

Safety Data Sheet (SDS) According to the REACH Regulation (EC) No. 1907/2006

Issuing Date: 2017-08-20

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Version: 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product No 13547
Product name Griess Reagent Nitrite Measurement Kit
Kit Component 13549: 0.1 M Nitrite Standard
13424: Reagent A: Sulfanilamide Solution
13371: Reagent B: NED Solution

Hazardous Components

13424: Reagent A: Sulfanilamide Solution

Contains

Chemical name	Index No.	CAS No
phosphoric acid (0 - 10%)	015-011-00-6	7664-38-2
sulphanilamide (0 - 10%)	-	63-74-1
sodium nitrite (0 - 10%)	007-010-00-4	7632-00-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses For Research Use Only. Not for Use in Diagnostic Procedures.

1.3. Details of the supplier of the safety data sheet

Importer	Manufacturer
Cell Signaling Technology Europe B.V. Dellaertweg 9b 2316 WZ Leiden The Netherlands TEL: +31 (0)71 7200 200 FAX: +31 (0)71 891 0019	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
E-mail Address info@cellsignal.eu

1.4. Emergency telephone number

CHEMTREC 24 hours a day, 7 days a week, 365 days a year
+1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

13547 Griess Reagent Nitrite Measurement Kit

Acute inhalation toxicity	Category 4 - (H332)
Skin corrosion/irritation	Category 1 - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

2.2. Label elements



Signal word

Danger

Hazard statement(s)

H314 - Causes severe skin burns and eye damage.

H332 - Harmful if inhaled.

Precautionary statement(s)

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor/physician.

P363 - Wash contaminated clothing before reuse.

P405 - Store locked up.

P501 - Dispose of contents/container to an approved waste disposal plant.

2.3. Other hazards

No information available.

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

SECTION 3. Composition/information on ingredients

3.2 Mixtures

Kit Component 13549: 0.1 M Nitrite Standard

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
sodium nitrite	7632-00-0	0.1 - <1	231-555-9	Acute Tox. 3 (H301) Aquatic Acute 1 (H400) Ox. Sol. 3 (H272)	no data available

Kit Component 13424: Reagent A: Sulfanilamide Solution

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DANGER: Causes severe skin burns and eye damage. Harmful if inhaled.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
phosphoric acid	7664-38-2	5	231-633-2	Skin Corr. 1B (H314)	no data available
sulphanilamide	63-74-1	1	200-563-4	Acute Tox. 4 (H302)	no data available

Kit Component **13371: Reagent B: NED Solution**

This product does not contain substances at concentrations requiring disclosure under (EC) No. 1907/2006 (REACH).

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air. Immediate medical attention is required. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Skin contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
Protection of first-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2. Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
Unsuitable Extinguishing Media	No information available

5.2. Special hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous Combustion	Carbon oxides (CO _x), Nitrogen oxides (NO _x), Hydrogen chloride
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Products

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.
For emergency responders Use personal protection recommended in Section 8.
Other information Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Do not allow material to contaminate ground water system. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Do not flush into surface water or sanitary sewer system.

6.3. 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, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

6.4. Reference to other sections

See Sections 8 & 13 for additional information.

SECTION 7: Handling and storage

7.1. 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. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers.

7.3. Specific end use(s)

Use as a laboratory reagent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values					
Chemical name	European Union	United Kingdom	France	Spain	Germany
phosphoric acid	TWA 1 mg/m ³	STEL 2 mg/m ³	TWA 0.2 ppm	TWA 1 mg/m ³	TWA: 2 mg/m ³

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	STEL 2 mg/m ³	TWA 1 mg/m ³	TWA 1 mg/m ³ STEL 0.5 ppm STEL 2 mg/m ³	STEL 2 mg/m ³	Ceiling / Peak: 4 mg/m ³
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
phosphoric acid	TWA 1 mg/m ³ STEL 2 mg/m ³	TWA 1 mg/m ³ STEL 2 mg/m ³	STEL 2 mg/m ³ TWA 1 mg/m ³	TWA 1 mg/m ³ STEL 2 mg/m ³	TWA 1 mg/m ³ STEL 2 mg/m ³
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
phosphoric acid	STEL 2 mg/m ³ TWA 1 mg/m ³	SS-C** TWA 2 mg/m ³ STEL 4 mg/m ³	TWA 1 mg/m ³ STEL 2 mg/m ³	TWA 1 mg/m ³ STEL 3 mg/m ³	TWA 1 mg/m ³ STEL 2 mg/m ³

8.2. Exposure controls

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly fitting safety goggles.

Skin protection

Wear protective gloves and protective clothing.

Hand protection

Impervious gloves.

Other

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental Exposure Controls

No information available

SECTION 9. Physical and chemical properties

9.1. Information on basic 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.

Kit Component

13549: 0.1 M Nitrite Standard

Physical state

Liquid

Appearance

Clear

Color

Colorless

pH

6.5

Kit Component

13424: Reagent A: Sulfanilamide Solution

Physical state

Liquid

Appearance

Clear

Color

Colorless

pH

1.4

Kit Component

13371: Reagent B: NED Solution

Physical state

Liquid

pH

2.5

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization does not occur.
Hazardous reactions None under normal processing

10.4. Conditions to avoid

Exposure to air or moisture over prolonged periods.

10.5. Incompatible materials

Incompatible with oxidizing agents, Bases, Acids, Halogens, Acid chlorides, Acid anhydrides.

10.6. Hazardous decomposition products

None under normal use conditions

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product 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.

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
phosphoric acid	= 1530 mg/kg (Rat)	= 2740 mg/kg (Rabbit)	> 850 mg/m ³ (Rat) 1 h
sulphanilamide	= 3900 mg/kg (Rat) = 1300 mg/kg (Rabbit)	-	-
sodium nitrite	= 85 mg/kg (Rat)	-	5.5 mg/L (Rat) 4h

Information on likely routes of exposure

Inhalation

Kit Component 13424: Reagent A: Sulfanilamide Solution
Inhalation Corrosive to respiratory system

Eye contact

Kit Component 13424: Reagent A: Sulfanilamide Solution
Eye contact Corrosive to the eyes and may cause severe damage including blindness

Skin contact

Kit Component 13424: Reagent A: Sulfanilamide Solution
Skin contact Corrosive to skin

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Ingestion

Kit Component
Ingestion

13424: Reagent A: Sulfanilamide Solution
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

Symptoms Causes severe skin burns and eye damage. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

Skin and Eye Corrosion/Irritation

Kit Component

Serious eye damage/eye irritation
Skin corrosion/irritation

13424: Reagent A: Sulfanilamide Solution

Risk of serious damage to eyes
Causes severe burns

Sensitization No information available

Mutagenic effects No information available.

Carcinogenic effects No information available

Reproductive toxicity No information available.

Systemic Target Organ Toxicity (STOT) No information available

Aspiration Hazard No information available.

11.2. Information on other hazards

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Product Information

Component Information

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
sodium nitrite	-	LC50 0.092 - 0.13 mg/L (Oncorhynchus mykiss) 96 h	-

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

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Chemical name	Octanol-Water Partition Coefficient
sodium nitrite	-3.7

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Do not re-use empty containers.
Other information	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG/IMO

14.1 UN number	UN1805
14.2 UN proper shipping name	Phosphoric acid, solution
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazards	None
14.6 Special precautions for user	None
14.7 Maritime transport in bulk according to IMO instruments	Not regulated

ADR/RID

14.1 UN number	UN1805
14.2 UN proper shipping name	Phosphoric acid, solution
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazards	None
14.6 Special precautions for user	None
Tunnel Restriction Code	(E)

IATA

14.1 UN number	UN1805
14.2 UN proper shipping name	Phosphoric acid, solution
14.3 Transport hazard class(es)	8

14.4 Packing group	III
14.5 Environmental hazards	None
14.6 Special precautions for user	None

SECTION 15: Regulatory information

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

Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

This product does not contain Substances of Very High Concern (SVHC).

SEVESO Directive Information

This product does not contain substances identified in the SEVESO Directive.

International inventories

TSCA 8(b)	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	-
IECSC	Complies
KECL	-
PICCS	Complies
AICS	Complies

International inventories legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out

SECTION 16: Other information

Full text of H-Statements referred to under Sections 2 and 3

H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage

Classification procedure: Expert judgment and weight of evidence determination.
Issuing Date: 2017-08-20
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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.