

**Lethen Broth Base, Modified  
L12-109M****SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

- 1.1 Product identifier:** Lethen Broth Base, Modified  
L12-109M
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Culture medium. For professional use only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:** Alpha Biosciences, Inc.  
3651 Clipper Mill Road  
21211 Baltimore - Maryland - USA  
Phone.: 410.467.9983 -  
Fax: 410.467.5088  
www.alphabiosciences.com
- 1.4 Emergency telephone number:**

**SECTION 2: HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture:**  
**Directive 67/548/EC and Directive 1999/45/EC:**  
In accordance with Directive 67/548/EC and Directive 1999/45/EC, the product is not classified as dangerous.  
**CLP Regulation (EC) n° 1272/2008:**  
The product is not classified as dangerous according to CLP Regulation (EC) n° 1272/2008.
- 2.2 Label elements:**  
**CLP Regulation (EC) n° 1272/2008:**  
**Hazard statements:**  
Non-applicable  
**Precautionary statements:**  
P101: If medical advice is needed, have product container or label at hand  
P102: Keep out of reach of children  
P103: Read label before use  
P501: Dispose of the contents/containers in accordance with the current legislation on waste treatment  
**Supplementary information:**  
Non-applicable
- 2.3 Other hazards:**  
Non-applicable

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

- Chemical description:** Mixture of substances
- Components:**  
None of the substances contained in the mixture are above the values fixed in Annex II of Regulation (EC) n°1907/2006

**SECTION 4: FIRST AID MEASURES**

- 4.1 Description of first aid measures:**  
Consult a doctor in case of discomfort with this Security Data Sheet.
- By inhalation:**  
In case of symptoms, move the person affected into fresh air.
- By skin contact:**  
In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of modifications on the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Security Data Sheet

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**SECTION 4: FIRST AID MEASURES (continue)**

**By eye contact:**

Rinse with water until the product has been eliminated. In case of problems, consult a doctor with the MSDS of this product.

**By ingestion/aspiration:**

In case of consumption in large quantities, it is recommended to seek medical assistance.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media:**

Product is non-flammable, low risk of fire by the inflammability characteristics of the product in normal conditions of storage, manipulation and use. In the case of the existence of sustained combustion as a result of improper manipulation, storage or use any type of extinguishing agent can be used (ABC Powder, water,...)

**5.2 Special hazards arising from the substance or mixture:**

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

**5.3 Advice for firefighters:**

Have available a minimum of emergency facilities or equipment (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:**

Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal See sections 8 and 13.

**6.2 Environmental precautions:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container.

**6.3 Methods and material for containment and cleaning up:**

It is recommended:

Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

**6.4 Reference to other sections:**

See sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling:**

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and destroy using safe methods (section 6).

B.- Technical recommendations for the prevention of fires and explosions

It is recommended to transfer at a slow speed to avoid the creation of electrostatic charges that could affect flammable products. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

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**SECTION 7: HANDLING AND STORAGE (continue)**

D.- Technical recommendations to prevent environmental risks

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container.

**7.2 Conditions for safe storage, including any incompatibilities:**

A.- Technical measures for storage

Minimum Temp.: 2 °C  
Maximum Temp.: 25 °C  
Maximum time: 48 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the work environment

Nuisance dust: Inhalable dust 10 mg/m<sup>3</sup> // Respirable dust 4 mg/m<sup>3</sup>

**8.2 Exposure controls:**

A.- General security and hygiene measures in the work place



As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.



B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the professional exposure limits are exceeded.


C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves		EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	Replace the gloves at any sign of deterioration.

D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against liquid splash		EN 166:2001 EN 172:1994/A1:2000 EN 172:1994/A2:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.


E.- Bodily protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing		EN ISO 13688:2013	For professional use only.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)**

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Anti-slip work shoes		EN ISO 20347:2012 EN ISO 20344:2011	None

F.- Additional emergency measures

It is not necessary to take additional emergency measures.

**Environmental exposure controls:**

This product does not contain substances dangerous to the environment, although it is recommended not to spill it. For additional information see subsection 7.1.D

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C: Solid  
Appearance: Not available  
Color: Not available  
Odor: Not available

**Volatility:**

Boiling point at atmospheric pressure: Non-applicable \*  
Vapour pressure at 20 °C: Non-applicable \*  
Vapour pressure at 50 °C: Non-applicable \*  
Evaporation rate at 20 °C: Non-applicable \*

**Product description:**

Density at 20 °C: Non-applicable \*  
Relative density at 20 °C: Non-applicable \*  
Dynamic viscosity at 20 °C: Non-applicable \*  
Kinematic viscosity at 20 °C: Non-applicable \*  
Kinematic viscosity at 40 °C: Non-applicable \*  
Concentration: Non-applicable \*  
pH: Non-applicable \*  
Vapour density at 20 °C: Non-applicable \*  
Partition coefficient n-octanol/water 20 °C: Non-applicable \*  
Solubility in water at 20 °C: Non-applicable \*  
Solubility properties: Non-applicable \*  
Decomposition temperature: Non-applicable \*  
Melting point/freezing point: Non-applicable \*

**Flammability:**

Flash Point: Non Flammable (>60 °C)  
Autoignition temperature: Non-applicable \*  
Lower flammability limit: Non-applicable \*  
Upper flammability limit: Non-applicable \*

**9.2 Other information:**

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continue)**

Surface tension at 20 °C: Non-applicable \*  
Refraction index: Non-applicable \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected if the following technical instructions storage of chemicals. See section 7.

**10.2 Chemical stability:**

Chemically stable under the conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

**10.4 Conditions to avoid:**

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

**10.5 Incompatible materials:**

Acids	Water	Combustive materials	Combustible materials	Others
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

**10.6 Hazardous decomposition products:**

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects:**

LD50 oral > 2000 mg/kg (rat)

**Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A.- Ingestion:

Based on available data, the classification criteria are not met

B- Inhalation:

Based on available data, the classification criteria are not met

C- Contact with the skin and the eyes:

Based on available data, the classification criteria are not met

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

Based on available data, the classification criteria are not met

E- Sensitizing effects:

Based on available data, the classification criteria are not met

F- Specific target organ toxicity (STOT)-time exposure:

Based on available data, the classification criteria are not met

G- Specific target organ toxicity (STOT)-repeated exposure:

Based on available data, the classification criteria are not met

H- Aspiration hazard:

Based on available data, the classification criteria are not met

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**SECTION 11: TOXICOLOGICAL INFORMATION (continue)**

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

Not available

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**

Not available

**12.2 Persistence and degradability:**

Not available

**12.3 Bioaccumulative potential:**

Not available

**12.4 Mobility in soil:**

Not available

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Directive 2008/98/EC)
16 05 09	Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08	Non dangerous

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2000/532/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2000/532/EC: Commission Decision of 3 May 2000

**SECTION 14: TRANSPORT INFORMATION**

The transport of dangerous goods only applies to finished products.

**SECTION 15: REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Active substances for which a decision of non-inclusion onto Annex I (Regulation (EU) No 528/2012): Non-applicable

Regulation (EC) 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII, REACH):**

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**SECTION 15: REGULATORY INFORMATION (continue)**

Non-applicable

**Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

**Other legislation:**

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009, 2009 No. 716  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885  
Control of Substances Hazardous to Health Regulations 2002 (as amended)  
EH40/2005 Workplace exposure limits  
The Waste Regulations 2011, 2011 No. 988

**15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

**SECTION 16: OTHER INFORMATION**

**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EC) N° 453/2010)

**Modifications related to the previous security card which concerns the ways of managing risks. :**

Non-applicable

**Texts of the legislative phrases mentioned in section 3.:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

**Directive 67/548/EC and Directive 1999/45/EC:**

Non-applicable

**CLP Regulation (EC) n° 1272/2008:**

Non-applicable

**Advice related to training:**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

<http://esis.jrc.ec.europa.eu>  
<http://echa.europa.eu>  
<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

- ADR: European agreement concerning the international carriage of dangerous goods by road
- IMDG: International maritime dangerous goods code
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organisation
- COD: Chemical Oxygen Demand
- BOD5: 5-day biochemical oxygen demand
- BCF: Bioconcentration factor
- LD50: Lethal Dose 50
- CL50: Lethal Concentration 50
- EC50: Effective concentration 50
- Log-POW: Octanol–water partition coefficient
- Koc: Partition coefficient of organic carbon

The information contained in this security data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this security data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -