

SAFETY DATA SHEETS

Invivoscribe® Gel Assays

This document includes the Safety Data Sheets for reagents included in Invivoscribe Gel Assays, Catalog Numbers listed below.

Catalog Number	Description
11000010	<i>IGH</i> + <i>IGK</i> B-cell Clonality Assay for Gel Detection
11010010	<i>IGH</i> Gene Rearrangement Assay for Gel Detection
11010020	<i>IGH</i> Gene Clonality Assay for Gel Detection
11010040	<i>IGH</i> Gene Clonality Assay MegaKit for Gel Detection
11020020	<i>IGK</i> Gene Clonality Assay for Gel Detection
11020030	<i>IGK</i> Gene Clonality Assay MegaKit for Gel Detection
11030010	<i>IGL</i> Gene Clonality Assay for Gel Detection
11030020	<i>IGL</i> Gene Clonality Assay MegaKit for Gel Detection
12050010	<i>TCRB</i> Gene Clonality Assay for Gel Detection
12050020	<i>TCRB</i> Gene Clonality Assay MegaKit for Gel Detection
12060010	<i>TCRD</i> Gene Clonality Assay for Gel Detection
12060020	<i>TCRD</i> Gene Clonality Assay MegaKit for Gel Detection
12070010	T-cell Receptor Gamma Gene Rearrangement Assay for Gel Detection
13080010	<i>BCL1/JH</i> Translocation Assay for Gel Detection
13080020	<i>BCL1/JH</i> Translocation Assay MegaKit for Gel Detection
13090010	<i>BCL2/JH</i> t(14;18) Translocation Assay for Gel Detection
13090020	<i>BCL2/JH</i> Translocation Assay for Gel Detection
13090040	<i>BCL2/JH</i> Translocation Assay MegaKit for Gel Detection
13100010	<i>BCR/ABL</i> t(9;22) Translocation Assay for Gel Detection
13110010	<i>PML/RARα</i> t(15;17) Translocation Assay for Gel Detection
14120010	<i>FLT3</i> Mutation Assay for Gel Detection
51010030	<i>IGH</i> Somatic Hypermutation Assay v2.0 - Gel Detection
51010040	<i>IGH</i> Somatic Hypermutation Assay MegaKit v2.0 - Gel Detection

Conforms to HCS 2021 – United States

SAFETY DATA SHEET



Section 1: Identification

GHS product identifier :

IVS-0004 Clonal Control DNA
 IVS-0007 Clonal Control DNA
 IVS-0008 Clonal Control DNA
 IVS-0009 Clonal Control DNA
 IVS-0010 Clonal Control DNA
 IVS-0013 Clonal Control DNA
 IVS-0017 Clonal Control DNA
 IVS-0019 Clonal Control DNA
 IVS-0021 Clonal Control DNA
 IVS-0024 Clonal Control DNA
 IVS-0029 Clonal Control DNA
 IVS-0030 Clonal Control DNA
 IVS-0031 Clonal Control DNA
 IVS-0003 Clonal Control RNA
 IVS-0011 Clonal Control RNA
 IVS-0020 Clonal Control RNA
 IVS-0032 Clonal Control RNA
 IVS-0035 Clonal Control RNA
 IVS-P001 Clonal Control DNA
 IVS-P002 Clonal Control DNA
 IVS-0000 Polyclonal Control DNA

Part number :

40880190
 40880370
 40880430
 40880490
 40880550
 40880730
 40880970
 40881090
 40881210
 40881390
 40881690
 40881750
 40881810
 40890190
 40890910
 40891720
 40892800
 40893070
 40900010
 40900070
 40920010

Other means of identification :

IVS-0004 Clonal Control DNA
 IVS-0007 Clonal Control DNA
 IVS-0008 Clonal Control DNA
 IVS-0009 Clonal Control DNA
 IVS-0010 Clonal Control DNA
 IVS-0013 Clonal Control DNA
 IVS-0017 Clonal Control DNA
 IVS-0019 Clonal Control DNA
 IVS-0021 Clonal Control DNA
 IVS-0024 Clonal Control DNA
 IVS-0029 Clonal Control DNA
 IVS-0030 Clonal Control DNA
 IVS-0031 Clonal Control DNA
 IVS-0003 Clonal Control RNA
 IVS-0011 Clonal Control RNA
 IVS-0020 Clonal Control RNA
 IVS-0032 Clonal Control RNA
 IVS-0035 Clonal Control RNA
 IVS-P001 Clonal Control DNA
 IVS-P002 Clonal Control DNA
 IVS-0000 Polyclonal Control DNA

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.
- 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 an 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.

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

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

	<u>DOT Classification</u>	<u>IMDG</u>	<u>IATA</u>
<u>UN number</u>	Not regulated.	Not regulated.	Not regulated.
<u>UN proper shipping name</u>	-	-	-
<u>Transport hazard class(es)</u>	-	-	-
<u>Packing group</u>	-	-	-
<u>Environmental Hazards</u>	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; 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	≤0.001	Yes.	500	-	5000	-

SARA 304 RQ : 634763213.6 lbs / 288182499 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 : 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.

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 partition 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
Amplification Control - Unlabeled for Gel Detection	20960010	Amplification Control - Unlabeled for Gel Detection
Specimen Control Size Ladder - Unlabeled for Gel Detection	20960020	Specimen Control Size Ladder - Unlabeled for Gel Detection
<i>IGH</i> Tube A - Unlabeled for Gel Detection	21010010	<i>IGH</i> Tube A - Unlabeled for Gel Detection
<i>IGH</i> Tube B - Unlabeled for Gel Detection	21010020	<i>IGH</i> Tube B - Unlabeled for Gel Detection
<i>IGH</i> Tube C - Unlabeled for Gel Detection	21010030	<i>IGH</i> Tube C - Unlabeled for Gel Detection
<i>IGH</i> Tube D - Unlabeled for Gel Detection	21010040	<i>IGH</i> Tube D - Unlabeled for Gel Detection
<i>IGH</i> Tube E - Unlabeled for Gel Detection	21010050	<i>IGH</i> Tube E - Unlabeled for Gel Detection
<i>IGH</i> Framework 1 (FR1) - Unlabeled for Gel Detection	21010060	<i>IGH</i> Framework 1 (FR1) - Unlabeled for Gel Detection
<i>IGH</i> Framework 2 (FR2) - Unlabeled for Gel Detection	21010070	<i>IGH</i> Framework 2 (FR2) - Unlabeled for Gel Detection
<i>IGH</i> Framework 3 (FR3) - Unlabeled for Gel Detection	21010080	<i>IGH</i> Framework 3 (FR3) - Unlabeled for Gel Detection
Hypermutation Mix 1 v2.0 - Unlabeled for Gel Detection	21010170	Hypermutation Mix 1 v2.0 - Unlabeled for Gel Detection
Hypermutation Mix 2 v2.0 Unlabeled for Gel Detection	21010180	Hypermutation Mix 2 v2.0 Unlabeled for Gel Detection
<i>IGK</i> Tube A - Unlabeled for Gel Detection	21020010	<i>IGK</i> Tube A - Unlabeled for Gel Detection
<i>IGK</i> Tube B - Unlabeled for Gel Detection	21020020	<i>IGK</i> Tube B - Unlabeled for Gel Detection
<i>IGL</i> Tube - Unlabeled for Gel Detection	21030010	<i>IGL</i> Tube - Unlabeled for Gel Detection
<i>TCRB</i> Tube A - Unlabeled for Gel Detection	22050010	<i>TCRB</i> Tube A - Unlabeled for Gel Detection
<i>TCRB</i> Tube B - Unlabeled for Gel Detection	22050020	<i>TCRB</i> Tube B - Unlabeled for Gel Detection
<i>TCRB</i> Tube C - Unlabeled for Gel Detection	22050030	<i>TCRB</i> Tube C - Unlabeled for Gel Detection
<i>TCRD</i> Tube - Unlabeled for Gel Detection	22060010	<i>TCRD</i> Tube - Unlabeled for Gel Detection
T Cell Receptor Gamma Mix 1 - Unlabeled for Gel Detection	22070010	T Cell Receptor Gamma Mix 1 - Unlabeled for Gel Detection
T Cell Receptor Gamma Mix 2 - Unlabeled for Gel Detection	22070020	T Cell Receptor Gamma Mix 2 - Unlabeled for Gel Detection
<i>BCL2/JH</i> Tube - Unlabeled for Gel Detection	23080010	<i>BCL2/JH</i> Tube - Unlabeled for Gel Detection
<i>BCL2/JH</i> t(14;18) (Mbr) Mix 1b - Unlabeled for Gel Detection	23090010	<i>BCL2/JH</i> t(14;18) (Mbr) Mix 1b - Unlabeled for Gel Detection
<i>BCL2/JH</i> t(14;18) (mcr) Mix 2b - Unlabeled for Gel Detection	23090020	<i>BCL2/JH</i> t(14;18) (mcr) Mix 2b - Unlabeled for Gel Detection
<i>BCL2/JH</i> t(14;18) (Mbr) Mix 1a - Unlabeled for Gel Detection	23090030	<i>BCL2/JH</i> t(14;18) (Mbr) Mix 1a - Unlabeled for Gel Detection
<i>BCL2/JH</i> t(14;18) (mcr) Mix 2a - Unlabeled for Gel Detection	23090040	<i>BCL2/JH</i> t(14;18) (mcr) Mix 2a - Unlabeled for Gel Detection
<i>BCL2/JH</i> Tube A - Unlabeled for Gel Detection	23090050	<i>BCL2/JH</i> Tube A - Unlabeled for Gel Detection
<i>BCL2/JH</i> Tube B - Unlabeled for Gel Detection	23090060	<i>BCL2/JH</i> Tube B - Unlabeled for Gel Detection
<i>BCL2/JH</i> Tube C - Unlabeled for Gel Detection	23090070	<i>BCL2/JH</i> Tube C - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 1a - Unlabeled for Gel Detection	23100010	<i>BCR/ABL</i> t(9;22) Mix 1a - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 2a - Unlabeled for Gel Detection	23100020	<i>BCR/ABL</i> t(9;22) Mix 2a - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 3a - Unlabeled for Gel Detection	23100030	<i>BCR/ABL</i> t(9;22) Mix 3a - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 1b - Unlabeled for Gel Detection	23100040	<i>BCR/ABL</i> t(9;22) Mix 1b - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 2b - Unlabeled for Gel Detection	23100050	<i>BCR/ABL</i> t(9;22) Mix 2b - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 2c - Unlabeled for Gel Detection	23100060	<i>BCR/ABL</i> t(9;22) Mix 2c - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 3b - Unlabeled for Gel Detection	23100070	<i>BCR/ABL</i> t(9;22) Mix 3b - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 3c - Unlabeled for Gel Detection	23100080	<i>BCR/ABL</i> t(9;22) Mix 3c - Unlabeled for Gel Detection
<i>BCR/ABL</i> t(9;22) Mix 3d - Unlabeled for Gel Detection	23100090	<i>BCR/ABL</i> t(9;22) Mix 3d - Unlabeled for Gel Detection
<i>PML/RARα</i> t(15;17) Mix 1 - Unlabeled for Gel Detection	23110010	<i>PML/RARα</i> t(15;17) Mix 1 - Unlabeled for Gel Detection
<i>PML/RARα</i> t(15;17) Mix 2a - Unlabeled for Gel Detection	23110020	<i>PML/RARα</i> t(15;17) Mix 2a - Unlabeled for Gel Detection
<i>PML/RARα</i> t(15;17) Mix 2b - Unlabeled for Gel Detection	23110030	<i>PML/RARα</i> t(15;17) Mix 2b - Unlabeled for Gel Detection
<i>PML/RARα</i> t(15;17) Mix 2c - Unlabeled for Gel Detection	23110040	<i>PML/RARα</i> t(15;17) Mix 2c - Unlabeled for Gel Detection
<i>FLT3</i> ITD Master Mix for Gel Detection	24120010	<i>FLT3</i> ITD Master Mix for Gel Detection
<i>FLT3</i> D835 Master Mix for Gel Detection	24120020	<i>FLT3</i> D835 Master Mix for Gel Detection
Primer Hypermutation 100 μ M - Unlabeled	30000000	Primer Hypermutation 100 μ M - Unlabeled
<i>IGH</i> JH Primer 100 μ M - Unlabeled	31010380	<i>IGH</i> JH Primer 100 μ M - Unlabeled

Section 1: Identification

Product type : Liquid

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

Identified uses For amplification of gene rearrangements and/or translocations.

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.
- 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".

Section 6. Accidental release measures

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.

Section 8. Exposure to controls/personal protection

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	Rat	40000 mg/kg	-
	LD50 Oral	Rat	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.

[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.

Section 11. Toxicological information

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	Algae – Nitzschia pungens	96 hour
	Acute LC50 37.437 mg/L Marine water	Crustaceans – Artemia sp.	48 hours
	Acute LC50 25000 ppm Fresh water	Daphnie – Daphnia magna – Neonate	48 hours
	Acute LC50 34000000 µg/L Fresh water	Fish – Pimephales promelas	96 hours
	Chronic NOEC 3323 µg/L Marine water	Algae – Nitzschia pungens	96 hours
	Chronic NOEC 100 µl/L Fresh water	Daphnia – Daphnia magna – Juvenile (Fledgling, Hatchling, Weanling)	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

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ATE = Acute Toxicity Estimate

Section 16. Other information

Key to abbreviations

:	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 partition 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

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