

1. IDENTIFICATION

1.1 Product identifiers

Product name(s): 4-Methylumbelliferyl beta-D-lactoside
Other name(s): LacMU; 4-Methylumbelliferyl beta-D-lactopyranoside
Product number(s): 04S-144.0
CAS No.: 84325-23-5

1.2 Intended uses

Identified uses: Laboratory chemicals for research use only.

1.3 Supplier information

Company: Integrated Micro-Chromatography Systems, Inc. (IMCS)
110 Centrum Drive
Irmo, SC 29063
Telephone: +1 (888) 560-2073
Website: www.imcstips.com

1.4 Emergency telephone number

Emergency Phone: VelocityEHS USA and Canada: +1 (800) 255-3924
VelocityEHS International: +1 (813) 248-0585
IMCS Technical Support: +1 (888) 560-2073

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

This product is not classified as a hazardous material.

2.2 Label Elements

No labeling applicable.

2.3 Other Hazards

Not applicable.

2.4 Unknown acute toxicity

Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: LacMU, 4-Methylumbelliferyl beta-D-lactopyranoside
Molecular formula: $C_{22}H_{28}O_{13}$
Molecular weight: 500.45 g/mol
CAS No.: 84325-23-5

Product contains no substances at concentration levels considered to be hazardous to human health or the environment. Handle all chemicals with caution.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information: Consult physician if symptoms occur.
After inhalation: Supply fresh air; consult physician if symptoms occur.
After skin contact: Wash with soap and plenty of water.

After eye contact: Remove contact lenses and rinse opened eye for at least 15 minutes with running water.
After swallowing: Rinse mouth with water; consult physician if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

4.3 Indication of any immediate medical attention and special treatment needed

If exposed or concerned, seek medical advice and attention. Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Suitable extinguishing media

CO₂, dry chemical, foam, or water spray.

5.2 Unsuitable extinguishing media

No data available.

5.3 Specialized hazards arising from the substance or mixture:

Carbon oxides

5.4 Specialized protective equipment or precautions:

No special measures required. Exercise caution when fighting any chemical fire.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Avoid dust formation. Ensure adequate ventilation. Wear personal protective equipment.

6.2 Environmental precautions

Avoid release into the environment.

6.3 Methods and materials for containment and clean up

Sweep up and shovel into a suitable container for disposal.

6.4 Reference to other sections

See section 7 for safe handling, section 8 for personal protection equipment, and section 13 for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in accordance with good laboratory practices and safety procedures.

7.2 Conditions for safe storage, including any incompatibilities

Store tightly closed in a dry, well-ventilated place. Recommended storage temperature is 2-8 °C.

7.3 Specific end use(s)

For research use only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure guidelines

Contains no substances with occupational exposure limit values.

8.2 Engineering controls

Wear personal protective equipment. Ensure adequate ventilation, especially if dust is formed.

8.3 Protective equipment and hygiene

Breathing equipment:	Not required unless dust is formed.
Skin protection:	Handle with gloves. Recommendation: nitrile rubber 0.11 mm minimum thickness with 480 min breakthrough time; long-sleeved clothing.
Eye protection:	Safety glasses or goggles.
Hygiene:	Wash hands and exposed skin thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Appearance:	White powder
Odor:	No data available
Odor threshold:	Not established
pH:	No data available
Melting point/range:	No data available
Freezing point/range:	No data available
Boiling point/range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper flammability or explosive limits:	No data available
Lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	No data available
Solubility:	Soluble in water, dimethylsulfoxide
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available

10. STABILITY AND REACTIVITY

- 10.1 Reactivity:** None known.
- 10.2 Chemical stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3 Possibility of hazardous reactions:** None expected under normal use.
- 10.4 Conditions to avoid:** No data available.
- 10.5 Incompatible materials:** Strong oxidizers.
- 10.6 Hazardous decomposition products:** None expected under normal conditions. See section 5 in case of fire.

11. TOXICOLOGICAL INFORMATION

- 11.1 Acute toxicity**
Not classified
- 11.2 Primary irritant effect**
None known.

11.3 Additional toxicological information

No additional toxicological information available.

11.4 Carcinogenicity

Not applicable.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Not regulated for transport.

15. REGULATORY INFORMATION

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

None known.

15.2 State regulations

4-Methylumbelliferyl beta-D-lactoside (84325-23-5)
New Jersey – Right to Know List
Pennsylvania – Right to Know List

16. OTHER INFORMATION

The information in this document is based on the present state of 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.

IMCS, Inc and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

Date of Last Revision: 05/13/2025

Revision Notes: Updated recommended storage temperature.
