

Hazard Overview

Version 6.21
Revision Date 07/20/2026
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SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : Spectrum™ Plant Total RNA Kit

Product Number : STRN50

Brand : Sigma

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

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

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

Flammable liquids	: Category 4
Acute toxicity (Oral)	: Category 3
Acute toxicity (Inhalation)	: Category 3
Acute toxicity (Dermal)	: Category 2
Skin irritation	: Category 2
Serious eye damage	: Category 1
Skin sensitisation	: Category 1
Reproductive toxicity	: Category 2
Specific target organ toxicity - repeated exposure (Oral)	: Category 2 (Liver, Heart)
Short-term (acute) aquatic hazard	: Category 1
Long-term (chronic) aquatic hazard	: Category 2

Other hazards

None known.

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H227 Combustible liquid.
H301 + H331 Toxic if swallowed or if inhaled.
H310 Fatal in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (Liver, Heart) through prolonged or repeated exposure if swallowed.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Supplemental Hazard : Corrosive to the respiratory tract.
Statements

Precautionary statements : **Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist or vapours.
P262 Do not get in eyes, on skin, or on clothing.
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/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P302 + P352 + P310 IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Please refer to component Safety Data Sheet and/or to Section 16 Kit components

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 GHS label elements

- | | |
|---|---|
| Advice on protection against fire and explosion | : Keep away from open flames, hot surfaces and sources of ignition.
Take precautionary measures against static discharge. |
| Advice on safe handling | : Work under hood. Do not inhale substance/mixture.
Avoid generation of vapours/aerosols. |
| Further information on storage conditions | : Tightly closed.
Keep in a well-ventilated place.
Keep locked up or in an area accessible only to qualified or authorised persons. |
| Storage class | : 6.1A, Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials |
| Recommended storage temperature | : 59 - 77 °F / 15 - 25 °C |

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
Proper shipping name	: CHEMICAL KIT
Class	: 9
Packing group	: II
Labels	: 9
EmS Code	: F-A, <u>S</u> -P
Marine pollutant	: no

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

National Regulations

49 CFR

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

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

SECTION 16. OTHER INFORMATION

Kit Components:

Lysis solution	Sigma	L8167
2-Mercaptoethanol	Sigma	M3148
Binding solution	Sigma	L8042
Wash solution 1	Sigma	W1141
Wash solution 2	Sigma	W3261
Concentrate for Total RNA		
Elution solution	Sigma	E8024

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;

Sigma - STRN50

Page 6 of 13

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 : 07/20/2026

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

US / EN

Kit Components:

Lysis solution					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - L8167		Warning	Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled. Harmful to aquatic life.	Do not breathe mist or vapours. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. Dispose of contents/ container to an approved waste disposal plant. Wash skin thoroughly after handling. IF ON SKIN: Wash with plenty of water. Do not eat, drink or smoke when using this product. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Avoid release to the environment. Get medical advice/ attention if you feel unwell. Wear protective gloves/ eye protection/ face	

Sigma - STRN50

Page 8 of 13

				protection. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.	
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2-Mercaptoethanol

Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - M3148		Danger	Combustible liquid. Toxic if swallowed or if inhaled. Fatal in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Suspected of damaging fertility or the unborn child. May cause damage to organs (Liver, Heart) through prolonged or repeated exposure if swallowed. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.	Obtain special instructions before use. IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/ container to an approved waste disposal plant. Do not handle until all safety precautions have been read and understood. IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor. Store locked up. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF INHALED: Remove person	

Sigma - STRN50

Page 9 of 13

				to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. Do not breathe mist or vapours. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. Do not get in eyes, on skin, or on clothing. IF exposed or concerned: Get medical advice/ attention. Wash skin thoroughly after handling. If skin irritation or rash occurs: Get medical advice/ attention. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Use only outdoors or in a well-ventilated area. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to	
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				extinguish. Contaminated work clothing must not be allowed out of the workplace. Collect spillage. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.	
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Binding solution

Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - L8042		Warning	Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.	Wash skin thoroughly after handling. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. Dispose of contents/ container to an approved waste disposal plant. Do not eat, drink or smoke when using this product. IF ON SKIN: Wash with plenty of water. Wear protective gloves/ eye protection/ face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.	

Sigma - STRN50

Page 11 of 13

				Continue rinsing. 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.	
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Wash solution 1

Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - W1141					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Wash solution 2 Concentrate for Total RNA

Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - W3261					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Elution solution

Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - E8024					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Sigma - STRN50

Page 12 of 13

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