

SAFETY DATA SHEET

Section 1: Identification

- 1.1. Product identifier
- 1.1.1. Product Name: Farber Pham Diastaticus Medium (FPDM)
- 1.1.2. Product Number: M625
- 1.2. Recommended use of product
- 1.2.1. Culture media used for the detection and quantitative determination of diastaticus yeast populations in beer and culture yeast.
- 1.3. Company information
- 1.3.1. Manufacturer: Millennium LifeSciences, Inc.
- 1.3.2. Address: 970 E. Orangethorpe Ave. Unit A
Anaheim, CA 92801
- 1.3.3. Phone: 714.773.1726
- 1.3.4. Fax: 714.773.1793
- 1.3.5. Email: info@mlscmc.com

Section 2: Hazard(s) Identification

- 2.1. Classification of the substance or mixture
- 2.1.1. Classification: This product contains hazardous constituents described by OSHA Hazard Communication Standard 29 CFR 1910.1200.

Acute toxicity – Oral	Category 4
Serious eye damage/eye irritation	Category 2A
Skin corrosion/irritation	Category 2

- 2.1.2. Additional information
- 2.2. Label



- 2.2.1. Signal word:
- 2.2.1.1. Warning
- 2.2.2. Symbols:
- 2.2.2.1. GHS07
- 2.2.3. Hazard phrases:
- 2.2.3.1. Harmful if swallowed
- 2.2.3.2. Harmful to aquatic life with long lasting effects
- 2.2.3.3. Causes skin irritation
- 2.2.3.4. Causes serious eye irritation
- 2.2.4. Precautionary phrases:
- 2.2.4.1. If medical advice is needed, have product container or label at hand
- 2.2.4.2. Keep container tightly closed
- 2.2.4.3. Do not get in eyes, on skin, or on clothing
- 2.2.4.4. Wash face, hands and any exposed skin thoroughly after handling
- 2.2.4.5. Do not eat, drink or smoke when using this product
- 2.2.4.6. IF SWALLOWED: Call a POISON CENTER or a doctor/physician if you feel unwell

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Section 2: Hazard(s) Identification (Continued)

- 2.2.4.7. Avoid release to the environment
- 2.2.4.8. Wear protective gloves
- 2.2.4.9. Wear eye/face protection
- 2.2.4.10. Dispose of the contents/containers in accordance with the current legislation on waste treatment
- 2.3. Other hazards:
 - 2.3.1. Harmful to aquatic life with long lasting effects

Section 3: Composition/Information on Ingredients

- 3.1. Substances:
 - 3.1.1. Non-applicable
- 3.2. Mixtures:
 - 3.2.1. This product is a mixture of the substances listed below with the addition of non-hazardous materials

Chemical	Concentration	CAS No.	H-Statements	Symbol
Ammonium Chloride	<1%	12125-02-9	H302, H319	GHS07
Cupric Sulfate, Anhydrous	2-3%	7758-98-7	H302, H400, H410, H319, H315	GHS07, GHS09

Section 4: First-Aid Measures

- 4.1. First-aid measures:
 - 4.1.1. Contact with skin:
 - 4.1.1.1. Remove contaminated clothing. Wash affected area with plenty of neutral soap and cold water. If skin irritation or rash occurs: Get medical advice/attention. Contaminated clothing should be laundered before reuse.
 - 4.1.2. Contact with eyes:
 - 4.1.2.1. If substance has gotten into eyes, immediately wash out with plenty of water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.
 - 4.1.3. Ingestion:
 - 4.1.3.1. If swallowed, wash mouth out with water provided person is conscious. Seek medical attention immediately. Do not induce vomiting, but if it does happen keep the head up to avoid inhalation. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor.
 - 4.1.4. Inhalation:
 - 4.1.4.1. If inhale, supply fresh air or oxygen. Seek medical attention. If breathing is difficult, give oxygen. In case of unconsciousness, place patient on side position for transportation.
- 4.2. Most important symptoms and effects, both acute and delayed:
 - 4.2.1. Acute and delayed effects are indicated in Sections 2 and 11.
- 4.3. Indication of any immediate medical attention and special treatment needed:
 - 4.3.1. Treat symptomatically.

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Section 5: Fire-Fighting Measures

- 5.1. Suitable Extinguishing Media:
 - 5.1.1. Product is non-flammable under normal conditions of storage, manipulation and use. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.
- 5.2. Special hazards arising from the substance or mixture:
 - 5.2.1. As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and consequently, can present a serious health risk.
 - 5.2.2. Smoke from fires is toxic. Take precautions to protect personnel from exposure.
- 5.3. Recommendations for firefighters:
 - 5.3.1. Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Section 6: Accidental Release Measures

- 6.1. Personal precautions, protective equipment, and emergency procedures:
 - 6.1.1. Avoid inhalation and contact with skin and eyes.
 - 6.1.2. Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal
- 6.2. Environmental Precautions:
 - 6.2.1. Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.
 - 6.2.2. Shut off all sources of ignition, ventilate spill area.
- 6.3. Methods and materials used for containment:
 - 6.3.1. It is recommended: Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal
- 6.4. Cleanup Procedures:
 - 6.4.1. Contact safety officer and ventilate area. Absorb spill with inert material, including dry-lime, sand, or soda ash, then place into a chemical waste container using non-sparking tools. Wash spill site after material pickup is complete.

Section 7: Handling and Storage

- 7.1. Precautions for safe handling:
 - 7.1.1. Do not ingest.
 - 7.1.2. Do not breathe vapor.
 - 7.1.3. Avoid contact with eyes, skin, and clothing.
 - 7.1.4. Avoid prolonged or repeated exposure.
 - 7.1.5. Do not use if skin is cut or scratched.
 - 7.1.6. Ensure adequate ventilation.
 - 7.1.7. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.
- 7.2. Conditions for safe storage, including any incompatibilities:
 - 7.2.1. Store at temperatures not exceeding 30°C/86°F. Keep cool.
 - 7.2.2. Store in a well-ventilated place. Keep container tightly closed.
 - 7.2.3. Store in a dry place.
 - 7.2.4. Keep away from oxidizing substances.

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Section 7: Handling and Storage (Continued)

- 7.2.5. Keep away from acid.
- 7.2.6. Avoid contact with food.

Section 8: Exposure Controls/Personal Protection

- 8.1. Engineering Controls:
 - 8.1.1. Do not use compressed air by filling, discharging, or handling the product. Proper ventilation, safety shower, and eye bath required.
 - 8.1.2. Nuisance dust: Inhalable dust 10 mg/m³ // Respirable dust 4 mg/m³
- 8.2. Personal Protective Equipment:
 - 8.2.1. Wear suitable protective clothing such as gloves, safety glasses, and lab coat. No respiratory protection is needed if ventilation/extraction is adequate, otherwise wear approved dust mask, NIOSH N95 (US) or type FFP1 (EN143) dust masks.
 - 8.2.2. Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
 - 8.2.3. Wear safety glasses approved to standard for NIOSH (US), ANSI Z87 or EN 166.



Gloves



Safety Glasses



Lab Coat

- 8.3. Exposure controls:
 - 8.3.1. Eyewash bottles should be available.
 - 8.3.2. Engineering controls should be provided to prevent the need for ventilation.
 - 8.3.3. 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.

Section 9: Physical and Chemical Properties

- 9.1. Information on physical and chemical properties:
 - 9.1.1. Appearance: Homogeneous, free-flowing powder, light-beige
 - 9.1.2. Odor: No information available.
 - 9.1.3. Odor threshold: No information available.
 - 9.1.4. pH: Not applicable
 - 9.1.5. Melting point/Range: No information available.
 - 9.1.6. Boiling point/Range: Not determined
 - 9.1.7. Flashpoint: No information available.
 - 9.1.8. Evaporation Rate: No information available.
 - 9.1.9. Flammability: No information available.
 - 9.1.10. Vapor Pressure: No information available.
 - 9.1.11. Vapor Density: No information available.
 - 9.1.12. Relative Density: No information available.
 - 9.1.13. Solubility in water: Completely soluble in water.
 - 9.1.14. Partition Coefficient (n-Octanol/Water): No information available.

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Section 9: Physical and Chemical Properties (Continued)

- 9.1.15. Autoignition Temperature: No information available.
- 9.1.16. Decomposition temperature: No information available.
- 9.1.17. Explosive Properties: Product does not present an explosion hazard
- 9.1.18. Viscosity: No information available.
- 9.2. Other information:
 - 9.2.1. No information available.

Section 10: Stability and Reactivity

- 10.1. Reactivity:
 - 10.1.1. No hazardous reactions are expected if following technical instructions of storing chemicals.
- 10.2. Chemical stability:
 - 10.2.1. Considered stable under normal conditions.
- 10.3. Possibility of hazardous reactions:
 - 10.3.1. No hazardous reactions known if used for its intended purpose.
- 10.4. Conditions to avoid:
 - 10.4.1. Avoid strong oxidizing agents and strong bases.
- 10.5. Incompatible materials:
 - 10.5.1. Incompatible with strong oxidizing agents and strong bases.
- 10.6. Hazardous decomposition products:
 - 10.6.1. Decomposition products may include Carbon monoxide, Carbon dioxide, Hydrogen chloride gas, and other organic compounds.

Section 11: Toxicological Information

- 11.1. Information on toxicological effects:
 - 11.1.1. The experimental information related to the toxicological properties of the product itself is not available.
 - 11.1.2. Contact with skin:
 - 11.1.2.1. Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for skin contact. For more information see section 3.
 - 11.1.3. Contact with eyes:
 - 11.1.3.1. Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for eye contact. For more information see section 3.
 - 11.1.4. Inhalation:
 - 11.1.4.1. Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
 - 11.1.5. Carcinogenicity:
 - 11.1.5.1. No evidence of carcinogenic effects.
 - 11.1.6. Mutagenicity:
 - 11.1.6.1. Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
 - 11.1.7. Teratogenicity:
 - 11.1.7.1. Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

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Section 11: Toxicological Information (Continued)

11.2. Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Ammonium chloride CAS No.: 12125-02-9 EC: 235-186-4	1650 mg/kg	Non-applicable	Rat
	Non-applicable	Non-applicable	
	Non-applicable	Non-applicable	
Cupric sulfate CAS No.: 7758-98-7 EC: 231-847-6	300 mg/kg	Non-applicable	Rat
	Non-applicable	Non-applicable	
	Non-applicable	Non-applicable	

Section 12: Ecological Information

12.1. Toxicity:

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

Identification	Acute toxicity		Specie	Genus
	LC50	EC50		
Ammonium chloride CAS No.: 12125-02-9 EC: 235-186-4	3,98 mg/L (96 h)	161 mg/L (48 h)	Oncorhynchus mykiss	Fish
	Non-applicable	Non-applicable	Daphnia magna	Crustacean
	Non-applicable	Non-applicable		
Cupric sulfate CAS No.: 7758-98-7 EC: 231-847-6	0,1 – 1 mg/L (96 h)	0,1 – 1 mg/L		Fish
	0,1 – 1 mg/L	0,1 – 1 mg/L		Crustacean
	0,1 – 1 mg/L	0,1 – 1 mg/L		Algae

12.2. Persistence and degradability:

12.2.1. No information available.

12.3. Bioaccumulation Potential:

12.3.1. No information available.

12.4. Mobility in soil:

12.4.1. No information available.

12.5. Results of PBT and vPvB assessment

12.5.1. Not a PBT according to REACH annex XIII

12.5.2. PBT/vPvB assessment not available

12.6. Other adverse effects

12.6.1. To the best of our knowledge, the properties of this material have not been fully evaluated.

Section 13: Disposal Considerations

13.1. Waste treatment methods

13.1.1. Disposal should be in accordance with local, state, or national legislation.

Code	Description	Waste class Regulation (EU) No. 1357/2014
16 05 06*	Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals	Dangerous

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Section 13: Disposal Considerations (Continued)

- 13.2. Type of waste (Regulation (EU) No. 1357/2014):
- 13.2.1. HP14 Ecotoxic
- 13.3. Waste management (disposal and evaluation):
- 13.3.1. 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 (2014/955/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 6.2.

Section 14: Transport Information

- 14.1. UN number:
- 14.1.1. Not classified as hazardous for transport.
- 14.2. UN proper shipping name:
- 14.2.1. Not available.
- 14.3. Transport hazard class(es):
- 14.3.1. Not available.
- 14.4. Packing group number:
- 14.4.1. Not available.
- 14.5. Environmental hazards:
- 14.5.1. Not classified.
- 14.6. Guidance on transport in bulk (according to Annex II of MARPOL 73/78 and IBC code):
- 14.6.1. Not classified.
- 14.7. Special precautions:
- 14.7.1. No information available.

Section: 15: Regulatory Information

- 15.1. Safety, health, and environmental regulations/legislation specific for the substance or mixture:
- 15.1.1. Candidate substances for authorization under Regulation (EC) 1907/2006 (REACH):
 - 15.1.1.1. Non-applicable
 - 15.1.2. Substances included in Annex XIV of REACH ("Authorisation List") and sunset date:
 - 15.1.2.1. Non-applicable
 - 15.1.3. Regulation (EC) 1005/2009, about substances that deplete the ozone layer:
 - 15.1.3.1. Non-applicable
 - 15.1.4. Active substances for which a decision of non-inclusion onto Annex I (Regulation (EU) No. 528/2012):
 - 15.1.4.1. Non-applicable
 - 15.1.5. REGULATION (EU) No. 649/2012, in relation to the import and export of hazardous chemical products:
 - 15.1.5.1. Non-applicable
- 15.2. Chemical Safety Assessment:
- 15.2.1. No information available

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Section 15: Regulatory Information (Continued)

15.3. International Inventories

Components	CAS-No.	US TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Cupric Sulfate, Anhydrous	7758-98-7	Present	Present KE-08956	Present	Present (1)-300	Present	Present	Present 231-847-6
Ammonium Chloride	12125-02-9	Present	Present KE-01645	Present	Present (1)-218	Present	Present	Present 235-186-4

15.4. United States Regulatory Information

15.4.1. SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

15.4.2. SARA 313 Components: The material contains copper compounds.

15.4.3. SARA 311/312: No SARA Hazards.

15.4.4. Toxic Substance Control Act (TSCA): All components of this material are either listed or exempt from listing on the TSCA Inventory.

15.4.5. State Right-to-Know

15.4.5.1. Massachusetts

15.4.5.1.1. Cupric Sulfate, Anhydrous CAS No. 7758-98-7

15.4.5.1.2. Ammonium Chloride CAS No. 12125-02-9

15.4.5.2. New Jersey

15.4.5.2.1. Cupric Sulfate, Anhydrous CAS No. 7758-98-7

15.4.5.2.2. Ammonium Chloride CAS No. 12125-02-9

15.4.5.3. Pennsylvania

15.4.5.3.1. Cupric Sulfate, Anhydrous CAS No. 7758-98-7

15.4.5.3.2. Ammonium Chloride CAS No. 12125-02-9

15.4.5.4. Rhode Island

15.4.5.4.1. Ammonium Chloride CAS No. 12125-02-9

15.4.6. Minnesota – Hazardous Substance List

15.4.6.1. Ammonium Chloride CAS No. 12125-02-9

15.4.7. New York Release Reporting – List of Hazardous Substances:

15.4.7.1. Cupric Sulfate, Anhydrous CAS No. 7758-98-7, 10lb RQ

15.4.7.2. Ammonium Chloride CAS No. 12125-02-9, 100lb RQ

15.4.8. Louisiana Reportable Quantity List for Pollutants

15.4.8.1. Cupric Sulfate, Anhydrous CAS No. 7758-98-7, 10lb final RQ, 4.54kg final RQ

15.4.8.2. Ammonium Chloride CAS No. 12125-02-9, 5000lb final RQ, 2270kg final RQ

15.4.9. California Directors List of Hazardous Substances:

15.4.9.1. Cupric Sulfate, Anhydrous CAS No. 7758-98-7

15.4.9.2. Ammonium Chloride CAS No. 12125-02-9

15.4.10. California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

15.4.11. Chemicals Known to the State of California to Cause Cancer:

15.4.11.1. This product does not contain a chemical requiring a warning under California Prop. 65.

15.4.12. Chemicals known to the State of California to Cause Reproductive Toxicity:

15.4.12.1. This product does not contain a chemical requiring a warning under California Prop. 65.

15.5. Canada

15.5.1. WHMIS hazard class:

15.5.1.1. D2B Toxic materials

15.5.1.1.1. Ammonium Chloride CAS No. 12125-02-9

15.5.2. Canada Controlled Products Regulation:

15.5.2.1. This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

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Section 15: Regulatory Information (Continued)

Components	WHMIS Ingredient Disclosure List
Ammonium Chloride	1%
Cupric Sulfate, Anhydrous	1%

15.5.3. Inventory

Components	Canada (DSL)	Canada (NDSL)	CEPA Schedule I – Toxic Substances	CEPA – 2010 Greenhouse Gases Subject to mandatory Reporting
Ammonium Chloride	Present	Not listed	Not listed	Not listed
Cupric Sulfate, Anhydrous	Present	Not listed	Not listed	Not listed

15.6. EU Classification

15.6.1. R-phrases(s)

- 15.6.1.1. R22 – Harmful if swallowed
- 15.6.1.2. R36 – Irritating to eyes
- 15.6.1.3. R53 – May cause long-term adverse effects in the aquatic environment.

15.6.2. S-phrases(s)

- 15.6.2.1. S 2 – Keep out of the reach of children.
- 15.6.2.2. S22 – Do not breath dust.
- 15.6.2.3. S60 – This material and its container must be disposed of as hazardous waste.
- 15.6.2.4. S61 – Avoid release to the environment. Refer to special instructions/safety data sheets.

Components	CAS-No.	Classification	Concentration Limits	Safety Phrases
Ammonium Chloride	12125-02-9	Xn; R22 Xi; R36	No information	S2 S22
Cupric Sulfate, Anhydrous	7758-98-7	Xn; R22 Xi; R36 N; R50-53	No information	S:(2)-22-60-61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

15.6.3. Indication of danger:

- 15.6.3.1. Xn – Harmful.
- 15.6.3.2. Xi – Irritant.
- 15.6.3.3. N – Dangerous for the environment.

Xn



Xi



N



Section 16: Other Information

16.1. Legislation related to safety data sheets:

- 16.1.1. This Safety Data Sheet is provided in compliance with the EC Directive 1907/2006-453/2010 and OSHA Hazard Communication Standard 29 CFR 1910.1200.
- 16.1.2. Regulation (EC) No. 1272/2008 on the classification, labelling, and packaging of substances and mixtures (CLP Regulation) applies in Europe.

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Section 16: Other Information (Continued)

- 16.2. Texts of the legislative phrases mentioned in section 2:
- 16.2.1. H412: Harmful to aquatic life with long lasting effects
 - 16.2.2. H302: Harmful if swallowed
- 16.3. Texts of the legislative phrases mentioned in section 3:
- 16.3.1. 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.
- 16.4. CLP Regulation (EC) No. 1272/2008:
- 16.4.1. Acute Tox. 4: H302 – Harmful if swallowed
 - 16.4.2. Aquatic Acute 1: H400 – Very toxic to aquatic life
 - 16.4.3. Aquatic Chronic 1: H410 – Very toxic to aquatic life with long lasting effects
 - 16.4.4. Eye Irrit. 2: H319 – Causes serious eye irritation
 - 16.4.5. Skin Irrit. 2: H315 – Causes skin irritation
- 16.5. Classification procedure:
- 16.5.1. Aquatic Chronic 3: Calculation method
 - 16.5.2. Acute Tox. 4: Calculation method
- 16.6. This document is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. These suggestions should not be confused with state, municipal or insurance requirements, and constitute NO WARRANTY. Millennium LifeSciences, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.