

# Safety Data Sheet

## Calcein AM, 4 mM solution in DMSO

### SECTION 1: Identification of the Substances and the Company/Undertaking

Identification of the Substance or Mixture    **Product Name:** Calcein AM, 4 mM solution in DMSO    **Catalog Number:** 5030

#### Company/Undertaking Identification

Ion Biosciences

3055 Hunter Road, Box 3

San Marcos, TX 78666

+1 512.957.9123

#### 24 hour Emergency Response

866.536.0631

301.431.8585

+1 301.431.8585 (Outside the U.S.)

For Research Use Only. Not for use in diagnostic procedures.

### SECTION 2: Hazards Identification

#### GHS - Classification

**Signal word:** WARNING

**Hazard Pictograms:** None.

**Health Hazards:** Not hazardous.

**Physical Hazards:** GHS Physical Hazard– Flammable liquids– Category 4

**Hazard statements:** H227– Combustible liquid.

#### Precautionary Statements

**Prevention:** P210– Keep away from heat, sparks, open flames, other ignition sources. No smoking.

P280– Wear protective gloves/clothing/eye and face protection

**Response:** P370 + P378– In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:** P403– Store in well-ventilated place.

**Disposal:** P501– Dispose of contents/container to an approved waste disposal plant.

#### HMIS

Health	1
Flammability	2
Reactivity	0

### SECTION 3: Composition/Information on Ingredients

Name	CAS No.	EC No.	Index No.	Weight %	Classification according to regulation (EC)No1278/2008
DMSO	67-68-5	200-664-3	-	95-100%	NA

### SECTION 4: First Aid Measures

**Skin contact:** Rinse skin with water. Immediate medical attention is not required.

**Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Ingestion:** Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation:** Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

**Most important symptoms and effects, both acute and delayed:** H227– Combustible liquid.

**Notes to physician:** Treat symptomatically.

## SECTION 5: Firefighting Measures

### Extinguishing Media

**Suitable extinguishing media:** Water spray. Carbon Dioxide (CO<sub>2</sub>) Foam. Dry chemical.

**Unsuitable extinguishing media:** Not known.

**Specific hazards arising from the chemical:** Not known.

**Advice for firefighters:** Standard procedure for chemical fires.

## SECTION 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use personal protection equipment. See section 8 for more information.

**Environmental precautions:** No special environmental precautions required.

**Methods and material for containment and cleaning up:** Soak up with inert absorbent material.

**Reference to other sections:** See section 8 for more information.

## SECTION 7: Handling and Storage

**Handling:** Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

**Conditions for safe storage, including any incompatibilities:** Store at -20°C. Protect from light and moisture.

**Specific end use(s):** For research use only.

## SECTION 8: Exposure Controls/Personal Protection

### Control Parameters

**Substance:** Dimethylsulfoxide, CAS no. 67-68-5

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Dimethylsulfoxide	None	None	None	None

**Engineering measures:** Ensure adequate ventilation, especially in confined areas.

### Exposure Controls

**Personal Protective Equipment:** Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Respiratory protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

**Hand protection:** Wear suitable gloves. Glove material: Compatible chemical resistant gloves.

**Eye protection:** Tight sealing safety goggles.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls:** No special environmental precautions required.

# Safety Data Sheet

## SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties.

**Appearance:** Liquid.

**Odor:** No data available.

**Odor threshold:** No data available.

**pH:** 6-8

**Boiling point/boiling range:** No data available.

**Melting point/melting range:** No data available.

**Flash point:** No data available.

**Evaporation rate:** No data available.

**Flammability:** No data available.

**Explosive Limits:** No data available.

**Vapor pressure:** No data available.

**Vapor density:** No data available.

**Relative density:** No data available.

**Solubility:** No data available.

**Partition coefficient (n-octanol/water):** No data available.

**Autoignition temperature:** No data available.

**Decomposition temperature:** No data available.

**Viscosity:** No data available.

**Explosive properties:** No data available.

**Oxidizing properties:** No data available.

## SECTION 10: Stability and Reactivity

**Reactivity:** None known.

**Stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous reaction has not been reported.

**Conditions to avoid:** None under normal processing.

**Incompatible materials:** Strong acids. Strong oxidizing agents.

**Hazardous decomposition products:** No data available.

## SECTION 11: Toxicological Information

**Acute Toxicity DMSO:**

Oral LD50	14,500 mg/kg
Dermal LD50	>40000 mg/kg bw
Inhalation LC50	>5000 mg/l

**Principle Routes of Exposure**

**Acute toxicity:** Data are conclusive but insufficient for classification.

**Skin corrosion:** Mild skin irritant. Mild eye irritant. Components of the product may be absorbed through the skin.

**Serious eye damage/irritation:** Data are conclusive but insufficient for classification.

**Respiratory or skin sensitization:** Data are conclusive but insufficient for classification.

**Specific target organ toxicity- single exposure:** Data are conclusive but insufficient for classification.

**Specific target organ toxicity- repeated exposure:** Data are conclusive but insufficient for classification.

**Carcinogenicity:** Data are conclusive but insufficient for classification.

**Germ cell mutagenicity:** Data are conclusive but insufficient for classification.

**Reproductive toxicity:** Data are conclusive but insufficient for classification.

**Aspiration hazard:** Data are conclusive but insufficient for classification.

## SECTION 12: Ecological Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
Dimethylsulfoxide	Skeletonema costatum EC5012350- 25500 mg/L (96 h)	Daphnia species EC50=7000 mg/L (24 h)	No data available.	No data available.	logPow-2.03

**Ecotoxicity:** Contains no substances known to be hazardous in waste water treatment plants.

**Mobility in soil:** No information available.

**Persistence and degradability:** Inherently biodegradable.

**Bioaccumulation potential:** Does not bioaccumulate.

**Results of PBT and vPvB assessment:** This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects:** No information available.

# Safety Data Sheet

## SECTION 13: Disposal Considerations

**Waste treatment methods:** The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique.

Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

## SECTION 14: Transport Information

**IATA/ADR/DOT-US/IMDG:** Not classified as dangerous in the meaning of transport regulations.

**UN number:** Not applicable.

**UN proper shipping name:** Not applicable.

**Transport hazard class(es):** Not applicable.

**Packing group:** Not applicable.

**Environmental hazards:** Not applicable.

**Special precautions for use:** Not applicable.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable.

## SECTION 15: Regulatory Information

Component	US TSCA
Dimethylsulfoxide 67-68-5	Listed

### US Federal Regulations

**SARA 313:** This product is not regulated by SARA.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61):** This product does not contains HAPs.

### US State Regulations

**California Proposition 65:** This product does not contain any Proposition 65 chemicals.

**WHMIS Hazard Class:** B3- Combustible liquid. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other Information

For Research Use Only. Not for use in diagnostic procedures.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"

# Safety Data Sheet

## Ethidium Homodimer I, 2 mM DMSO/H<sub>2</sub>O solution

### SECTION 1: Identification of the Substances and the Company/Undertaking

Identification of the Substance or Mixture **Product Name:** Ethidium Homodimer I, 2 mM DMSO/H<sub>2</sub>O solution

#### Company/Undertaking Identification

Ion Biosciences  
3055 Hunter Road, Box 3  
San Marcos, TX 78666  
+1 512.957.9123

#### 24 hour Emergency Response

866.536.0631  
301.431.8585  
+1 301.431.8585 (Outside the U.S.)  
For Research Use Only. Not for use in diagnostic procedures.

### SECTION 2: Hazards Identification

#### GHS - Classification

**Signal word:** WARNING

**Hazard Pictograms:**



**Health Hazards:** Carcinogenicity– Category 2

**Physical Hazards:** GHS Physical Hazard– Flammable liquids– Category 4

**Hazard statements:** H227– Combustible liquid.  
H351– Suspected of causing cancer.

#### Precautionary Statements

**Prevention:** P210– Keep away from heat, sparks, open flames, other ignition sources. No smoking.  
P201– Obtain special instructions before use.

P280– Wear protective gloves/clothing/eye and face protection  
P202– Do not handle until all safety precautions read and understood.

**Response:** P370 + P378– In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P308 + P313– If exposed or concerned: Get medical advice/attention.

**Storage:** P403– Store in well-ventilated place.

**Disposal:** P501– Dispose of contents/container to an approved waste disposal plant.

#### HMIS

Health	4
Flammability	2
Reactivity	0

### SECTION 3: Composition/Information on Ingredients

Name	CAS No.	EC No.	Index No.	Weight %	Classification according to regulation (EC)No1278/2008
Ethidium Homodimer I	61926-22-5	-	-	<0.1%	-
DMSO	67-68-5	200-664-3	-	~25%	NA

### SECTION 4: First Aid Measures

**Skin contact:** Rinse with water and soap for several minutes. If irritation persists, seek medical care.

**Eye contact:** Flush eyes with water for 15 minutes. If irritation persists, seek medical care.

**Ingestion:** If swallowed, do NOT induce vomiting. Rinse mouth with water. Seek medical care

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration and seek medical care.

**Most important symptoms and effects, both acute and delayed:**  
Not applicable

**Notes to physician:** Treat symptomatically.

# Safety Data Sheet

## SECTION 5: Firefighting Measures

### Extinguishing Media

**Suitable extinguishing media:** Water spray. Carbon Dioxide (CO<sub>2</sub>) Foam. Dry chemical.

**Unsuitable extinguishing media:** Not known.

**Specific hazards arising from the chemical:** Not known.

**Advice for firefighters:** Burning produces poisonous gases, sulfur oxides. Wear self contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Avoid breathing vapors, mist, or gas. Remove all sources of ignition.

**Environmental precautions:** Avoid discharge into drains and waterways whenever possible.

**Methods and material for containment and cleaning up:** Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

## SECTION 7: Handling and Storage

**Handling:** Avoid inhalation of vapor or mist. Avoid direct contact with substance.

**Conditions for safe storage, including any incompatibilities:** Store at -20°C. Keep container tightly closed in a dry and well-ventilated place.

**Specific end use(s):** For research use only.

## SECTION 8: Exposure Controls/Personal Protection

### Control Parameters/Exposure Limits

**Substance:** Dimethylsulfoxide, CAS no. 67-68-5

Country	Austria	Belgium	Denmark	European Union	France	Germany	Hungary	Italy	Poland
Limit value, 8 hours	160mg/m3	-	160mg/m3	-	-	160mg/m3	-	-	-
Limit Value, short term	-	-	320mg/m3	-	-	320mg/m3	-	-	-

Country	Spain	Sweden	Netherlands	United Kingdom	USA	Australia	Canada	Japan	South Korea
Limit value, 8 hours	-	160mg/m3	-	-	-	-	-	-	-
Limit Value, short term	-	500mg/m3	-	-	-	-	-	-	-

### Exposure Controls

**Personal Protective Equipment:** Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

**Hand protection:** Handle with gloves. Inspect gloves prior to use. Use proper glove removal technique to avoid skin contact with the product. Dispose of contaminated gloves

**Respiratory protection:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye protection:** Safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at end of workday.

# Safety Data Sheet

## SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties.

**Appearance:** Liquid.

**Odor:** No data available.

**Odor threshold:** No data available.

**pH:** No data available.

**Boiling point/boiling range:** No data available.

**Melting point/melting range:** No data available.

**Flash point:** No data available.

**Evaporation rate:** No data available.

**Flammability:** No data available.

**Explosive Limits:** No data available.

**Vapor pressure:** No data available.

**Vapor density:** No data available.

**Relative density:** No data available.

**Solubility:** Soluble in water.

**Partition coefficient (n-octanol/water):** No data available.

**Autoignition temperature:** No data available.

**Decomposition temperature:** No data available.

**Viscosity:** No data available.

**Explosive properties:** No data available.

**Oxidizing properties:** No data available.

## SECTION 10: Stability and Reactivity

**Stability:** Stable under normal conditions.

**Materials to avoid:** Strong acids. Strong oxidizing agents.

**Possibility of hazardous reactions:** No data available.

**Hazardous decomposition products:** Hazardous decomposition

## SECTION 11: Toxicological Information

**Acute Toxicity DMSO:**

<b>Oral LD50</b>	Rat- 14,500 mg/kg
<b>Inhalation LC50</b>	Rat- 4 h- 40250 ppm
<b>Reactivity</b>	Rabbit- > 5,000 mg/kg

**Germ cell mutagenicity:** Salmonella typhimurium assay (Ames test): negative (+/- activation), DMSO is used as a neutral solvent in the Ames mutagen test.

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**GHS**

**Specific target organ toxicity- single exposure:** No data available.

**Specific target organ toxicity- repeated exposure:** No data available.

**Potential Health Effects**

**Eyes:** May cause eye irritation.

**Skin:** May be harmful if absorbed through skin. May cause skin irritation.

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.

**Ingestion:** May be harmful if swallowed.

**Reproductive toxicity:** Experiments have shown reproductive toxicity effects on laboratory animals (Dimethyl sulfoxide)

**Sensitization:** No data available.

**Additional Information:** RTECS: PV6210000 (DMSO)

## SECTION 12: Ecological Information

**Toxicity (DMSO):** The LC50(96hrs) for ten species of fish range from 32500 to 43000ppm.

**Persistence and degradability:** No information available.

**Mobility:** No information available.

**Biodegradation:** Dimethyl sulfoxide: biodegradation: 90% (28d).

**Results of PBT and vPvB assessment:** No information available.

**Other adverse effects:** No information available.

# Safety Data Sheet

## SECTION 13: Disposal Considerations

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**Waste treatment methods:** Do not dispose product directly into sewage.

Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

## SECTION 14: Transport Information

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**IATA/ADR/DOT-US/IMDG:** Not Classified as dangerous in the meaning of transport regulations.

**Proper shipping name:** No dangerous good in sense of these transport regulations.

**Hazard class:** None.

**Subsidiary class:** None.

**Packing group:** None.

**UN-No:** None.

**Environmental hazards:** None.

## SECTION 15: Regulatory Information

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US Federal Regulations

**US Toxic Substances Control Act (TSCA):** Not listed.

**SARA 302:** No chemicals were found.

**SARA 313:** No chemicals were found.

**SARA 311/312 Hazards:** DMSO: fire hazard, chronic health hazard

**Acute Health Hazard:** Yes

**Chronic Health Hazard:** No

**Fire Hazard:** Yes

**Sudden Release of Pressure Hazard:** No

**Reactive Hazard:** No

## SECTION 16: Other Information

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