SAFETY DATA SHEETS

LymphoTrack® Dx Assays - MiSeq™

This document includes the Safety Data Sheets for reagents included in LymphoTrack Dx - MiSeq Assays, Catalog Numbers listed below.

Catalog Number	Description
91210009	LymphoTrack Dx *IGH* FR1 Assay Kit A - MiSeq
91210039	LymphoTrack Dx *IGH* FR1 Assay Panel - MiSeq
91210059	LymphoTrack Dx *IGHV* Leader Somatic Hypermutation Assay Kit A - MiSeq
91210069	LymphoTrack Dx *IGHV* Leader Somatic Hypermutation Assay Panel - MiSeq
91210089	LymphoTrack Dx *IGH* FR2 Assay Kit A - MiSeq
91210099	LymphoTrack Dx *IGH* FR2 Assay Panel - MiSeq
91210109	LymphoTrack Dx *IGH* FR3 Assay Kit A - MiSeq
91210119	LymphoTrack Dx *IGH* FR3 Assay Panel - MiSeq
91210129	LymphoTrack Dx *IGH* FR1/2/3 Assay Kit A - MiSeq
91210139	LymphoTrack Dx *IGH* FR1/2/3 Assay Panel - MiSeq
91220009	LymphoTrackDx *IGK* Assay Kit A - MiSeq
91220019	LymphoTrack Dx *IGK* Assay Panel - MiSeq
92250009	LymphoTrack Dx *TRB* Assay Kit A - MiSeq
92250019	LymphoTrack Dx *TRB* Assay Panel - MiSeq
92270009	LymphoTrack Dx *TRG* Assay Panel - MiSeq
92270019	LymphoTrack Dx *TRG* Assay Kit A - MiSeq

Conforms to HCS 2021 – United States

SAFETY DATA SHEET

Section 1: Identification

GHS product identifier :	Part number :	Other means of identification :
IGH SHM Positive Control DNA	40880008	*IGH* SHM Positive Control DNA
IGH Positive Control	40880009	*IGH* Positive Control
IGK Positive	40880018	*IGK* Positive
TRB Positive Control	40880058	*TRB* Positive Control
NGS Negative Control	40920018	NGS Negative Control
TRG POS (+) Control	42270019	*TRG* POS (+) Control

Product type : Liquid

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

Identified uses	For use as qualitative PCR controls.
Restrictions on use	: For professional users only.

Supplier's details :
Invivoscribe, Inc.
10222 Barnes Canyon Road, Building 1
San Diego, CA
92121 USA
Tel: 1 858 224 6000
Toll Free: 1 866 623 8105
Email: customerservice@invivoscribe.com
Website: invivoscribe.com

Emergency telephone (with hours of operation) : 1 866 623 8105
8 AM – 5 PM PST

Section 2. Hazards Identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910:1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Compositions/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training.

Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water soluble. Alternatively, or if water soluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8)..

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure to controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure to controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicated this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. In contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with and approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid. [Clear.]
Color	:	Colorless.
Odor	:	Slight.
Odor threshold	:	Not available.
pH	:	Not available.
Melting/freezing point	:	Not available.
Initial boiling point and boiling range	:	Not available.
Flash point	:	Does not flash.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility	:	Not available.
Solubility in water	:	Not available.
Partition coefficient: n-octanol/water	:	Not applicable.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Not available.
Flow time (ISO 2431)	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific Target organ toxicity (single exposure)

There is no data available.

Specific Target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Routes on entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact	:	No known significant effects or critical hazards.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	No known significant effects or critical hazards.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	:	No known significant effects or critical hazards.
Potential delayed effects	:	No known significant effects or critical hazards.

Long term exposure

Potential immediate effects	:	No known significant effects or critical hazards.
Potential delayed effects	:	No known significant effects or critical hazards.

Potential chronic health effects

General	:	No known significant effects or critical hazards.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Reproductive toxicity	:	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solution and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental Hazards	No.	No.	No.

AERG : Not applicable

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transportation in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined.
Clean Water Act (CWA) 311: Edetic Acid; Hydochloric Acid.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Hydrochloric acid	≤0.001	Yes.	500	-	5000	-

SARA 304 RQ : 634763213.6 lbs / 288182499 kg

Section 15. Regulatory information

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients No products were found

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65 : This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not Listed.

Montreal Protocol

Not Listed.

Stockholm Convention on Persistent Organic Pollutants

Not Listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not Listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not Listed.

Inventory list

United States (TSCA 8b) : All components are active or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Not classified.	

History

Date of issue/Date of revision : 4/15/2021

Date of previous issue : Not applicable.

Version : 1

Internal code : 651-004

Prepared by : Invivoscribe, Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMGD = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water portion coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (“Marpol” = maritime pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Section 1: Identification

GHS product identifier	Part number	Other means of identification
IGH FR1 MiSeq 01	21210009CE	*IGH* FR1 MiSeq 01
IGH FR1 MiSeq 02	21210019CE	*IGH* FR1 MiSeq 02
IGH FR1 MiSeq 03	21210029CE	*IGH* FR1 MiSeq 03
IGH FR1 MiSeq 04	21210039CE	*IGH* FR1 MiSeq 04
IGH FR1 MiSeq 05	21210049CE	*IGH* FR1 MiSeq 05
IGH FR1 MiSeq 06	21210059CE	*IGH* FR1 MiSeq 06
IGH FR1 MiSeq 07	21210069CE	*IGH* FR1 MiSeq 07
IGH FR1 MiSeq 08	21210079CE	*IGH* FR1 MiSeq 08
IGH FR1 MiSeq 09	21210089CE	*IGH* FR1 MiSeq 09
IGH FR1 MiSeq 10	21210099CE	*IGH* FR1 MiSeq 10
IGH FR1 MiSeq 11	21210109CE	*IGH* FR1 MiSeq 11
IGH FR1 MiSeq 12	21210119CE	*IGH* FR1 MiSeq 12
IGH FR1 MiSeq 13	21210129CE	*IGH* FR1 MiSeq 13
IGH FR1 MiSeq 14	21210139CE	*IGH* FR1 MiSeq 14
IGH FR1 MiSeq 15	21210149CE	*IGH* FR1 MiSeq 15
IGH FR1 MiSeq 16	21210159CE	*IGH* FR1 MiSeq 16
IGH FR1 MiSeq 18	21210169CE	*IGH* FR1 MiSeq 18
IGH FR1 MiSeq 19	21210179CE	*IGH* FR1 MiSeq 19
IGH FR1 MiSeq 20	21210189CE	*IGH* FR1 MiSeq 20
IGH FR1 MiSeq 21	21210199CE	*IGH* FR1 MiSeq 21
IGH FR1 MiSeq 22	21210209CE	*IGH* FR1 MiSeq 22
IGH FR1 MiSeq 23	21210219CE	*IGH* FR1 MiSeq 23
IGH FR1 MiSeq 25	21210229CE	*IGH* FR1 MiSeq 25
IGH FR1 MiSeq 27	21210239CE	*IGH* FR1 MiSeq 27
IGH Leader MiSeq 01	21210249CE	*IGH* Leader MiSeq 01
IGH Leader MiSeq 02	21210259CE	*IGH* Leader MiSeq 02
IGH Leader MiSeq 03	21210269CE	*IGH* Leader MiSeq 03
IGH Leader MiSeq 04	21210279CE	*IGH* Leader MiSeq 04
IGH Leader MiSeq 05	21210289CE	*IGH* Leader MiSeq 05
IGH Leader MiSeq 06	21210299CE	*IGH* Leader MiSeq 06
IGH Leader MiSeq 07	21210309CE	*IGH* Leader MiSeq 07
IGH Leader MiSeq 08	21210319CE	*IGH* Leader MiSeq 08
IGH Leader MiSeq 09	21210329CE	*IGH* Leader MiSeq 09
IGH Leader MiSeq 10	21210339CE	*IGH* Leader MiSeq 10
IGH Leader MiSeq 11	21210349CE	*IGH* Leader MiSeq 11
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IGH Leader MiSeq 13	21210369CE	*IGH* Leader MiSeq 13
IGH Leader MiSeq 14	21210379CE	*IGH* Leader MiSeq 14
IGH Leader MiSeq 15	21210389CE	*IGH* Leader MiSeq 15
IGH Leader MiSeq 16	21210399CE	*IGH* Leader MiSeq 16
IGH Leader MiSeq 18	21210409CE	*IGH* Leader MiSeq 18
IGH Leader MiSeq 19	21210419CE	*IGH* Leader MiSeq 19
IGH Leader MiSeq 20	21210429CE	*IGH* Leader MiSeq 20
IGH Leader MiSeq 21	21210439CE	*IGH* Leader MiSeq 21
IGH Leader MiSeq 22	21210449CE	*IGH* Leader MiSeq 22
IGH Leader MiSeq 23	21210459CE	*IGH* Leader MiSeq 23

Section 1: Identification

GHS product identifier	Part number	Other means of identification
IGH Leader MiSeq 25	21210469CE	*IGH* Leader MiSeq 25
IGH Leader MiSeq 27	21210479CE	*IGH* Leader MiSeq 27
IGH FR2 MiSeq 01	21210489CE	*IGH* FR2 MiSeq 01
IGH FR2 MiSeq 02	21210499CE	*IGH* FR2 MiSeq 02
IGH FR2 MiSeq 03	21210509CE	*IGH* FR2 MiSeq 03
IGH FR2 MiSeq 04	21210519CE	*IGH* FR2 MiSeq 04
IGH FR2 MiSeq 05	21210529CE	*IGH* FR2 MiSeq 05
IGH FR2 MiSeq 06	21210539CE	*IGH* FR2 MiSeq 06
IGH FR2 MiSeq 07	21210549CE	*IGH* FR2 MiSeq 07
IGH FR2 MiSeq 08	21210559CE	*IGH* FR2 MiSeq 08
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IGH FR2 MiSeq 18	21210649CE	*IGH* FR2 MiSeq 18
IGH FR2 MiSeq 19	21210659CE	*IGH* FR2 MiSeq 19
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IGH FR2 MiSeq 21	21210679CE	*IGH* FR2 MiSeq 21
IGH FR2 MiSeq 22	21210689CE	*IGH* FR2 MiSeq 22
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IGH FR2 MiSeq 25	21210709CE	*IGH* FR2 MiSeq 25
IGH FR2 MiSeq 27	21210719CE	*IGH* FR2 MiSeq 27
IGH FR3 MiSeq 01	21210729CE	*IGH* FR3 MiSeq 01
IGH FR3 MiSeq 02	21210739CE	*IGH* FR3 MiSeq 02
IGH FR3 MiSeq 03	21210749CE	*IGH* FR3 MiSeq 03
IGH FR3 MiSeq 04	21210759CE	*IGH* FR3 MiSeq 04
IGH FR3 MiSeq 05	21210769CE	*IGH* FR3 MiSeq 05
IGH FR3 MiSeq 06	21210779CE	*IGH* FR3 MiSeq 06
IGH FR3 MiSeq 07	21210789CE	*IGH* FR3 MiSeq 07
IGH FR3 MiSeq 08	21210799CE	*IGH* FR3 MiSeq 08
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IGH FR3 MiSeq 19	21210899CE	*IGH* FR3 MiSeq 19
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IGH FR3 MiSeq 22	21210929CE	*IGH* FR3 MiSeq 22
IGH FR3 MiSeq 23	21210939CE	*IGH* FR3 MiSeq 23
IGH FR3 MiSeq 25	21210949CE	*IGH* FR3 MiSeq 25

Section 1: Identification

GHS product identifier	Part number	Other means of identification
IGH FR3 MiSeq 27	21210959CE	*IGH* FR3 MiSeq 27
IGK MiSeq 01	21220009CE	*IGK* MiSeq 01
IGK MiSeq 02	21220019CE	*IGK* MiSeq 02
IGK MiSeq 03	21220029CE	*IGK* MiSeq 03
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IGK MiSeq 21	21220199CE	*IGK* MiSeq 21
IGK MiSeq 22	21220209CE	*IGK* MiSeq 22
IGK MiSeq 23	21220219CE	*IGK* MiSeq 23
IGK MiSeq 25	21220229CE	*IGK* MiSeq 25
IGK MiSeq 27	21220239CE	*IGK* MiSeq 27
TRB MiSeq 01	22250009CE	*TRB* MiSeq 01
TRB MiSeq 02	22250019CE	*TRB* MiSeq 02
TRB MiSeq 03	22250029CE	*TRB* MiSeq 03
TRB MiSeq 04	22250039CE	*TRB* MiSeq 04
TRB MiSeq 05	22250049CE	*TRB* MiSeq 05
TRB MiSeq 06	22250059CE	*TRB* MiSeq 06
TRB MiSeq 07	22250069CE	*TRB* MiSeq 07
TRB MiSeq 08	22250079CE	*TRB* MiSeq 08
TRB MiSeq 09	22250089CE	*TRB* MiSeq 09
TRB MiSeq 10	22250099CE	*TRB* MiSeq 10
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TRB MiSeq 14	22250139CE	*TRB* MiSeq 14
TRB MiSeq 15	22250149CE	*TRB* MiSeq 15
TRB MiSeq 16	22250159CE	*TRB* MiSeq 16
TRB MiSeq 18	22250169CE	*TRB* MiSeq 18
TRB MiSeq 19	22250179CE	*TRB* MiSeq 19
TRB MiSeq 20	22250189CE	*TRB* MiSeq 20
TRB MiSeq 21	22250199CE	*TRB* MiSeq 21
TRB MiSeq 22	22250209CE	*TRB* MiSeq 22
TRB MiSeq 23	22250219CE	*TRB* MiSeq 23
TRB MiSeq 25	22250229CE	*TRB* MiSeq 25
TRB MiSeq 27	22250239CE	*TRB* MiSeq 27

Section 1: Identification

GHS product identifier	Part number	Other means of identification
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TRG MiSeq 02	22270029CE	*TRG* MiSeq 02
TRG MiSeq 03	22270039CE	*TRG* MiSeq 03
TRG MiSeq 04	22270049CE	*TRG* MiSeq 04
TRG MiSeq 05	22270059CE	*TRG* MiSeq 05
TRG MiSeq 06	22270069CE	*TRG* MiSeq 06
TRG MiSeq 07	22270079CE	*TRG* MiSeq 07
TRG MiSeq 08	22270089CE	*TRG* MiSeq 08
TRG MiSeq 09	22270099CE	*TRG* MiSeq 09
TRG MiSeq 10	22270109CE	*TRG* MiSeq 10
TRG MiSeq 11	22270119CE	*TRG* MiSeq 11
TRG MiSeq 12	22270129CE	*TRG* MiSeq 12
TRG MiSeq 13	22270139CE	*TRG* MiSeq 13
TRG MiSeq 14	22270149CE	*TRG* MiSeq 14
TRG MiSeq 15	22270159CE	*TRG* MiSeq 15
TRG MiSeq 16	22270169CE	*TRG* MiSeq 16
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TRG MiSeq 19	22270199CE	*TRG* MiSeq 19
TRG MiSeq 20	22270209CE	*TRG* MiSeq 20
TRG MiSeq 21	22270219CE	*TRG* MiSeq 21
TRG MiSeq 22	22270229CE	*TRG* MiSeq 22
TRG MiSeq 23	22270239CE	*TRG* MiSeq 23
TRG MiSeq 25	22270259CE	*TRG* MiSeq 25
TRG MiSeq 27	22270279CE	*TRG* MiSeq 27

Product type : Liquid

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

Identified uses	For amplification of gene rearrangements.
Restrictions on use	: For professional users only.

Supplier's details :
Invivoscribe, Inc.
10222 Barnes Canyon Road, Building 1
San Diego, CA
92121 USA
Tel: 1 858 224 6000
Toll Free: 1 866 623 8105
Email: customerservice@invivoscribe.com
Website: invivoscribe.com

Emergency telephone (with hours of operation) : 1 866 623 8105
8 AM – 5 PM PST

Section 2. Hazards Identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910:1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Section 2. Hazards Identification

Precautionary statements

- Prevention : Not applicable.
- Response : Not applicable.
- Storage : Not applicable.
- Disposal : Not applicable.
- Hazards not otherwise classified : None known.

Section 3. Compositions/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient Name	%	CAS Number
Dimethyl Sulfoxide	≥1 - ≤3	67-68-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.
- Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact : No known significant effects or critical hazards.
- Inhalation : No known significant effects or critical hazards.
- Skin contact : No known significant effects or critical hazards.
- Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact : No known significant effects or critical hazards.
- Inhalation : No known significant effects or critical hazards.
- Skin contact : No known significant effects or critical hazards.
- Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments : No specific treatment.
- Protection of first aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	None known.
Specific hazards arising from the chemical	:	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
Special protective actions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill	:	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water soluble. Alternatively, or if water soluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure to controls/personal protection

Control parameters

Occupational exposure limits

Ingredient Name	Exposure limits
Dimethyl sulfoxide	**AIHA WEEL (United States, 7/2018).** TWA: 250 ppm 8 hours

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location..

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicated this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. In contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with and approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Clear.]

Color : Colorless, light yellow, light pink, light blue or light orange.

Odor : Odorless.

Odor threshold : Not available.

pH : 7 to 9.5.

Melting/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flash point : Does not flash.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Dimethyl sulfoxide	LD50 Dermal LD50 Oral	Rat Rat	40000 mg/kg 14500 mg/kg	- -

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific Target organ toxicity (single exposure)

There is no data available.

Specific Target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Routes on entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Dimethyl sulfoxide	14500	40000	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Dimethyl sulfoxide	Acute EC50 18299 µg/L Marine water Acute LC50 37.437 mg/L Marine water Acute LC50 25000 ppm Fresh water Acute LC50 34000000 µg/L Fresh water Chronic NOEC 3323 µg/L Marine water Chronic NOEC 100 µl/L Fresh water	Algae – Nitzschia pungens Crustaceans – Artemia sp. Daphnie – Daphnia magna – Neonate Fish – Pimephales promelas Algea – Nitzschia pungens Daphnia – Daphnia magna – Juvenile (Fledgling, Hatchling, Weanling)	96 hour 48 hours 48 hours 96 hours 96 hours 21 days

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogP	BCF	Potential
Dimethyl sulfoxide	-1.35	3.16	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solution and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental Hazards	No.	No.	No.

AERG : Not applicable

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transportation in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined.
Clean Water Act (CWA) 311: Hydrochloric Acid.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Hydrochloric acid	≤0.0025	Yes.	500	-	5000	-

SARA 304 RQ : 277831623,1 lbs / 126135556,9 kg

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The components are listed: Dimethyl sulfoxide.

Pennsylvania : None of the components are listed.

California Prop. 65 This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not Listed.

Montreal Protocol

Not Listed.

Stockholm Convention on Persistent Organic Pollutants

Not Listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not Listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not Listed.

Inventory list

United States (TSCA 8b) : All components are active or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Not classified.	

History

Date of issue/Date of revision : 4/15/2021

Date of previous issue : Not applicable.

Version : 1

Internal code : 651-005

Prepared by : Invivoscribe, Inc..

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMGD = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water portion coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 ("Marpol" = maritime pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.