compounds. <b>Sulfuric acid</b> reacts vigorously, violently or explosively with many organic and inorganic chemicals including water, acrylonitrile, alkali solutions, carbides, chlorates, fulminates, nitrates, perchlorates, permanganates, picrates, powdered metals, metal acetylides or carbides, epichlorohydrin, aniline, ethylenediamine, alcohols with strong hydrogen peroxide, chlorosulfonic acid, cyclopentadiene, hydrofluoric acid, nitromethane, 4-nitrotoluene, phosphorus (III) oxide, potassium, sodium, ethylene glycol, isoprene, styrene. Hazardous gases, such as hydrogen, hydrogen cyanide, hydrogen sulfide and acetylene, are evolved on contact with chemicals such as metals, cyanides, sulfides and mercaptans and carbides respectively.



Hazardous Decomposition Products:	May release toxic oxides of carbon, nitrogen, and sulfur gas.
Hazardous Polymerization:	Has not been reported to occur.

### SECTION 11: TOXICOLOGICAL INFORMATION -- GENERAL COMPOSITE

Refer to Sections 2 and 3 for the kit component concentrations. The composite toxicological information for this product is:

#### Acute Health Effects

Acute Toxicity:	May be detrimental in contact with skin, if swallowed, and to eyes upon contact; in case of contact with eyes, immediately rinse with copious water and seek medical attention.
Primary Irritant Effect:	Irritating to skin and severely irritating or corrosive to eyes, and with greater exposures can cause eye damage, including permanent impairment of vision or blindness.
Skin Corrosivity / Metal Corrosion:	Causes severe skin burns and eye damage. The <b>Stopping Solution</b> is Corrosive, able to cause severe burns of the mucous membranes, skin and eyes; can cause permanent eye damage or blindness. May cause ingestion corrosive effects, including burning throat, mouth and stomach.
Serious Eye Damage / Irritation:	The <b>Stopping Solution</b> is Corrosive, able to cause severe burns of the eyes; can cause permanent eye damage or blindness. The <b>Stopping Solution</b> poses a risk of serious damage to eyes. Harmful to eyes upon contact; in case of contact with eyes, immediately rinse with copious water and seek medical attention.
STOT-Single Exposure:	No applicable information was found.
Aspiration Hazard:	No applicable information was found.
Other Acute Health Effects:	No significant other acute health effect known.

#### Chronic Toxicity

Respiratory or Skin Sensitization:	No sensitization effect known.
Carcinogenicity:	<b>IARC Group 1, The agent is Carcinogenic to Humans:</b> <b>Sulfuric Acid</b> , CAS# 7664-93-9. [Note: The IARC classification of Group 1 is for strong inorganic acid mists containing sulfuric acid is for inorganic acid mists only and does not apply to sulfuric acid or sulfuric acid solutions].
Germ Cell Mutagenicity:	No applicable information was found.
Reproductive hazard:	No reproductive toxic effect known.
STOT-Repeated Exposure:	No applicable information was found.

Additional Toxicological Information: The chemical, physical, and toxicological properties have not been thoroughly investigated.

### SECTION 12: ECOLOGICAL INFORMATION

This product was not tested. The following assessment is based on information for the ingredients.

Ecotoxicity:	<b>Concentrated Sulfuric acid [CAS# 7664-93-9]*:</b> Fish LC <sub>50</sub> - <i>Gambusia affinis</i> (Mosquito fish) – 42 mg/l - 96 h * Source: <i>Raw Material Vendor Safety Data Sheets, RTECS and/or CCOHS Cheminfo</i>
Persistence and degradability:	This information is not available.
Bioaccumulation potential:	This information is not available.
Mobility in soil:	This information is not available.

PBT and vPvB assessment:	This information is not available.
Other adverse effects:	Hazardous for drinking water and toxic to aquatic organisms by pH modification if not neutralized. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Avoid release to the environment.

### SECTION 13: DISPOSAL CONSIDERATIONS

Disposal of hazardous and/or laboratory wastes, product, or packaging must be conducted in accordance with all applicable local, regional, national, and international regulations. This section specifies the general and United States RCRA requirements. Processing, use, or contamination of the kit components may change waste management requirements and options. Contact your Environmental Health & Safety Office for your specific disposal procedures.

**Recommended Product Disposal: Acidic Stopping Solution** (sulfuric acid,  $\text{pH} \leq 2$ ), wastes should be neutralized to  $\text{pH}$  6-8 for safe sewer disposal; check your local, regional, national, and international ordinances accordingly. If the final  $\text{pH}$  measures  $\leq 2$ , it requires disposal as a corrosive material in a RCRA approved waste facility (or equivalent); the US RCRA Waste disposal Code for this waste, if not neutralized, is D002; check your international, national, and regional ordinances accordingly.

Do not allow undiluted product or large quantities of it to reach ground water or water course.

**Recommended Unclean Packaging Disposal:** Dispose in accordance with all applicable local, regional, national, and international regulations.

### SECTION 14: TRANSPORT INFORMATION

Shipping of product, packaging, and waste must be conducted in accordance with all applicable local, regional, national, and international regulations. Processing, use, or contamination of the kit components may change shipping requirements and options. Contact your Environmental Health & Safety Office for your specific shipping procedures.

**Recommended Unused Product Multi-Modal Transportation:** According to US DOT, IATA, and UN "Model Regulations", the **STOPPING SOLUTION** in the kit must be transported as follows:

**Acidic** 1N sulfuric acid **Stopping Solution** is at  $\text{pH} \leq 2$  contains **1 N Sulfuric acid** ( $< 5\% \text{H}_2\text{SO}_4$ ).

Thus, any unneutralized discarded product component or waste generated from its use resulting in a corrosive liquid ( $\text{pH} \leq 2$  or a  $\text{pH} \geq 12.5$  per Method 9040 (USEPA Publication SW-846) or which corrodes Steel (NACE Standard TM-01-69)) must be transported as follows:

Proper Shipping Name and Description: **Sulphuric acid [with not more than 51% acid]**

Hazard Class or Division: **8**

UN ID Number: **UN 2796**

Packing group **II**



**Recommended Used Product Hazardous Waste Disposal Transportation:** Air and land transportation information for discarded kit components and waste from this product when used as intended is:

**Acidic** 1N sulfuric acid **Stopping Solution** is at  $\text{pH} \leq 2$ .

Thus, any un-neutralized discarded product component or waste generated from its use resulting in a corrosive liquid ( $\text{pH} \leq 2$  or an  $\text{pH} \geq 12.5$  per Method 9040 (USEPA Publication SW-846) or Corrodes Steel (NACE Standard TM-01-69)) must be transported as follows:

Proper Shipping Name and Description: **Sulfuric acid, Spent**

Hazard Class or Division: **8**

UN ID Number: **UN 1832**

Packing group **II**



**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

### SECTION 15: REGULATORY INFORMATION



**Composite HMIS Rating:** Health: 2 Flammability: 0 Reactivity: 1

**Carcinogenicity Categories:**

Contains **1N Sulfuric Acid**, CAS# 7664-93-9: IARC Group 1, The agent is Carcinogenic to Humans, NTP listed as Known to be a Human Carcinogen and ACGIH-TLV Group A2, Suspected Human Carcinogen

*Note: The IARC Group 1 and ACGIH A2 classifications refers specifically to sulfuric acid contained in strong inorganic acid mists and does not apply to sulfuric acid or sulfuric acid solutions.*

**National Regulations – Other Domestic / Foreign Laws:**

**Hazard communication compliance** – This SDS contains the required information for preparation in accordance with the following GHS-based global regulations:

1. **United States** – Occupational Safety Health Administration *Hazard Communication Standard 29 CFR 1910.1200 (US HCS)*
2. **Taiwan** – Regulation **Lao-An-3-Tzu-No. 0960145703** / Published National Standard **CNS 15030**
3. **People’s Republic of China** – National Standard **GB/T 17519-2013, GB 30000-2013**
4. **New Zealand** – *Hazardous Substances and New Organisms Act 1996 (HSNO), Hazardous Substances (Classification) Regulations 2001 and Thresholds and Classifications January 2012 (as published in 2008)*  
*Composite HSNO Hazard Class: Subclass 8.2 Category B (skin corrosive, GHS 1B)*  
*Subclass 8.3 Category A (eye corrosive)*
5. **Mexico** – **Standard NMX-R-019-SCFI-2011**
6. **Korea** – **Public Notice 2013-37 Standard for Classification and Labeling of Chemical Substances and Material Safety Data Sheets**
7. **Japan** – Industrial Safety and Health Law (ISHL) National Standard **JIS Z7252, JIS Z7253**
8. **European Community (EC)** – applicable **CLP** related regulations (**2010/453/EC, 2008/1272/EC, 2006/1907/EC** etc.)
9. **Canada** – Standard *Workplace Hazardous Materials Information System (WHMIS-GHS) Canadian Standard* for the hazard classification criteria for this product.  
*Composite WHMIS Hazards: Skin Corrosion*  
*Serious Eye Damage*
10. **Brazil** – Regulation **NRB 14725**
11. **Australia** – Code of Practice *Preparation of Safety Data Sheets for Hazardous Chemicals* under Section 274 of the **Work Health and Safety (WHS) Act**.
12. Analogous GHS-based global regulations

**Inventory status**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>In Compliance (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS) or Europe European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCs)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	inventory (CSNN):	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\* A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**Regulation (EC) No. 1907/2006 (REACH):**

*Chemicals included in the Candidate List of Substances of Very High Concern (SVHC):* None

*REACH No.:* A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**United States SARA:**

*SARA 302 (extremely hazardous substance) components:* The following components are subject to reporting levels established by SARA Title III, Section 302: **Sulfuric Acid**, CAS# 7664-93-9; Revision Date: 2007-07-01

*SARA 313 components:* The following components are subject to reporting levels established by SARA Title III, Section 313: **Sulfuric Acid**, CAS# 7664-93-9; Revision Date: 2007-07-01

**California Proposition 65:** The Product does not contain listed substances.

## SECTION 16: OTHER INFORMATION

### Hazard statement abbreviation(s):

Skin Corr.	Skin corrosion
Eye Damage	Serious eye damage
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Cat.	Category
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.
P260	Do not breathe mist / vapours / spray.
P264	Wash skin thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
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.
P308 + P313	If exposed or concerned: Get medical advice/ attention.
P310	Immediately call a POISON CENTER or doctor/ physician
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	This material and its container must be disposed of as hazardous waste.

This test kit should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards. Specific warnings are given in the instructions for use. The absence of a specific warning should not be interpreted as an indication of safety.

These are Replacement, optional, or separately purchased components, identical to those found in the products, which are to be used exclusively with the Bio-Rad Laboratories products listed in Section 1.

**Chemical safety assessment:** Mixtures covered in this SDS were classified using the US HCS, EC CLP, and/or UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Fourth edition unless otherwise specified.

Sources of key data used to compile the Safety Data Sheet:

Raw Material Vendor Safety Data Sheets  
*United Nations* (UN) Globally Harmonized System (GHS)  
*United States* OSHA Hazard Communication Standard (US HCS) 1910.1200  
*Canadian* Workplace Hazardous Materials Information System (WHMIS)  
*Mexican Standard* (NMX-R-019-SCFI-2011) [regulatory translation and summaries]  
*European Commission* (EC) Regulations 2008/1272/EC, 2010/453/EC, 2006/1907/EC (EC CLP)  
*Australian* Code of Practice – Preparation of Safety Data Sheets for Hazardous Chemicals (Section 274 of the *Work Health and Safety Act*)  
*New Zealand* – Hazardous Substances and New Organisms Act 1996 (HSNO)  
*The People’s Republic of China* National Standard GB/T 17519-2013, GB 30000-2013 [regulatory translation if available and summaries]  
*Taiwan* Regulation Lao-An-3-Tzu-No. 0960145703 / Published National Standard CNS 15030 [regulatory translation if available / summaries]  
*Korean* Public Notice 2008-26 [regulatory translation if available and summaries]  
*Japanese* Industrial Standard JIS Z7252, JIS Z7253 [regulatory translation if available and summaries]  
*Registry of Toxic Effects of Chemical Substances* (RTECS)  
 Canadian Centre for Occupational Health and Safety (CCOHS) *CHEMINFO* databases, etc.  
 International Agency for Research on Cancer (IARC)  
 American Conference of Governmental Industrial Hygienists (ACGIH)  
 Occupational Safety and Health Administration, U.S. Department of Labor (OSHA)  
 National Toxicity Program (NTP)  
 National Institute for Occupational Safety and Health (NIOSH)  
 World Health Organization. *Laboratory Biosafety Manual*  
 CDC/NIH *Biosafety in Microbiological and Biomedical Laboratories*  
*Australian Inventory of Chemical Substances* (ACIS) Listing  
*California Proposition 65*

Key / legend to abbreviations and acronyms used in the safety data sheet:

ACGIH – American Conference of Governmental Industrial Hygienists  
 ACIS – Australian Inventory of Chemical Substances  
 ANSI – American National Standards Institute

CAS – Chemical Abstracts Service  
 CCOHS – Canadian Centre for Occupational Health and Safety  
 CDC – Centers for Disease Control, USA  
 CNS – Central Nervous System  
 DGSMA – Dangerous Goods Safety Management Act  
 DOT – Department of Transportation, USA  
 EC<sub>50</sub> – half maximal effective concentration  
 EC CLP – European Commission regulation for the Classification, Labeling and Packaging of chemical substances and mixtures  
 EU – European Union  
 GHS – Globally Harmonized System  
 HNOC – Hazard Not Otherwise Classified  
 HSNO – Hazardous Substances and New Organisms Act 1996 (New Zealand)  
 IARC – International Agency for Research on Cancer  
 IATA – International Air Transport Association  
 ICAO – International Civil Aviation Organization  
 IDLH – Immediately Dangerous to Life or Health  
 IMDG – International Maritime Dangerous Goods  
 IPCS – International Programme on Chemical Safety  
 ISHA – Industrial Safety and Health Act  
 LC<sub>50</sub> – median lethal concentration, 50%  
 LD<sub>50</sub> – median lethal dose, 50%  
 MSDS – Material Safety Data Sheet  
 NIOSH – National Institute for Occupational Safety and Health  
 NTP – National Toxicity Program  
 OEL – Occupational Exposure Limit  
 PEL – Permissible Exposure Limit  
 ppm – parts per million  
 RTECS – Registry of Toxic Effects of Chemical Substances  
 SDS – Safety Data Sheet  
 STEL – Short Term Exposure Limit  
 STOT – Specific Target Organ Toxicity  
 TCCA – Toxic Chemical Control Act  
 TLV/TWA – Threshold Limit Value / Time-Weighted Average  
 UN – United Nations  
 US EPA – United States Environmental Protection Agency, USA  
 US HCS – Hazard Communication Standard, USA  
 US OSHA – Occupational Safety and Health Administration, U.S. Department of Labor  
 WHMIS – Workplace Hazardous Materials Information System, Canada  
 WHO – World Health Organization (United Nations)

*Additional information:* The lists that were valid during the creation were used as basis.

**This Revision:** Updated, reformatted, and added new GHS information.

## Bio-Rad Laboratories:

**Department issuing SDS:** Environmental Health and Safety.

**Contact for general SDS information:** Seattle Operations, Environmental Health & Safety, 6565 185th Ave. NE, Redmond, WA 98052, USA, Phone: 425-881-8300 (8 am to 5 pm PT), [ro-sds@bio-rad.com](mailto:ro-sds@bio-rad.com)

**Customer support contact:** Clinical Diagnostics Group, 4000 Alfred Nobel Drive, Hercules, CA 94547, USA  
 Phone: 1-800-224-6723, [www.bio-rad.com/diagnostics](http://www.bio-rad.com/diagnostics)

**Contact 24/7/365:** 1-800-424-9300

**Contact Local Bio-Rad Agents for general information:**

**Australia**, Bio-Rad Laboratories Pty. Ltd., Level 5, 446 Victoria Road, Gladesville NSW 2111 • Phone 61-2-9914-2800 • Telefax 61-2-9914-2888 •  
*24h/365d:* 61-2-9914-2800  
**Austria**, Bio-Rad Laboratories Ges.m.b.H., Hummelgasse 88/3-6, A-1130 Vienna • Phone 43-1-877-8901 • Telefax 43-1-876-5629 • *24h/365d:* 43-1-877-89 01  
**Belgium**, Bio-Rad S.A.-N.V. Begoniastraat 5, B-9810 Nazareth Eke • Phone 32-9-385-5511 • Telefax 32-9-385-6554 • *24h/365d:* 09-385-5511  
**Brazil**, Bio-Rad Laboratórios Brasil Ltda, Rua Alfredo Albano da Costa, 100, sl 1, 2 e 3, Lagoa Santa, CEP: 33.400-000 • Phone +55 (31)3689-6600 •  
 Telefax +55 (31)3689-6611 • *24h/365d:* (11) 99118 7957  
**Canada**, Bio-Rad Laboratories, Ltd., 2403 Guénette Street, Montréal, Québec H4R 2E9 • Phone 1-514-334-4372 • Telefax 1-514-334-4415 •  
*24h/365d:* 514-334-4372  
**China**, Bio-Rad Laboratories Shanghai Ltd. 3rd Floor, #18 Dong Fang Road, Bldg E, Poly Plaza, Pudong, Shanghai, PRC 200120 • Phone 86-21-61698500 •  
 Telefax 86-21-61698599 • *24h/365d:* 86-21-63052255  
**Czech Republic**, Bio-Rad spol. s r.o., Nad ostrovem 1119/7, 147 00 Prague 4 • Phone 420-241-430-532 • Telefax 420-241-431-642 • *24h/365d:* 224 919 293  
**Denmark**, Bio-Rad Laboratories, Symbion Science Park, Fruebjergvej 3, DK-2100 Copenhagen East • Phone +45-4452-1000 • Telefax +45-4452-1001 •  
*24h/365d:* +45 4452 1000  
**Finland**, Bio-Rad Laboratories, Linnanherrankuja 16, FIN-00950 Helsinki • Phone 358-9-804-22-00 • Telefax 358-9-7597-5010 • *24h/365d:* +358 9 804 2200

- France**, Bio-Rad, 3 boulevard Raymond Poincaré, 92430 Marnes-la-Coquette • Phone 33-1-47-95-60-00 • Telefax 33-1-47-41-91-33 •  
*24h/365d*: +33 (0)1 47 95 60 00
- Germany**, Bio-Rad Laboratories GmbH, Heidemannstrasse 164, D-80939 Munich • Phone +49-(0)89-318-840 • Telefax +49-(0)89-318-84100 •  
*24h/365d*: 0049-89-31884-0
- Greece**, Bio-Rad Laboratories M.E.P.E, 2-4 Mesogeion Street, Fourth Floor 115 27 Athens • Phone 30-210-7774396 • Telefax 30-210-7774376
- Hong Kong**, Bio-Rad Pacific Ltd., Unit 1101, 11/F DCH Commercial Centre, 25 Westlands Road, Quarry Bay • Phone 852-2789-3300 • Telefax 852-2789-1290 •  
*24h/365d*: 852-2789-3300
- Hungary**, Bio-Rad Hungary Ltd., H-1082 Budapest, Futo Street 47-53, Hungary • Phone +36-1-459-6100 • Telefax +36-1-459-6101 • *24h/365d*: 36 1 459 6100
- India**, Bio-Rad Laboratories (India) Pvt. Ltd., Bio-Rad House, 86-87, Udyog Vihar, Phase IV, Gurgaon, Haryana 122 015 • Phone 1-800-180-1224 •  
Telefax 91-124-2398115 • *24h/365d*: 91-124-2398112/113/114
- Israel**, Bio-Rad Laboratories Ltd., 14 Homa Street, New Industrial Area, Rishon Le Zion 75655 • Phone 972-3-9636050 • Telefax 972-3-9514129 •  
*24h/365d*: 972-3-951-4127
- Italy**, Bio-Rad Laboratories S.r.l., Via Cellini 18/A, 20090 Segrate, Milan • Phone +39-02-216091 • Telefax +39-02-21609553 • *24h/365d*: 02-216091
- Japan**, Bio-Rad Laboratories K.K., Tennoz Central Tower 20F, 2-2-24 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 • Phone 81-3-6361-7070
- Korea**, Bio-Rad Korea Ltd., 10th Floor, Hyunjuk Building, 832-41, Gangnam-gu, Seoul 135-080 • Phone 82-2-3473-4460 • Telefax 82-2-3472-7003 •  
*24h/365d*: 852-2789-330
- Mexico**, Bio-Rad, S.A., Avenida Eugenia 197, Piso 10-A, Col. Narvarte, C.P. 03020 Mexico, D.F. • Phone +52 (55) 54 88 76 70 • Telefax +52 (55) 1107-7246 •  
*24h/365d*: + 52 1 (55) 20 46 47 77
- The Netherlands**, Bio-Rad Laboratories B.V., Fokkerstraat 2-8, 3905 KV Veenendaal • Phone +31-318-540666 • Telefax +31-318-542216 •  
*24h/365d*: 31-318-540666
- New Zealand**, Bio-Rad New Zealand, 189 Bush Road Unit B, Albany, Auckland • Phone 64-9-415-2280 • Telefax 64-9-415-2284 • *24h/365d*: 64-9-415-2280
- Norway**, Bio-Rad Laboratories, Nydalsveien 33, 0484 Oslo • Phone +47-23-38-41-30 • Telefax +46(0)8-5551-2780 • *24h/365d*: 47 23 38 41 30
- Poland**, Bio-Rad Polska Sp. z o.o., Nakielska Str. 3, 01-106 Warsaw • Phone 48-22-3319999 • Telefax 48-22-3319988 • *24h/365d*: 48 (22) 331 99 85
- Portugal**, Bio-Rad Laboratories, Lda., Edificio Prime, Ave. Quinta Grande, 53 – Fração 3B Alfragide 26114-521 Amadora • Phone 351-21-472-7700 •  
Telefax 351-21-472-7777 • *24h/365d*: 351-21-472-7700
- Russia**, Bio-Rad Laboratorii, Russian Federation, Moscow, Varshavskoe sh., 9, Bldg., 1B • Phone: +7-495-721-1404 • Telefax +7-495-721-1412
- Singapore**, Bio-Rad Laboratories (Singapore) Pte. Ltd., 27 International Business Park, #01-02 iQuest @IBP, Singapore 609924 • Phone 65-6415-3170 •  
Telefax 65-6415-3189 • *24/7/365*: 65-6415-3188 • *24h/365d*: 65-6415-3188
- South Africa**, Bio-Rad Laboratories (Pty) Ltd., 34 Bolton Road, Parkwood, Johannesburg 2193 • Phone 27-11-442-85-08 • Telefax 27-11-442-85-25
- Spain**, Bio-Rad Laboratories, S.A., C/ Caléndula, 95, Edificio M. Miniparc II, El Soto de la Moraleja, 28109 Madrid • Phone 34-91-590-5200 •  
Telefax 34-91-590-5211 • *24h/365d*: 34-91-590-5200
- Sweden**, Bio-Rad Laboratories A.B., Box 1097, Solna Strandväg 3, SE-171 54, Solna • Phone +46-8-555-127-00 • Telefax +46-8-555-127-80 •  
*24h/365d*: 46-8-55 51 27 00
- Switzerland**, Bio-Rad Laboratories AG, Pra Rond 23 CH-1785 Cressier • Phone +41 (0)26-674-55-05/06 • Telefax +41 (0)26-674-52-19 •  
Email: [swiss@bio-rad.com](mailto:swiss@bio-rad.com) • *24h/365d*: 41-61-7179555
- Taiwan**, Bio-Rad Laboratories Taiwan Ltd., 14F-B, No. 126 Nan-King East Road, Sec. 4, Taipei, Taiwan 10546 R.O.C. • Phone 886-2-2578-7189 •  
Telefax 886-2-2578-6890
- Thailand**, Bio-Rad Laboratories Ltd., 1st & 2nd Floor, Lumpini I Bldg., 239/2 Rajdamri Rd., Lumpini, Pathumwan, Bangkok 10330 • Phone 662-651-8311 •  
Telefax 662-651-8312
- United Kingdom**, Bio-Rad Laboratories Ltd., Bio-Rad House, Maxted Road, Hemel Hempstead, Herts HP2 7DX • Phone +44 (0)20-8328-2000 •  
Telefax +44 (0)20-8328-2550 • *24h/365d*: 020-8328-2000

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