
Section 1: Information

1. Product Identification

1.1. Name: Acridine Orange

1.2. Catalog Numbers

1.2.1. ViaStain™ AO Staining Solution, Cat. No.: CS1-0108-5mL, 5mL

1.2.2. ViaStain™ AO Staining Solution, Cat. No.: CS1-0108-1mL, 1mL

1.3. Supplier

Nexcelom Bioscience, LLC.

360 Merrimack St., Building 9

Lawrence, MA 01843

Phone Number: 1 (978) 327-5340

Hours of Operation: 9am-5pm EST

2. Recommended Use

2.1. Acridine Orange is a fluorescent dye and should only be used to stain mammalian cells

2.2. Acridine Orange is not intended to be used as a human or animal diagnostic or therapeutic reagent

2.3. Do not use Acridine Orange for any other uses

Section 2: Hazard Identification

1. Hazard Classification

1.1. Phosphate buffered saline

1.1.1. H412 Toxic to aquatic life Category: Aquatic Acute – 3
Aquatic Chronic – 3**2. Label Elements**

2.1. Signal Words: None

2.2. Hazard Statements

2.2.1. Not a hazardous mixture

2.3. Precautionary Statements:

2.3.1. None

2.4. Pictograms:

2.4.1. None

2.5. Other Hazards Which Do Not Result in Classification

2.5.1. To our knowledge, the hazards of this material have not been thoroughly investigated, but we recommend the handling of all chemicals to be done with caution

2.5.2. Hazardous Materials Identification System Classification

Health Hazard: 0

Chronic Health Hazard: 0

Flammability: 0

Physical Hazard: 0

2.5.3. National Fire Protection Association Rating

Health Hazard: 0
 Fire: 0
 Reactivity Hazard: 0

Section 3: Composition and Information on Ingredients

1. Substances

Common Name	Molecular Formula and Weight	CAS Number/IU PAC Name	EC-Number	Impurities and Stabilizers	Percentage
Acridine Orange	C ₁₇ H ₁₉ N ₃ (265.36 g/mol)	65-61-2	200-614-0	-	0.1 % - 2 %
Phosphate buffered saline	Cl ₂ H ₃ K ₂ Na ₃ O ₈ P ₂ (411.029 g/mol)	7447-40-7	231-211-8	-	99.9 % - 98 %

Section 4: First-aid Measures

1. Always remove contaminated personnel away from the hazardous area, and to a safe area
2. Most Important Symptoms and Effects
 - 2.1. No information available
3. Indication of Immediate Medical Attention or Necessary Special Treatment
 - 3.1. No information available
4. Medical Professionals
 - 4.1. If medical advice or attention is required, present them with this safety data sheet first
 - 4.2. Notes to Physician: Treat symptomatically
5. Inhalation
 - 5.1. Place affected person in fresh air and in a comfortable position for breathing
 - 5.2. Seek medical advice or attention
6. Skin Contact
 - 6.1. Remove any contaminated clothing from the affected person, and wash the contaminated area with soap and plenty of water for 15 minutes
 - 6.1.1. Wash clothes before re-use
 - 6.2. Seek medical advice or attention
7. Eye Contamination
 - 7.1. Flush open eyes for 15 minutes with water
 - 7.2. If contacts are present, remove contacts after the first 15-minute flush, and flush for an additional 15 minutes
 - 7.3. Seek medical advice or attention
8. Ingestion
 - 8.1. Do not induce vomiting
 - 8.2. Drink plenty of water

- 8.3. Never give an unconscious person anything by mouth
- 8.4. Seek medical advice or attention

Section 5: Fire-fighting Measures

- 1. Suitable Extinguishing Media
 - 1.1. Carbon dioxide
 - 1.2. Dry chemical extinguisher
 - 1.3. Alcohol- resistant foam extinguisher
 - 1.4. Water
- 2. Not Suitable Extinguishing Media
 - 2.1. No information available
- 3. Specific Hazards Arising from the Chemical
 - 3.1. No information available
- 4. Special Protective Actions for Fire-fighters
 - 4.1. Wear a self-contained breathing apparatus for firefighting if necessary
- 5. Further Information
 - 5.1. No information available

Section 6: Accidental Release Measures

- 1. Personal Precautions
 - 1.1. Wear proper personal protective equipment
 - 1.2. Avoid formation of dusts
 - 1.3. Avoid breathing dusts, vapors, mists, or gases
 - 1.4. Ensure adequate ventilation
 - 1.5. Remove all sources of ignition
- 2. Protective Equipment
 - 2.1. Proper personal protective equipment
- 3. Emergency Procedures
 - 3.1. See Section 5
- 4. Accidental Spills or Release of the Product
 - 4.1. Wear proper protective equipment while cleaning up spills
 - 4.2. Remove ignition sources and provide adequate ventilation
 - 4.3. Contact emergency personnel if required
- 5. Emergency Responders
 - 5.1. Personal Protective Equipment
 - 5.1.1. See Section 5
- 6. Environmental Precautions
 - 6.1. Contain leakage or spillage if safe to do so
 - 6.2. Do not let product enter drains
- 7. Methods and Materials for Containment and Cleaning
 - 7.1. Drains

- 7.1.1. Do not let product enter drains
- 7.2. Capping procedures
 - 7.2.1. No information available
- 7.3. Neutralization techniques
 - 7.3.1. No information available
- 7.4. Decontamination techniques
 - 7.4.1. No information available
- 7.5. Absorbent Materials
 - 7.5.1. Inert absorbent material
- 7.6. Cleaning Techniques
 - 7.6.1. Pick up and arrange disposal without creating dusts
 - 7.6.2. Sweep up or shovel after application of absorbent material
 - 7.6.3. Keep in suitable, closed containers for disposal
 - 7.6.3.1. See section 13 for disposal options
- 7.7. Vacuuming Techniques
 - 7.7.1. No information available
- 7.8. Special Equipment
 - 7.8.1. No information available

Section 7: Handling and Storage

- 1. Safe Handling
 - 1.1. Avoid inhalation of vapor, mist, dusts, and aerosols
 - 1.2. Provide appropriate exhaust ventilation at places where dust is formed
 - 1.3. Avoid direct contact with mixture
- 2. Incompatible Substances
 - 2.1. No information available
- 3. Operations and Conditions to Avoid
 - 3.1. No information available
- 4. General Good Hygiene Practices
 - 4.1. No eating, drinking or smoking in work areas
 - 4.2. Wash hands after breaks and at the end of the work day
 - 4.3. Remove contaminated clothing and protective equipment before entering eating areas
- 5. Conditions for Safe Storage
 - 5.1. Keep container tightly closed
 - 5.2. Keep in a dry and well-ventilated place
 - 5.3. Store at 4 °C
 - 5.4. Conditions to avoid
 - 5.4.1. No information available
 - 5.5. Environmental Effects to avoid
 - 5.5.1. No information available
- 6. How to maintain product integrity

- 6.1. No information available
- 7. Engineering Advice
 - 7.1. No information available

Section 8: Exposure Controls and Personal Protection

- 1. Occupational Exposure Limits
 - 1.1. American Conference of Government Industrial Hygienists (ACGIH)- No information available
 - 1.2. Threshold Limit Values (TLV)- No information available
 - 1.3. International Agency for Research on Cancer (IARC)- No information available
 - 1.4. National Toxicology Program (NTP)- No information available
- 2. Biological Limits
 - 2.1. No information available
- 3. Appropriate Engineering Controls
 - 3.1. Handle in accordance with good industrial hygiene and safety practice
- 4. Proper Personal Protective Equipment
 - 4.1. Always use good occupational hygiene practices
 - 4.1.1. Do not eat, drink, or smoke while using this product
 - 4.1.2. Wash hands before breaks and at the end of the work day
 - 4.1.3. Regularly clean equipment, work area, and clothing
 - 4.2. Eye and face protection
 - 4.2.1. Use safety glasses with side-shields conforming to EN166 or equipment for eye protection tested and approved under appropriate government standards such as NIOSH (U.S.A.) or EN 166 (E.U.)
 - 4.3. Skin protection
 - 4.3.1. Wear impervious clothing and handle with gloves
 - 4.3.2. Gloves must be inspected prior to use
 - 4.3.3. Use proper removal technique (without touching glove's outer surface) to avoid skin contact with this product
 - 4.3.4. Dispose of contaminated gloves after use in accordance with applicable laws (outlined in Section 13) and good laboratory practices
 - 4.3.5. Wash hands with soap and plenty of water after use
 - 4.4. Respiratory Protection
 - 4.4.1. No information available
 - 4.5. Thermal Hazards
 - 4.5.1. No information available
- 5. Special Equipment
 - 5.1. No information available

Section 9: Physical and Chemical Properties

Property	Data
Physical State	Liquid
Color	Orange to Very Dark Orange and Brown to Very Dark Brown and Red-Orange and Red-Brown and Orange-Brown and Very Dark Red-Brown
Odor	No information available
Odor Threshold	No information available
Freezing Point	No information available
Melting Point	No information available
Boiling point or Initial Boiling Point/Range	No information available
Flammability	No information available
Lower and Upper Explosion Limit/Flammability Limit	No information available
Flash Point	No information available
Auto-Ignition Temperature	No information available
Explosive properties	No information available
Decomposition Temperature	No information available
Oxidizing Properties	No information available
pH	No information available
Kinematic Viscosity	No information available
Solubility	High in water
Partition Coefficient n-octanol/water (Log value)	No information available
Vapor Pressure	No information available
Density and/or Relative Density	No information available
Relative Vapor Density	No information available
Particle Characteristics	No information available
Evaporation Rate	No information available
Surface Tension	No information available

Section 10: Stability and Reactivity

1. Reactivity
 - 1.1. No information available
2. Chemical Stability
 - 2.1. Stable under recommended storage conditions
3. Possibility of Hazardous Reactions
 - 3.1. No information available
4. Conditions to avoid
 - 4.1. Heat, flames and sparks
5. Incompatible Materials

- 5.1. No information available
- 6. Hazardous Decomposition Products
 - 6.1. Under fire conditions: Carbon Oxides
 - 6.2. Other decomposition products: No information available

Section 11: Toxicological Information

- 1. Acute Toxicity
 - 1.1. No information available
- 2. Skin Corrosion/Irritation
 - 2.1. No information available
- 3. Serious Eye Damage/Irritation
 - 3.1. No information available
- 4. Respiratory or Skin Sensitization
 - 4.1. No information available
- 5. Germ Cell Mutagenicity
 - 5.1. No information available
- 6. Carcinogenicity
 - 6.1. IARC
 - 6.1.1. 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
 - 6.2. NTP
 - 6.2.1. No component of this product present at levels greater than or equal to 0.1 % is identified as known or anticipated carcinogen by NTP
 - 6.3. OSHA
 - 6.3.1. 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
- 7. Reproductive Toxicity
 - 7.1. No information available
- 8. Specific Target Organ Toxicity- Single Exposure
 - 8.1. No information available
- 9. Specific Target Organ Toxicity – Repeated Exposure
 - 9.1. No information available
- 10. Aspiration Hazard
 - 10.1. No information available
- 11. Other Information
 - 11.1. To our knowledge, the hazards of this material have not been thoroughly investigated, but we recommend the handling of all chemicals to be done with caution
 - 11.2. Liver Irregularities – based on human evidence

Section 12: Ecological Information

1. Ecotoxicity: May cause long lasting harmful effects to aquatic life
 - 1.1. Fish
 - 1.1.1. No information available
 - 1.2. Crustaceans
 - 1.2.1. No information available
 - 1.3. Algae
 - 1.3.1. No information available
 - 1.4. Other Aquatic Plants
 - 1.4.1. No information available
 - 1.5. Soil Micro- and Macro-Organisms
 - 1.5.1. No information available
 - 1.6. Birds
 - 1.6.1. No information available
 - 1.7. Bees
 - 1.7.1. No information available
 - 1.8. Plants
 - 1.8.1. No information available
 - 1.9. Inhibition of Micro-Organisms
 - 1.9.1. No information available
2. Persistence and Degradability
 - 2.1. No information available
3. Bioaccumulative Potential
 - 3.1. No information available
4. Mobility in Soil
 - 4.1. No information available
5. Other Adverse Effects
 - 5.1. Environmental Fate
 - 5.1.1. No information available
 - 5.2. Ozone Depletion Potential
 - 5.2.1. No information available
 - 5.3. Photochemical Ozone Creation Potential
 - 5.3.1. No information available
 - 5.4. Endocrine Disrupting Potential and/or Global Warming Potential
 - 5.4.1. No information available

Section 13: Disposal Considerations

1. Disposal Methods
 - 1.1. Please take precautions to generate as little waste as possible while handling and using this product
 - 1.2. Do not dispose of contaminated materials in the sewage
 - 1.3. Packaging, containers, solutions and any material that may have come in contact with this product should be considered as hazardous as the product itself
 - 1.4. Disposal of this product and any of its by-products should be in compliance with all applicable local, regional and national/federal biological hazardous waste disposal regulations
2. Disposal Containers and methods
 - 2.1. See Section 6

Section 14: Transport Information

1. DOT (US) Not a dangerous good during transportation
 - 1.1. NA-Number: No information available
 - 1.2. Class: No information available
 - 1.3. Packing Group: No information available
 - 1.4. Proper Shipping Name: No information available
 - 1.5. Reportable Quantity: No information available
 - 1.6. Poison Inhalation Hazard: No information available

Section 15: Regulatory Information

1. States with Right to Know Components
 - 1.1. Massachusetts Right to Know Components
 - 1.1.1. Disodium hydrogenorthophosphate CAS-No. 7558-79-4
 - 1.2. Pennsylvania Right to Know Components
 - 1.2.1. Disodium hydrogenorthophosphate CAS-No. 7558-79-4
 - 1.2.2. Sodium chloride CAS-No. 7647-14-5
 - 1.3. New Jersey Right to Know Components
 - 1.3.1. Disodium hydrogenorthophosphate CAS-No. 7558-79-4
 - 1.3.2. Sodium chloride CAS-No. 7647-14-5
 - 1.3.3. Potassium chloride CAS-No. 7447-40-7
 - 1.3.4. Potassium dihydrogenorthophosphate CAS-No. 7778-77-0
 - 1.4. California Prop. 65 Components
 - 1.4.1. This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm
2. No regulatory information to report (29 CFR 1910.1200(g)(2))

Section 16: Other Information

1. Literary references
 - 1.1. No information available

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Date Revised: 29, January 2019

Revision Number: B

1. Removed respirator mention

END OF SDS