



Safety Data Sheet (SDS) According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

Issuing Date: 2017-08-20

Version: 1

SECTION 1. Identification

Product identifier

Product No 12776
Product name Malachite Green Phosphate Detection Kit
Kit Component **Malachite Green Reagent**
Phosphate Standard (1mM)
UN number UN3316

Recommended use of the chemical and restrictions on use

Identified uses This product is intended for research purposes only.
Uses advised against This product is not intended for use in diagnostic procedures or therapeutics.
This product is not intended for use in humans or animals.

Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400
Website www.cellsignal.com
Email address support@cellsignal.com
Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

This substance/mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Classification and label elements described below are inclusive of all hazards of the combined kit. The most severe classifications are listed for each endpoint. Refer to individual kit component SDS for classification and label elements for each component present in the kit.

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 1A
Corrosive to metals	Category 1

GHS Label elements, including precautionary statements

**Signal Word**

Danger

Hazard statement(s)

May be corrosive to metals.

Causes skin irritation. Causes serious eye irritation. May cause cancer. .

Precautionary Statement(s)

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Keep only in original container.

IF exposed or concerned: Get medical advice/attention. Absorb spillage to prevent material damage.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Store locked up. Store in corrosive resistant/container with a resistant inner liner.

Dispose of contents/container to an approved waste disposal plant.

Supplementary Hazard Information

No information available.

Hazards not otherwise classified (HNOC)

Not applicable.

SECTION 3. Composition/information on ingredients

Kit Component Name Malachite Green Reagent

Chemical Name	CAS No	Weight %	Hazardous
sulfuric acid	7664-93-9	7.5	Yes

Kit Component Name Phosphate Standard (1mM)

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4. First-aid measures

Eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Keep eye wide open while rinsing.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation occurs, get medical advice/attention.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
Ingestion	Get medical attention. Do NOT induce vomiting. Clean mouth with water. Drink plenty of water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Contains kit components which may cause the following effects, refer to individual component SDSs for full information on symptoms:

Irritating to eyes and skin. Significant esophageal or gastrointestinal tract irritation or burns may occur following ingestion.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Advice for emergency responders

General advice	Show this safety data sheet to the doctor in attendance.
Protection of first-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

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 (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Should not be released into the environment. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Dam up. Soak up with inert absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

SECTION 7. Handling and storage

Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children. Store in original container.
Packaging material	Store in corrosive resistant/container with a resistant inner liner.
Incompatible products	Incompatible with strong acids and bases. Incompatible with oxidizing agents. Organic material. Metals.

SECTION 8. Exposure controls/personal protection**Control parameters**

Occupational exposure limit values			
Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
sulfuric acid	TWA thoracic fraction: 0.2 mg/m ³	TWA : 1 mg/m ³	IDLH : 15 mg/m ³ TWA : 1 mg/m ³

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

Eye/face protection	Tightly fitting safety goggles.
Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

SECTION 9. Physical and chemical properties

Information on the known physical chemical properties of each component within Kit are given below. If not included, information is either not available or not applicable. Refer to individual kit component SDS for further information.

Information on basic physical and chemical properties

Kit Component	Malachite Green Reagent
Physical state	Liquid
Color	Yellow
pH VALUE	1
Kit Component	Phosphate Standard (1mM)
Physical state	Liquid
Color	Colorless

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions	Reacts violently with combustible and reducing materials. Reacts violently with water and organic materials with evolution of heat. Reacts violently with bases and is corrosive to most common metals forming a flammable/explosive gas (hydrogen).
Hazardous polymerization	None under normal processing.

Conditions to Avoid

Exposure to air or moisture over prolonged periods.

Incompatible Materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents. Organic material. Metals.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 11. Toxicological information
Information on likely routes of exposure**Product Information**

Refer to kit component SDS for full toxicological information. This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Inhalation

Kit Component Inhalation	Malachite Green Reagent May cause irritation of respiratory tract
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Eye contact

Kit Component Eye contact	Malachite Green Reagent Severely irritating to eyes
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Skin contact

Kit Component Skin contact	Malachite Green Reagent Expected to be an irritant based on components
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Ingestion

Kit Component Ingestion	Malachite Green Reagent Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea
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Information on toxicological effects

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
sulfuric acid	-	-	= 347 ppm (Rat) 1 h

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

Contains kit components which may cause the following effects, refer to individual component SDSs for full information on symptoms:

Irritating to eyes and skin. Significant esophageal or gastrointestinal tract irritation or burns may occur following ingestion.

Skin and Eye Corrosion/Irritation

Kit Component	Malachite Green Reagent
Skin corrosion/irritation	Irritating to skin
Serious eye damage/eye irritation	Causes serious eye irritation

Sensitization

No information available.

Mutagenic effects

No information available.

Carcinogenicity

Kit Component	Malachite Green Reagent
Carcinogenicity	Exposure to strong inorganic mists containing sulfuric acid may cause cancer by inhalation

Chemical Name	IARC	NTP	OSHA
sulfuric acid 7664-93-9	1	Known	X

Legend:

IARC: (International Agency for Research on Cancer) Group 1 - Carcinogenic to Humans

NTP: (National Toxicity Program) Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration) X - Present

Reproductive toxicity

No information available.

Systemic Target Organ Toxicity (STOT)

No information available

Kit Component	Malachite Green Reagent
Target Organ Effects	Respiratory system Teeth Eyes Skin

Aspiration Hazard

No information available.

SECTION 12. Ecological information**Ecotoxicity****Product Information**

No information available

Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
sulfuric acid	-	LC50 500 mg/L (Brachydanio rerio) 96 h	EC50 29 mg/L (Daphnia magna) 24 h

Persistence and degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available

Other adverse effects

No information available.

SECTION 13. Disposal considerations**Waste Disposal Methods**

Should not be released into the environment.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14. Transport information

This material is subject to regulation as a hazardous material for shipping:

DOT

UN number	UN3316
UN proper shipping name	Chemical Kits
Transport hazard class(es)	9
Packing group	III
Special provisions	15
Emergency response guide number	171

IATA

UN number	UN3316
UN proper shipping name	Chemical Kits
Transport hazard class(es)	9
Packing group	III
Special provisions	A163, A44

SECTION 15. Regulatory information**North American Inventory Listing**

Chemical Name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
sulfuric acid	Listed	Not Listed	Listed	Not Listed

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS No	SARA 313 - Threshold Values %
sulfuric acid	7664-93-9	1.0
ammonium molybdenum oxide tetrahydrate	12054-85-2	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances	CWA - Bioaccumulative Chemicals of Concern (BCCs)
sulfuric acid	1000 lb	Not Listed	Not Listed	Listed	Not Listed

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
sulfuric acid	1000 lb	1000 lb

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	California Prop. 65
sulfuric acid	Carcinogen

U.S. State Right-to-Know Regulations

Refer to kit component SDS for applicable State Right-To-Know (RTK) information.

Chemical Name	New Jersey	Massachusetts	Pennsylvania
sulfuric acid	Listed	Listed	Listed

SECTION 16. Other information

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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 of Safety Data Sheet