

• SAFETY DATA SHEET

Version 8.12
Revision Date 03/16/2026
Print Date 03/17/2026

SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : FragEL™ DNA Fragmentation Detection Kit,
Colorimetric - TdT Enzyme

Product Number : QIA33
Catalogue No. : D55426
Brand : Millipore

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

Identified uses : Biochemical research/analysis

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

Oxidizing liquids : Category 3

Acute toxicity (Oral) : Category 4

Acute toxicity : Category 4

Millipore - QIA33

Page 1 of 14

(Inhalation)

Skin irritation	: Category 2
Serious eye damage	: Category 1
Respiratory sensitisation	: Category 1
Skin sensitisation	: Category 1
Germ cell mutagenicity	: Category 2
Carcinogenicity	: Category 1B
Specific target organ toxicity - repeated exposure (Inhalation)	: Category 2 (Respiratory Tract)
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 : Danger

Hazard statements : H272 May intensify fire; oxidizer.
H302 + H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H373 May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.
H411 Toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : Corrosive to the respiratory tract.

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.
P220 Keep away from clothing and other combustible materials.
P260 Do not breathe 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/ protective clothing/ eye protection/ face protection.
P285 In case of inadequate ventilation wear respiratory protection.

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 + 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.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.

Storage:

P405 Store locked up.

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.

Advice on protection against fire and explosion	: Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	: Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.
Further information on storage conditions	: Tightly closed. Away from combustible materials and sources of ignition and heat. Keep locked up or in an area accessible only to qualified or authorised persons. Do not store near combustible materials.
Storage class	: 5.1B, Oxidizing hazardous materials
Recommended storage temperature	: Recommended storage temperature see product label.
Further information on storage stability	: Recommended storage temperature see product label.

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	: III
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	: III
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 Road

UN/ID/NA number	: UN 3316
Proper shipping name	: Chemical kit
Class	: 9

Packing group : III
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

SECTION 16. OTHER INFORMATION

Kit Components:

Proteinase K	Millipore	JA1477
5X TdT Equilibration Buffer	Millipore	JA1558
TdT Labeling Reaction Mix	Millipore	JA1559
TdT Enzyme	Millipore	JA1560
Stop Solution	Millipore	JA1479
Block Buffer	Millipore	JA1480
50X Conjugate	Millipore	JA1481
DAB Tablets	Millipore	JA1485
H2O2/Urea Tablets	Millipore	JA1486
Methyl Green Counterstain	Millipore	JA1482

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 -

Millipore - QIA33

Page 6 of 14

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

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 : 03/16/2026

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US / EN

Kit Components:

Proteinase K					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1477		Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	Avoid breathing mist or vapours. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Dispose of contents/ container to an approved waste disposal plant. In case of inadequate ventilation wear respiratory protection. If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.	

5X TdT Equilibration Buffer					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1558		Danger	Harmful if swallowed or if inhaled. May cause cancer. Toxic to aquatic life with long lasting effects.	Obtain special instructions before use. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. Store locked up. Dispose of contents/ container to an	

				approved waste disposal plant. Do not handle until all safety precautions have been read and understood. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. Avoid breathing mist or vapours. IF exposed or concerned: Get medical advice/ attention. Wash skin thoroughly after handling. Collect spillage. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.	
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TdT Labeling Reaction Mix					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1559		Danger	May cause cancer. Toxic to aquatic life with long lasting effects.	Obtain special instructions before use. IF exposed or concerned: Get	

				medical advice/ attention. Store locked up. Dispose of contents/ container to an approved waste disposal plant. Do not handle until all safety precautions have been read and understood. Collect spillage. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.	
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TdT Enzyme					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1560					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Stop Solution					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1479		Warning	May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.	Do not breathe mist or vapours. Get medical advice/ attention if you feel unwell. Dispose of contents/ container to an approved waste disposal plant.	

Block Buffer					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1480					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

50X Conjugate					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1481		Danger	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.	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 INHALED: Remove person to fresh air and keep comfortable for breathing. Wear protective gloves. If skin irritation or rash occurs: Get medical advice/ attention. In case of inadequate ventilation wear respiratory protection. If experiencing respiratory symptoms: Call a POISON	

				CENTER/ doctor. Take off contaminated clothing and wash it before reuse.	
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DAB Tablets

Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1485		Danger	Harmful if swallowed. Causes serious eye irritation. Suspected of causing genetic defects. May cause cancer.	Obtain special instructions before use. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. Store locked up. Dispose of contents/ container to an approved waste disposal plant. Do not handle until all safety precautions have been read and understood. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash skin thoroughly after handling. IF exposed or concerned: Get medical advice/ attention. Do not eat, drink or smoke when using this product. If eye irritation persists: Get	

Millipore - QIA33

Page 12 of 14

				medical advice/ attention. Wear protective gloves/ protective clothing/ eye protection/ face protection.	
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H2O2/Urea Tablets					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1486		Danger	May intensify fire; oxidizer. Causes skin irritation. Causes serious eye damage.	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF ON SKIN: Wash with plenty of water. Dispose of contents/ container to an approved waste disposal plant. Keep away from clothing and other combustible materials. 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. Wash skin thoroughly after handling. If skin irritation occurs: Get medical advice/ attention.	

Millipore - QIA33

Page 13 of 14

				Wear protective gloves/ protective clothing/ eye protection/ face protection. Take off contaminated clothing and wash it before reuse. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.	
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Methyl Green Counterstain					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Millipore - JA1482					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.