SAFETY DATA SHEET (SDS)
TrailBio® Basal Medium F

1. Product and Company Identification

Product Name: TrailBio® Basal Medium F
Product Codes: TB73279
Product Use: For Research Use Only (RUO).
Manufacturer: Trailhead Biosystems Inc.
23215 Commerce Park Road, Beachwood, Ohio, 44122
SDSs are available at the following website: www.trailbio.com
Company Phone Number: 216-490-3304
Emergency Telephone Number: Medical Emergency (24 h): 1-800-222-1222
Email: support@trailbio.com

2. Hazards Identification

Classification
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)
Not applicable.

GHS Label elements, including precautionary statements:
Not classified.

Precautionary Statements
Prevention
Not applicable.
Response
Not applicable.
Storage
Not applicable.
Disposal
Not applicable.

3. Composition/Information on Ingredients

Substance
Not applicable

Mixture
Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)
No component of this product is present at a concentration that meets the criteria for classification as a health or physical hazard under 29 CFR 1910.1200. The identities and exact percentages (concentrations) of composition have been withheld as a trade secret.

4. First Aid Measures

First aid measures for different exposure routes:
General Advice
If symptoms persist call a physician.
Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact

Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.

Inhalation

Move to fresh air. If symptoms persist, call a physician.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Most important symptoms/effects, acute, and delayed

None known.

Indication of immediate medical attention and special treatment needed if necessary

Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media:

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

Unsuitable Extinguishing Media:

None known.

Specific hazards arising from the chemical:

Non-combustible. Development of hazardous combustion gases or vapors is possible in the event of fire.

Hazardous Combustion Products:

Carbon oxides, nitrogen oxides (NOx), sulphur oxides, oxides of phosphorus, hydrogen chloride gas, and metal oxides of sodium, potassium, magnesium, calcium, iron, zinc, copper, manganese, molybdenum, selenium, vanadium, cobalt, and nickel.

Explosion Data

Sensitivity to Mechanical Impact

None

Sensitivity to Static Discharge

None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approval or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Use personal protective equipment. Avoid contact with skin, eyes, or clothing.

Environmental precautions

Prevent product from entering drains.

Methods and materials for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Use personal protective equipment. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. Handling and Storage

Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes, or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Handle using aseptic technique in a biological safety cabinet appropriate to the cells being cultured.

Conditions for safe storage, including any incompatibilities

Store at 2 – 8 °C. Do not freeze. Keep container tightly closed and in a properly labeled container. No known incompatible materials. Refer to the product label and Certificate of Analysis for the assigned expiration date.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Exposure controls

Engineering Measures

Ventilation systems
Showers
Eyewash Stations

Individual protection measures, such as personal protective equipment

Eye/face protection	No special protective equipment required.
Skin and body protection	No special protective equipment required.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Appearance: Clear liquid, colorless to pale straw
Odor: Slight
Odor Threshold: Not available
pH: 7.5-8.1
Physical State at 20 deg C: Liquid
Specific Gravity: Not available
Density: Not available
Solubility: Miscible with water
Partition Coefficient: Not available
Melting point/melting range: Not applicable (liquid)
Freezing Point: Not available
Boiling point/boiling range: Not available
Flash Point: Not applicable (aqueous)
Flammability Limit in Air: Not applicable
Autoignition temperature: Not applicable
Decomposition temperature: Not available
Evaporation Rate: Not available

Vapor Pressure: Not available
Vapor Density: Not available
Dynamic Viscosity: Not available
Oxidizing Properties: Not available
Explosive properties: Not available
Molecular Weight: Not applicable (mixture)
VOC (lb/gal): None
VOC (g/L): None

10. Stability and Reactivity

Reactivity
No data available.

Chemical Stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available.

Conditions to avoid
Excessive heat. Freezing.

Incompatible Materials
Strong oxidizing agents.

Hazardous Decomposition Products
None known under recommended storage and handling conditions. For hazardous combustion products in the event of fire, see Section 5.

11. Toxicological Information

Information on likely routes of administration
Product Information
Acute toxicity

Inhalation	Unknown
Eyes	Unknown
Skin	Unknown
Ingestion	Unknown

Component Information
No component is classified for acute toxicity. Toxicological data are not available for the mixture as supplied.

Information on toxicological effects
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	No information available.
Corrosivity	No information available.
Sensitization	No information available.
Mutagenic Effects	No information available.
Reproductive Toxicity	No information available.
Carcinogenicity	None known. No component present at 0.1% or greater is listed by NTP, IARC, or OSHA as a carcinogen.
STOT – single exposure	No information available.

STOT – repeated exposure	No information available.
Target Organ Effects	None known.
Aspiration hazard	No information available.

Numerical measures of toxicity – Product Information

ATEmix (oral)	Not established. See note below.
ATEmix (dermal)	Not established. See note below.

ATE: acute toxicity estimate.

12. Ecological Information

Ecotoxicity

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

Persistence and degradability

No information available.

Bioaccumulation

There is no data for this product.

Mobility

No information available.

Other adverse effects

No information available.

Endocrine Disrupting Properties

No data available.

Additional Ecological Information

Discharge into the environment must be avoided.

13. Disposal Considerations

Waste disposal methods

Dispose of in accordance with local regulations. Material that has been in contact with cells or other biological material should be decontaminated and disposed of as biological waste in accordance with institutional procedures.

Contaminated packaging

Do not re-use empty containers.

14. Transport Information

DOT:	Not regulated.
TDG:	Not regulated.
MEX:	Not regulated.
ICAO:	Not regulated.
IATA:	Not regulated.
IMDG:	Not regulated.
ADR/RID:	Not regulated.
ADN:	Not regulated.

Not regulated as dangerous goods.

15. Regulatory Information

International Inventories

US TSCA: This product contains substance(s) not listed on the TSCA inventory.
DSL/NDSL, EINECS/ELINCS, ENCS, IECSC, KECL, PICCS, AICS: Not determined.

U.S. Federal Regulations

TSCA Sections 4, 5, and 12(b)

No substances are subject to a Significant New Use Rule. No substances are subject to TSCA Section 12(b) export notification requirements.

SARA 313

This product does not contain any chemical components with known CAS numbers that exceed the de minimis reporting thresholds established by SARA Title III, Section 313.

SARA 311/312 Hazard Categories

Not applicable. This product is not classified as a physical or health hazard under 29 CFR 1910.1200 (see Section 2); no component is present at a concentration meeting the classification criteria for a health hazard category

CERCLA

Listed substances present in this product are at low enough levels that they are not expected to exceed a reportable quantity. There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Clean Water Act

This product does not contain toxic pollutants listed under Clean Water Act Section 307, and does not contain priority pollutants related to the Clean Water Act.

US State Regulations

California Proposition 65

WARNING: This product can expose you to chemicals including nickel(II) chloride hexahydrate, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

US State Right to Know Regulations

The following are present as constituents of this product:
Massachusetts Right To Know: sodium chloride (7647-14-5); sodium selenite (10102-18-8)
Pennsylvania Right To Know: disodium hydrogen orthophosphate (7558-79-4)

International Regulations

Canada, Mexico, and other jurisdictions: Not determined.

16. Other Information

	Health Hazard	Flammability	Instability	Physical Hazard	Personal protection
NFPA	0	0	0	-	-
HMIS	0	0	-	0	A

Animal Origin	No component of animal origin is intentionally added to this product.
Prepared By	Trailhead Biosystems
Preparation Date	2026-09-14
Revision Date	NA
Revision Note	Initial issue.

Disclaimer	The information provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

END

SAFETY DATA SHEET (SDS)
TrailBio® Endothelial Expansion Supplement

1. Product and Company Identification

Product Name: TrailBio Endothelial Expansion Supplement
Product Codes: TB03489
Product Use: For Research Use Only (RUO)
Manufacturer: Trailhead Biosystems Inc.
23215 Commerce Park Road, Beachwood, Ohio, 44122
SDSs are available at the following website: www.trailbio.com
Company Phone Number: 216-490-3304
Emergency Telephone Number: Medical Emergency (24 h): 1-800-222-1222
Email: support@trailbio.com

2. Hazards Identification

Classification
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)
This product contains a component of bovine origin. Handle using aseptic technique and good industrial hygiene practice. Proteins of animal origin may provoke a response in individuals already sensitized to them. See Section 16.

GHS Label elements, including precautionary statements:
Not classified.

Precautionary Statements
Prevention
Not applicable.
Response
Not applicable.
Storage
Not applicable.
Disposal
Not applicable.

3. Composition/Information on Ingredients

Substance
Not applicable

Mixture
Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

**The exact percentage (concentration) of composition has been withheld as a trade secret.
No component of this product is present at a concentration that meets the criteria for classification as a health or physical hazard under 29 CFR 1910.1200.

4. First Aid Measures

First aid measures for different exposure routes:

General Advice
If symptoms persist call a physician.
Eye Contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact
Wash off immediately with plenty of water. Get medical attention if irritation develops and persists.
Inhalation
Move to fresh air. If symptoms persist, call a physician.
Ingestion
Clean mouth with water and drink afterwards plenty of water. Consult a physician.

Most important symptoms/effects, acute, and delayed
None known.

Indication of immediate medical attention and special treatment needed if necessary
Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media:
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media:
None known.

Specific hazards arising from the chemical:
None known.

Hazardous Combustion Products:
None known.

Explosion Data
Sensitivity to Mechanical Impact
None
Sensitivity to Static Discharge
None

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approval or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures
Use personal protective equipment. Avoid contact with skin, eyes, or clothing.

Environmental precautions
Prevent product from entering drains.

Methods and materials for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Use personal protective equipment. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. Handling and Storage

Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes, or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Handle using aseptic technique in a biological safety cabinet appropriate to the cells being cultured.

Conditions for safe storage, including any incompatibilities

Store at -20 °C. Keep container tightly closed and in a properly labeled container. No known incompatible materials. Refer to the product label and Certificate of Analysis for the assigned expiration date.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Exposure controls

Engineering Measures

Ventilation systems
Showers
Eyewash Stations

Individual protection measures, such as personal protective equipment

Eye/face protection	No special protective equipment required.
Skin and body protection	No special protective equipment required.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Appearance: Clear liquid, colorless to pale straw
Odor: Slight
Odor Threshold: Not available
pH: Not available
Physical State at 20 deg C: Liquid
Specific Gravity: Not available
Density: Not available
Solubility: Miscible with water
Partition Coefficient: Not available
Melting point/melting range: Not applicable (liquid)
Freezing Point: Not available
Boiling point/boiling range: Not available
Flash Point: Not applicable (aqueous)
Flammability Limit in Air: Not applicable
Autoignition temperature: Not applicable
Decomposition temperature: Not available
Evaporation Rate: Not available

Vapor Pressure: Not available
Vapor Density: Not available
Dynamic Viscosity: Not available
Oxidizing Properties: Not available
Explosive properties: Not available
Molecular Weight: Not applicable
VOC (lb/gal): None
VOC (g/L): None

10. Stability and Reactivity

Reactivity
Stable under recommended storage conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Excessive heat. Freezing. Prolonged exposure to light.

Incompatible Materials
Strong oxidizing agents, strong acids, strong bases, and acid chlorides.

Hazardous Decomposition Products
None known.

11. Toxicological Information

Information on likely routes of administration

Product Information

Acute toxicity

Inhalation	Unknown
Eyes	Unknown
Skin	Unknown
Ingestion	Unknown

Component Information
No component is classified for acute toxicity. Toxicological data are not available for the mixture as supplied.

Information on toxicological effects
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	No information available.
Corrosivity	No information available.
Sensitization	No information available. Contains protein of bovine origin; see Section 2.
Mutagenic Effects	No information available.
Reproductive Toxicity	No information available.
Carcinogenicity	None known. No component present at 0.1% or greater is listed by NTP, IARC, or OSHA as a carcinogen.
STOT – single exposure	No information available.

STOT – repeated exposure	No information available.
Target Organ Effects	None known.
Aspiration hazard	No information available.

Numerical measures of toxicity – Product Information

ATEmix (oral)	>5000 mg/kg
ATEmix (dermal)	>5000 mg/kg

ATE: acute toxicity estimate

12. Ecological Information

Ecotoxicity

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

Persistence and degradability

No information available.

Bioaccumulation

There is no data for this product.

Mobility

No information available.

Other adverse effects

No information available.

13. Disposal Considerations

Waste disposal methods

Dispose of in accordance with local regulations. Material that has been in contact with cells or other biological material should be decontaminated and disposed of as biological waste in accordance with institutional procedures.

Contaminated packaging

Do not re-use empty containers.

14. Transport Information

DOT:	Not regulated.
TDG:	Not regulated.
MEX:	Not regulated.
ICAO:	Not regulated.
IATA:	Not regulated.
IMDG:	Not regulated.
ADR/RID:	Not regulated.
ADN:	Not regulated.

Not regulated as dangerous goods. This product contains material of bovine origin; import permits, veterinary certification, or country-of-origin documentation may be required for international shipment.

15. Regulatory Information

International Inventories

US TSCA: This product contains substance(s) not listed on the TSCA inventory.
DSL/NDSL, EINECS/ELINCS, ENCS, IECSC, KECL, PICCS, AICS: Not determined.

U.S. Federal Regulations

TSCA Sections 4, 5, and 12(b)

This product does not contain any chemicals regulated by TSCA Sections 4, 5, or 12(b)

SARA 313

This product does not contain any chemical components with known CAS numbers that exceed the de minimis reporting thresholds established by SARA Title III, Section 313.

SARA 311/312 Hazard Categories

Acute Health Hazard; Chronic Health Hazard.

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

Listed substances present in this product are at low enough levels that they are not expected to exceed a reportable quantity. There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

WARNING: This product can expose you to chemicals including nickel(II) chloride hexahydrate, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

US State Right to Know Regulations

The following are present as constituents of this product:
Massachusetts Right To Know: sodium chloride (7647-14-5); sodium selenite (10102-18-8)
Pennsylvania Right To Know: disodium hydrogen orthophosphate (7558-79-4)

International Regulations

Canada – NDSL

No information available

Mexico – Grade

No information available.

Mexico – Carcinogen Status and Exposure Limits

No information available.

Other Regulations

No information available.

16. Other Information

	Health Hazard	Flammability	Instability	Physical Hazard	Personal protection
NFPA	0	0	0	-	-
HMIS	0	0	-	0	A

Biological Source This product contains bovine serum albumin. Country of origin and supplier documentation supporting the absence of transmissible spongiform encephalopathy (TSE/BSE) risk are

	available on request. The albumin supplier classifies that material as not hazardous and states that it contains no Proposition 65 chemicals; the Proposition 65 statement in Section 15 does not arise from this component.
Prepared By	Trailhead Biosystems
Preparation Date	2026-09-14
Revision Date	N/A
Revision Note	Initial issue.
Disclaimer	The information provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

END