

MATERIAL SAFETY DATA SHEET

Date Updated: 07/21/2021

< 1 > Product and Company Information

Product Name Long ssDNA Gel Extraction Kit for 3kb (DS640)
(Code#) Long ssDNA Gel Extraction Kit for 10kb (DS650)
Component Crystal Violet Solution
Gel-Dissolving Buffer

Company BioDynamics Laboratory Inc.
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Research use only

< 2 > Hazards Identification

Component: Crystal Violet Solution

Classification

Eye irritation (Category 2), H319
Carcinogenicity (Category 2), H351
Long-term (chronic) aquatic hazard (Category 2), H411
For the full text of the H-Statements mentioned in this Section, see Section 16.

Symbol:



Signal word: Warning

Hazard statement(s):

H351 Suspected of causing cancer.

Precautionary statement(s):

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard Statements:

none

Other hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Component: Gel-Dissolving Buffer

Classification

Classification of the substance or mixture

Acute toxicity, Oral (Category 4), H302
 Acute toxicity, Inhalation (Category 4), H332
 Acute toxicity, Dermal (Category 4), H312
 Skin corrosion (Sub-category 1C), H314
 Serious eye damage (Category 1), H318
 Long-term (chronic) aquatic hazard (Category 3), H412
 For the full text of the H-Statements mentioned in this Section, see Section 16.

Symbol:



Signal word: Danger

Hazard statement(s):

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
 H314 Causes severe skin burns and eye damage.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ faceprotection.
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Supplemental Hazard information (EU) EUH032 Contact with acids liberates very toxic gas.

Other hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

<3 > Composition/Information on Ingredients

Component: Crystal Violet Solution

Mixture

Ingredient name	CAS No.	Content (%)
Crystal Violet	548-62-9	0.4%

Component: Gel-Dissolving Buffer

Mixture

Ingredient name	CAS No.	Content (%)
Guanidinium thiocyanate	593-84-0	>40%

<4 > First Aid Measures

Component: Crystal Violet Solution

General advice:

Show this material safety data sheet to the doctor in attendance. If inhaled After inhalation: fresh air. Call in physician.

In case of skin contact:

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact:

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed:

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed:

No data available

Component: Gel-Dissolving Buffer

General advice:

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled:

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact:

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed:

No data available

< 5 > Fire Fighting Measures

Component: Crystal Violet Solution

Extinguishing media

Suitable extinguishing media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media:

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture:

Carbon oxides

Nitrogen oxides (NO_x)

Hydrogen chloride gas

Not combustible.

Ambient fire may liberate hazardous vapours.

Advice for firefighters:

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information:

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Component: Gel-Dissolving Buffer

Extinguishing media

Suitable extinguishing media:

Dry powder Dry sand

Special hazards arising from the substance or mixture:

Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides, Hydrogen cyanide (hydrocyanic acid), Ammonia

Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides

Combustible.

Advice for firefighters:

Wear self-contained breathing apparatus for firefighting if necessary.

Further information:

No data available

< 6 > Accidental Release Measures

Component: Crystal Violet Solution

Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

Environmental precautions:

Do not let product enter drains.

Methods and materials for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

Reference to other sections:

For disposal see section 13.

Component: Gel-Dissolving Buffer

Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water. Keep in suitable, closed containers for disposal.

Reference to other sections:

For disposal see section 13.

< 7 > Handling and Storage

Component: Crystal Violet Solution

Precautions for safe handling

Advice on safe handling:

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures:

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: Room Temperature

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

Component: Gel-Dissolving Buffer

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: Room Temperature

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

< 8 > Exposure Controls / PPE

Component: Crystal Violet Solution

Control parameters

Ingredients with workplace control parameters

Exposure controls

Personal protective equipment

Eye/face protection:

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection:

required

Body Protection:

protective clothing

Respiratory protection:

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure:

Do not let product enter drains.

Component: Gel-Dissolving Buffer

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection:

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection:

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided

< 9 > Physical/Chemical Properties

Component: Crystal Violet Solution

Physical State	Liquid
Appearance	Clear, Blue-Violet
Odor	Odorless
Odor Threshold	N/A
pH	N/A
Melting Point/Range	N/A
Boiling Point/Range	N/A
Flash Point	N/A
Evaporation	N/A
Flammability (solid,gas)	N/A
Flammability or explosive limits	N/A
Upper	N/A
Lower	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Specific Gravity	N/A
Solubility	N/A
Partition coefficient; n-octanol/water	N/A
Autoignition Temperature	N/A
Decomposition Temperature	N/A
Viscosity	N/A

Component: Gel-Dissolving Buffer

Physical State	Liquid
Appearance	Clear, Orange
Odor	Odorless
Odor Threshold	N/A
pH	approx 4.0 - 6.0
Melting Point/Range	N/A
Boiling Point/Range	N/A
Flash Point	N/A
Evaporation	N/A
Flammability (solid,gas)	N/A
Flammability or explosive limits	N/A
Upper	N/A
Lower	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Specific Gravity	N/A
Solubility	N/A
Partition coefficient; n-octanol/water	N/A
Autoignition Temperature	N/A
Decomposition Temperature	N/A

Viscosity N/A

*N/A: not available

< 10 > Stability and Reactivity

Component: Crystal Violet Solution

Reactivity:

No data available

Chemical stability:

This component is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions:

Violent reactions possible with: The generally known reaction partners of water.

Conditions to avoid:

no information available

Incompatible materials:

No data available

Hazardous decomposition products:

In the event of fire: see section 5

Additional Information:

Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Component: Gel-Dissolving Buffer

Reactivity:

No data available

Chemical stability:

Stable under recommended storage conditions.

Possibility of hazardous reactions:

No data available

Conditions to avoid:

No data available

Incompatible materials:

Strong acids, Strong oxidizing agents, Cyanides

Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, Hydrogen cyanide (hydrocyanic acid), Ammonia

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides

In the event of fire: see section 5

< 11 > Toxicological Information

Component: Crystal Violet Solution

Information on toxicological effects

Mixture

Acute toxicity:

No data available

Symptoms: Possible symptoms:, mucosal irritations

Skin corrosion/irritation:

No data available

Serious eye damage/eye irritation:

Mixture causes serious eye irritation.

Respiratory or skin sensitization:

No data available
Germ cell mutagenicity:
Carcinogenicity
Evidence of a carcinogenic effect.
IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity
Specific target organ toxicity - single exposure:
No data available
Acute inhalation toxicity - Possible symptoms:, mucosal irritations
Specific target organ toxicity - repeated exposure:
No data available
Aspiration hazard:
No data available

Component: Gel-Dissolving Buffer

Information on toxicological effects

Acute toxicity:
No data available
Skin corrosion/irritation:
No data available
Serious eye damage/eye irritation:
No data available
Respiratory or skin sensitization:
No data available
Germ cell mutagenicity:
No data available
Carcinogenicity:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity:
No data available
Specific target organ toxicity - single exposure:
No data available
Specific target organ toxicity - repeated exposure:
No data available
Aspiration hazard:
No data available
Additional Information:
RTECS: Not available
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

< 12 > Ecological Information

Component: Crystal Violet Solution

Toxicity
Mixture
data available
Persistence and degradability:
No data available
Bioaccumulative potential:
No data available
Mobility in soil:
No data available
Results of PBT and vPvB assessment:
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects:

No data available

Component: Gel-Dissolving Buffer

Toxicity:

No data available

Persistence and degradability:

No data available

Bioaccumulative potential:

No data available

Mobility in soil:

No data available

Results of PBT and vPvB assessment:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects:

No data available

Harmful to aquatic life with long lasting effects.

< 13 > Disposal Considerations

Waste treatment methods

Product:

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging:

Dispose of as unused product.

< 14 > Transport Information

Component: Crystal Violet Solution

UN number:

ADR/RID: 3082 IMDG: 3082 IATA: 3082

UN proper shipping name:

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Crystal violet)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Crystal violet)

IATA: Environmentally hazardous substance, liquid, n.o.s. (Crystal violet)

Transport hazard class(es):

ADR/RID: 9 IMDG: 9 IATA: 9

Packaging group

ADR/RID: III IMDG: III IATA: III

Environmental hazards:

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids. Packages smaller than or equal to 5 kg / L, not dangerous goods of Class 9

Component: Gel-Dissolving Buffer

UN number:

ADR/RID: 1760 IMDG: 1760 IATA: 1760

UN proper shipping name:

ADR/RID: CORROSIVE LIQUID, N.O.S. (Guanidinium thiocyanate)

IMDG: CORROSIVE LIQUID, N.O.S. (Guanidinium thiocyanate)

IATA: Corrosive liquid, n.o.s. (Guanidinium thiocyanate)

Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

Packaging group		
ADR/RID: III	IMDG: III	IATA: III
Environmental hazards		
ADR/RID: no	IMDG Marine pollutant: no	IATA: no
Special precautions for user:		
No data available		

< 15 > Regulatory Information

Component: Crystal Violet

Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulatory information

Law concerning Pollutant Release and Transfer Register / PRTR Law:	Not applicable
Industrial Safety and Health Law:	Not applicable
Chemical Substances Control Law:	Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.
Fire Service Law:	Not applicable
Poisonous and Deleterious Substances Control Law:	Not applicable

Component: Gel-Dissolving Buffer

Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulatory information

Law concerning Pollutant Release and Transfer Register / PRTR Law:	Not applicable
Industrial Safety and Health Law:	Not applicable
Chemical Substances Control Law:	Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.
Fire Service Law:	Not applicable
Poisonous and Deleterious Substances Control Law:	Not applicable

< 16 > Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biodynamics Laboratory Inc., shall not be held liable for any damage resulting from handling or from contact with the above product.