SAFETY DATA SHEETS

LymphoTrack® Assays - MiSeq™

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

Catalog Number	Description
71210009	LymphoTrack *IGH* FR1 Assay Kit A - MiSeq
71210039	LymphoTrack *IGH* FR1 Assay Panel - MiSeq
71210059	LymphoTrack *IGHV* Leader Somatic Hypermutation Assay Kit A - MiSeq
71210069	LymphoTrack *IGHV* Leader Somatic Hypermutation Assay Panel - MiSeq
71210089	LymphoTrack *IGH* FR2 Assay Kit A - MiSeq
71210099	LymphoTrack *IGH* FR2 Assay Panel - MiSeq
71210109	LymphoTrack *IGH* FR3 Assay Kit A - MiSeq
71210119	LymphoTrack *IGH* FR3 Assay Panel - MiSeq
71210129	LymphoTrack *IGH* FR1/2/3 Assay Kit A - MiSeq
71210139	LymphoTrack *IGH* FR1/2/3 Assay Panel - MiSeq
71210149	LymphoTrack *IGH* FR1 Assay Panel B – MiSeq
71220009	LymphoTrack *IGK* Assay Kit A - MiSeq
71220019	LymphoTrack *IGK* Assay Panel - MiSeq
72250009	LymphoTrack *TRB* Assay Kit A - MiSeq
72250019	LymphoTrack *TRB* Assay Panel - MiSeq
72270009	LymphoTrack *TRG* Assay Panel - MiSeq
72270019	LymphoTrack *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.

Section 1: Identification

GHS product identifier	Part number	Other means of identification
IGH FR1 MiSeq 01	21210009	*IGH* FR1 MiSeq 01
IGH FR1 MiSeq 02	21210019	*IGH* FR1 MiSeq 02
IGH FR1 MiSeq 03	21210029	*IGH* FR1 MiSeq 03
IGH FR1 MiSeq 04	21210039	*IGH* FR1 MiSeq 04
IGH FR1 MiSeq 05	21210049	*IGH* FR1 MiSeq 05
IGH FR1 MiSeq 06	21210059	*IGH* FR1 MiSeq 06
IGH FR1 MiSeq 07	21210069	*IGH* FR1 MiSeq 07
IGH FR1 MiSeq 08	21210079	*IGH* FR1 MiSeq 08
IGH FR1 MiSeq 09	21210089	*IGH* FR1 MiSeq 09
IGH FR1 MiSeq 10	21210099	*IGH* FR1 MiSeq 10
IGH FR1 MiSeq 11	21210109	*IGH* FR1 MiSeq 11
IGH FR1 MiSeq 12	21210119	*IGH* FR1 MiSeq 12
IGH FR1 MiSeq 13	21210129	*IGH* FR1 MiSeq 13
IGH FR1 MiSeq 14	21210139	*IGH* FR1 MiSeq 14
IGH FR1 MiSeq 15	21210149	*IGH* FR1 MiSeq 15
IGH FR1 MiSeq 16	21210159	*IGH* FR1 MiSeq 16
IGH FR1 MiSeq 18	21210169	*IGH* FR1 MiSeq 18
IGH FR1 MiSeq 19	21210179	*IGH* FR1 MiSeq 19
IGH FR1 MiSeq 20	21210189	*IGH* FR1 MiSeq 20
IGH FR1 MiSeq 21	21210199	*IGH* FR1 MiSeq 21
IGH FR1 MiSeq 22	21210209	*IGH* FR1 MiSeq 22
IGH FR1 MiSeq 23	21210219	*IGH* FR1 MiSeq 23
IGH FR1 MiSeq 25	21210229	*IGH* FR1 MiSeq 25
IGH FR1 MiSeq 27	21210239	*IGH* FR1 MiSeq 27
IGH Leader MiSeq 01	21210249	*IGH* Leader MiSeq 01
IGH Leader MiSeq 02	21210259	*IGH* Leader MiSeq 02
IGH Leader MiSeq 03	21210269	*IGH* Leader MiSeq 03
IGH Leader MiSeq 04	21210279	*IGH* Leader MiSeq 04
IGH Leader MiSeq 05	21210289	*IGH* Leader MiSeq 05
IGH Leader MiSeq 06	21210299	*IGH* Leader MiSeq 06
IGH Leader MiSeq 07	21210309	*IGH* Leader MiSeq 07
IGH Leader MiSeq 08	21210319	*IGH* Leader MiSeq 08
IGH Leader MiSeq 09	21210329	*IGH* Leader MiSeq 09
IGH Leader MiSeq 10	21210339	*IGH* Leader MiSeq 10
IGH Leader MiSeq 11	21210349	*IGH* Leader MiSeq 11
IGH Leader MiSeq 12	21210359	*IGH* Leader MiSeq 12
IGH Leader MiSeq 13	21210369	*IGH* Leader MiSeq 13
IGH Leader MiSeq 14	21210379	*IGH* Leader MiSeq 14
IGH Leader MiSeq 15	21210389	*IGH* Leader MiSeq 15
IGH Leader MiSeq 16	21210399	*IGH* Leader MiSeq 16
IGH Leader MiSeq 18	21210409	*IGH* Leader MiSeq 18
IGH Leader MiSeq 19	21210419	*IGH* Leader MiSeq 19
IGH Leader MiSeq 20	21210429	*IGH* Leader MiSeq 20
IGH Leader MiSeq 21	21210439	*IGH* Leader MiSeq 21
IGH Leader MiSeq 22	21210449	*IGH* Leader MiSeq 22
IGH Leader MiSeq 23	21210459	*IGH* Leader MiSeq 23
IGH Leader MiSeq 25	21210469	*IGH* Leader MiSeq 25

Section 1: Identification

GHS product identifier	Part number	Other means of identification
IGH Leader MiSeq 27	21210479	*IGH* Leader MiSeq 27
IGH FR2 MiSeq 01	21210489	*IGH* FR2 MiSeq 01
IGH FR2 MiSeq 02	21210499	*IGH* FR2 MiSeq 02
IGH FR2 MiSeq 03	21210509	*IGH* FR2 MiSeq 03
IGH FR2 MiSeq 04	21210519	*IGH* FR2 MiSeq 04
IGH FR2 MiSeq 05	21210529	*IGH* FR2 MiSeq 05
IGH FR2 MiSeq 06	21210539	*IGH* FR2 MiSeq 06
IGH FR2 MiSeq 07	21210549	*IGH* FR2 MiSeq 07
IGH FR2 MiSeq 08	21210559	*IGH* FR2 MiSeq 08
IGH FR2 MiSeq 09	21210569	*IGH* FR2 MiSeq 09
IGH FR2 MiSeq 10	21210579	*IGH* FR2 MiSeq 10
IGH FR2 MiSeq 11	21210589	*IGH* FR2 MiSeq 11
IGH FR2 MiSeq 12	21210599	*IGH* FR2 MiSeq 12
IGH FR2 MiSeq 13	21210609	*IGH* FR2 MiSeq 13
IGH FR2 MiSeq 14	21210619	*IGH* FR2 MiSeq 14
IGH FR2 MiSeq 15	21210629	*IGH* FR2 MiSeq 15
IGH FR2 MiSeq 16	21210639	*IGH* FR2 MiSeq 16
IGH FR2 MiSeq 18	21210649	*IGH* FR2 MiSeq 18
IGH FR2 MiSeq 19	21210659	*IGH* FR2 MiSeq 19
IGH FR2 MiSeq 20	21210669	*IGH* FR2 MiSeq 20
IGH FR2 MiSeq 21	21210679	*IGH* FR2 MiSeq 21
IGH FR2 MiSeq 22	21210689	*IGH* FR2 MiSeq 22
IGH FR2 MiSeq 23	21210699	*IGH* FR2 MiSeq 23
IGH FR2 MiSeq 25	21210709	*IGH* FR2 MiSeq 25
IGH FR2 MiSeq 27	21210719	*IGH* FR2 MiSeq 27
IGH FR3 MiSeq 01	21210729	*IGH* FR3 MiSeq 01
IGH FR3 MiSeq 02	21210739	*IGH* FR3 MiSeq 02
IGH FR3 MiSeq 03	21210749	*IGH* FR3 MiSeq 03
IGH FR3 MiSeq 04	21210759	*IGH* FR3 MiSeq 04
IGH FR3 MiSeq 05	21210769	*IGH* FR3 MiSeq 05
IGH FR3 MiSeq 06	21210779	*IGH* FR3 MiSeq 06
IGH FR3 MiSeq 07	21210789	*IGH* FR3 MiSeq 07
IGH FR3 MiSeq 08	21210799	*IGH* FR3 MiSeq 08
IGH FR3 MiSeq 09	21210809	*IGH* FR3 MiSeq 09
IGH FR3 MiSeq 10	21210819	*IGH* FR3 MiSeq 10
IGH FR3 MiSeq 11	21210829	*IGH* FR3 MiSeq 11
IGH FR3 MiSeq 12	21210839	*IGH* FR3 MiSeq 12
IGH FR3 MiSeq 13	21210849	*IGH* FR3 MiSeq 13
IGH FR3 MiSeq 14	21210859	*IGH* FR3 MiSeq 14
IGH FR3 MiSeq 15	21210869	*IGH* FR3 MiSeq 15
IGH FR3 MiSeq 16	21210879	*IGH* FR3 MiSeq 16
IGH FR3 MiSeq 18	21210889	*IGH* FR3 MiSeq 18
IGH FR3 MiSeq 19	21210899	*IGH* FR3 MiSeq 19
IGH FR3 MiSeq 20	21210909	*IGH* FR3 MiSeq 20
IGH FR3 MiSeq 21	21210919	*IGH* FR3 MiSeq 21
IGH FR3 MiSeq 22	21210929	*IGH* FR3 MiSeq 22
IGH FR3 MiSeq 23	21210939	*IGH* FR3 MiSeq 23
IGH FR3 MiSeq 25	21210949	*IGH* FR3 MiSeq 25
IGH FR3 MiSeq 27	21210959	*IGH* FR3 MiSeq 27

Section 1: Identification

GHS product identifier	Part number	Other means of identification
IGH FR1 MiSeq 17	21210969	*IGH* FR1 MiSeq 17
IGH FR1 MiSeq 24	21210979	*IGH* FR1 MiSeq 24
IGH FR1 MiSeq 26	21210989	*IGH* FR1 MiSeq 26
IGH FR1 MiSeq 28	21210999	*IGH* FR1 MiSeq 28
IGH FR1 MiSeq 29	21211009	*IGH* FR1 MiSeq 29
IGH FR1 MiSeq 30	21211019	*IGH* FR1 MiSeq 30
IGH FR1 MiSeq 31	21211029	*IGH* FR1 MiSeq 31
IGH FR1 MiSeq 32	21211039	*IGH* FR1 MiSeq 32
IGH FR1 MiSeq 33	21211049	*IGH* FR1 MiSeq 33
IGH FR1 MiSeq 34	21211059	*IGH* FR1 MiSeq 34
IGH FR1 MiSeq 35	21211069	*IGH* FR1 MiSeq 35
IGH FR1 MiSeq 36	21211079	*IGH* FR1 MiSeq 36
IGH FR1 MiSeq 37	21211089	*IGH* FR1 MiSeq 37
IGH FR1 MiSeq 38	21211099	*IGH* FR1 MiSeq 38
IGH FR1 MiSeq 39	21211109	*IGH* FR1 MiSeq 39
IGH FR1 MiSeq 40	21211119	*IGH* FR1 MiSeq 40
IGH FR1 MiSeq 41	21211129	*IGH* FR1 MiSeq 41
IGH FR1 MiSeq 42	21211139	*IGH* FR1 MiSeq 42
IGH FR1 MiSeq 43	21211149	*IGH* FR1 MiSeq 43
IGH FR1 MiSeq 44	21211159	*IGH* FR1 MiSeq 44
IGH FR1 MiSeq 45	21211169	*IGH* FR1 MiSeq 45
IGH FR1 MiSeq 46	21211179	*IGH* FR1 MiSeq 46
IGH FR1 MiSeq 47	21211189	*IGH* FR1 MiSeq 47
IGH FR1 MiSeq 48	21211199	*IGH* FR1 MiSeq 48
IGK MiSeq 01	21220009	*IGK* MiSeq 01
IGK MiSeq 02	21220019	*IGK* MiSeq 02
IGK MiSeq 03	21220029	*IGK* MiSeq 03
IGK MiSeq 04	21220039	*IGK* MiSeq 04
IGK MiSeq 05	21220049	*IGK* MiSeq 05
IGK MiSeq 06	21220059	*IGK* MiSeq 06
IGK MiSeq 07	21220069	*IGK* MiSeq 07
IGK MiSeq 08	21220079	*IGK* MiSeq 08
IGK MiSeq 09	21220089	*IGK* MiSeq 09
IGK MiSeq 10	21220099	*IGK* MiSeq 10
IGK MiSeq 11	21220109	*IGK* MiSeq 11
IGK MiSeq 12	21220119	*IGK* MiSeq 12
IGK MiSeq 13	21220129	*IGK* MiSeq 13
IGK MiSeq 14	21220139	*IGK* MiSeq 14
IGK MiSeq 15	21220149	*IGK* MiSeq 15
IGK MiSeq 16	21220159	*IGK* MiSeq 16
IGK MiSeq 18	21220169	*IGK* MiSeq 18
IGK MiSeq 19	21220179	*IGK* MiSeq 19
IGK MiSeq 20	21220189	*IGK* MiSeq 20
IGK MiSeq 21	21220199	*IGK* MiSeq 21
IGK MiSeq 22	21220209	*IGK* MiSeq 22
IGK MiSeq 23	21220219	*IGK* MiSeq 23
IGK MiSeq 25	21220229	*IGK* MiSeq 25
IGK MiSeq 27	21220239	IGK MiSeq 27
TRB MiSeq 01	22250009	*TRB* MiSeq 01

Section 1: Identification

GHS product identifier	Part number	Other means of identification
TRB MiSeq 02	22250019	*TRB* MiSeq 02
TRB MiSeq 03	22250029	*TRB* MiSeq 03
TRB MiSeq 04	22250039	*TRB* MiSeq 04
TRB MiSeq 05	22250049	*TRB* MiSeq 05
TRB MiSeq 06	22250059	*TRB* MiSeq 06
TRB MiSeq 07	22250069	*TRB* MiSeq 07
TRB MiSeq 08	22250079	*TRB* MiSeq 08
TRB MiSeq 09	22250089	*TRB* MiSeq 09
TRB MiSeq 10	22250099	*TRB* MiSeq 10
TRB MiSeq 11	22250109	*TRB* MiSeq 11
TRB MiSeq 12	22250119	*TRB* MiSeq 12
TRB MiSeq 13	22250129	*TRB* MiSeq 13
TRB MiSeq 14	22250139	*TRB* MiSeq 14
TRB MiSeq 15	22250149	*TRB* MiSeq 15
TRB MiSeq 16	22250159	*TRB* MiSeq 16
TRB MiSeq 18	22250169	*TRB* MiSeq 18
TRB MiSeq 19	22250179	*TRB* MiSeq 19
TRB MiSeq 20	22250189	*TRB* MiSeq 20
TRB MiSeq 21	22250199	*TRB* MiSeq 21
TRB MiSeq 22	22250209	*TRB* MiSeq 22
TRB MiSeq 23	22250219	*TRB* MiSeq 23
TRB MiSeq 25	22250229	*TRB* MiSeq 25
TRB MiSeq 27	22250239	*TRB* MiSeq 27
TRG MiSeq 01	22270019	*TRG* MiSeq 01
TRG MiSeq 02	22270029	*TRG* MiSeq 02
TRG MiSeq 03	22270039	*TRG* MiSeq 03
TRG MiSeq 04	22270049	*TRG* MiSeq 04
TRG MiSeq 05	22270059	*TRG* MiSeq 05
TRG MiSeq 06	22270069	*TRG* MiSeq 06
TRG MiSeq 07	22270079	*TRG* MiSeq 07
TRG MiSeq 08	22270089	*TRG* MiSeq 08
TRG MiSeq 09	22270099	*TRG* MiSeq 09
TRG MiSeq 10	22270109	*TRG* MiSeq 10
TRG MiSeq 11	22270119	*TRG* MiSeq 11
TRG MiSeq 12	22270129	*TRG* MiSeq 12
TRG MiSeq 13	22270139	*TRG* MiSeq 13
TRG MiSeq 14	22270149	*TRG* MiSeq 14
TRG MiSeq 15	22270159	*TRG* MiSeq 15
TRG MiSeq 16	22270169	*TRG* MiSeq 16
TRG MiSeq 18	22270189	*TRG* MiSeq 18
TRG MiSeq 19	22270199	*TRG* MiSeq 19
TRG MiSeq 20	22270209	*TRG* MiSeq 20
TRG MiSeq 21	22270219	*TRG* MiSeq 21
TRG MiSeq 22	22270229	*TRG* MiSeq 22
TRG MiSeq 23	22270239	*TRG* MiSeq 23
TRG MiSeq 25	22270259	*TRG* MiSeq 25
TRG MiSeq 27	22270279	*TRG* MiSeq 27

Product type : Liquid

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

Section 1: Identification

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.

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.

Section 4. First aid measures

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).

Section 6. Accidental release measures

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.

Section 8. Exposure to controls/personal protection

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.

Section 11. Toxicological information

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

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

Section 15. Regulatory information

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..

Section 16. Other information

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.