



# Safety Data Sheet

Cat. # 786-243

Pep-Extract™

Size: 500 Preps





# Pep-Extract

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Version: 7.1

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : Pep-Extract  
Product code : 052P

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Geno Technology, Inc./ G-Biosciences  
9800 Page Avenue  
Saint Louis, 63132-1429 - United States  
T 800-628-7730 - F 314-991-1504  
[technical@GBiosciences.com](mailto:technical@GBiosciences.com) - [www.GBiosciences.com](http://www.GBiosciences.com)

#### 1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flammable liquids Category 2	H225 Highly flammable liquid and vapour
Acute toxicity (oral) Category 4	H302 Harmful if swallowed
Acute toxicity (dermal) Category 4	H312 Harmful in contact with skin
Acute toxicity (inhalation:vapour) Category 4	H332 Harmful if inhaled
Skin corrosion/irritation Category 2	H315 Causes skin irritation
Serious eye damage/eye irritation Category 1	H318 Causes serious eye damage

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H225 - Highly flammable liquid and vapour  
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled  
H315 - Causes skin irritation  
H318 - Causes serious eye damage

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof electrical/ventilating/lighting equipment  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell  
P302+P352 - If on skin: Wash with plenty of water  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a poison center or doctor

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P312 - Call a poison center or doctor if you feel unwell  
P321 - Specific treatment (see supplemental first aid instruction on this label)  
P322 - Specific treatment (see supplemental first aid instruction on this label)  
P330 - Rinse mouth.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P370+P378 - In case of fire: Use media other than water to extinguish.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
acetonitrile	Acetonitrile / cyanomethane	(CAS-No.) 75-05-8	< 60	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Eye Irrit. 2, H319
formic acid (Note B)	aminic acid / amnic acid / carboxylic acid C1 / E 236 / formic acid / formira / formisoton / formylic acid / hydrogen carboxylic acid / methanoic acid / methanoic acid monomer / myrmicyl	(CAS-No.) 64-18-6	< 5	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314

Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.  
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.  
First-aid measures after ingestion : Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Irritation.  
Symptoms/effects after eye contact : Serious damage to eyes.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapour.

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### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Storage temperature : RT

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Pep-Extract</b>	
No additional information available	
<b>acetonitrile (75-05-8)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (ppm)	20 ppm
<b>formic acid (64-18-6)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH TWA (ppm)	5 ppm
ACGIH STEL (ppm)	10 ppm

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

**Hand protection:**

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Protective gloves

### Eye protection:

Safety glasses

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

Wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Highly flammable liquid and vapour.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Hazardous decomposition products.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.  
 Acute toxicity (dermal) : Harmful in contact with skin.  
 Acute toxicity (inhalation) : Harmful if inhaled.

ATE US (oral)	788.337 mg/kg body weight
ATE US (dermal)	1833.333 mg/kg body weight
ATE US (vapors)	18.333 mg/l/4h

#### acetonitrile (75-05-8)

LD50 dermal rabbit	980 mg/kg (Rabbit)
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

#### formic acid (64-18-6)

LD50 oral rat	730 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LC50 inhalation rat (mg/l)	7.4 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE US (oral)	730 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.  
 Serious eye damage/irritation : Causes serious eye damage.  
 Respiratory or skin sensitization : Not classified  
 Germ cell mutagenicity : Not classified  
 Carcinogenicity : Not classified  
 Reproductive toxicity : Not classified  
 Specific target organ toxicity – single exposure : Not classified  
 Specific target organ toxicity – repeated exposure : Not classified  
 Aspiration hazard : Not classified  
 Viscosity, kinematic : No data available  
 Symptoms/effects after skin contact : Irritation.  
 Symptoms/effects after eye contact : Serious damage to eyes.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

#### acetonitrile (75-05-8)

LC50 fish 1	1640 mg/l (LC50; Other; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 1000 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Semi-static system; Fresh water; Experimental value)
ErC50 (algae)	9696 mg/l (ISO 10253, 72 h, Phaeodactylum, Static system, Salt water, Experimental value, GLP)

#### formic acid (64-18-6)

LC50 fish 1	130 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, GLP)
EC50 Daphnia 1	365 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Read-across, GLP)

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### 12.2. Persistence and degradability

acetonitrile (75-05-8)	
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	0.17 g O <sub>2</sub> /g substance
ThOD	3.12 g O <sub>2</sub> /g substance

  

formic acid (64-18-6)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.02 - 0.27 g O <sub>2</sub> /g substance
ThOD	0.35 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.40 - 0.77

### 12.3. Bioaccumulative potential

acetonitrile (75-05-8)	
BCF other aquatic organisms 1	3.162 (BCF; BCFWIN)
Log Pow	0.29 (Weight of evidence approach; Equivalent or similar to OECD 107; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

  

formic acid (64-18-6)	
Log Pow	-0.54 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

### 12.4. Mobility in soil

acetonitrile (75-05-8)	
Surface tension	0.029 N/m (20 °C)
Log Koc	0.65 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

  

formic acid (64-18-6)	
Surface tension	0.0715 N/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Log Koc	< 1.25 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Highly mobile in soil.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Waste treatment methods.  
Additional information : Flammable vapors may accumulate in the container.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1648 Acetonitrile, 3, II  
UN-No.(DOT) : UN1648  
Proper Shipping Name (DOT) : Acetonitrile  
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Packing group (DOT) : II - Medium Danger

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Hazard labels (DOT) : 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
 DOT Packaging Bulk (49 CFR 173.xxx) : 242  
 DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
 T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
 TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
 DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5L  
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L  
 DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.  
 DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"  
 Other information : No supplementary information available.

### Transportation of Dangerous Goods

#### Transport by sea

Transport document description (IMDG) : UN 1648 , 3, II  
 UN-No. (IMDG) : 1648  
 Class (IMDG) : 3 - Flammable liquids  
 Packing group (IMDG) : II - substances presenting medium danger

#### Air transport

Transport document description (IATA) : UN 1648 , 3  
 UN-No. (IATA) : 1648  
 Class (IATA) : 3 - Flammable Liquids

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>acetonitrile (75-05-8)</b>	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
<b>formic acid (64-18-6)</b>	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb

### 15.2. International regulations



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### CANADA

#### EU-Regulations

#### National regulations

No additional information available

### 15.3. US State regulations

## SECTION 16: Other information

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Full text of H-phrases:

H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*