



SAFETY DATA SHEET

Date of Issue:

April 15, 2015

Section 1. Identification

Product Name: DAB (3,3'-diaminobenzidine) Peroxidase Substrate Kit

Catalog No.: SK-4100 - Reagent 1

Manufacturer/Supplier USA:

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Burlingame, CA 94010
United States
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Email: vector@vectorlabs.com

EU Supplier United Kingdom:

Vector Laboratories Ltd.
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Peterborough, PE2 6XS, United Kingdom
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Section 2. Hazards Identification

GHS Classification:

Acute toxicity, Oral - Category 4, H302
Eye irritation - Category 2A, H319
Germ cell mutagenicity - Category 2, H341
Carcinogenicity - Category 1B, H350

GHS Label:



Signal Word: Danger

Hazard Statements:

H302 - Harmful if swallowed.
H319 - Causes serious eye irritation.
H341 - Suspected of causing genetic defects.
H350 - May cause cancer.

Precautionary Statements:

Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when handling this product. Wash skin thoroughly after handling. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

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Section 3. Composition/Information on Ingredients

Reagent 1 is dissolved in the component listed below.

Component:	CAS#:	EC#:	% by weight:
3, 3'-diaminobenzidine	7411-49-6	231-018-9	<10%

Section 4. First Aid Measures

Inhalation: Remove to fresh air. Obtain medical attention.

Skin contact: Wash thoroughly with water for at least 15 minutes. Obtain medical attention.

Eye contact: Wash thoroughly with water for at least 15 minutes. Obtain medical attention.

Ingestion: Do not induce vomiting. If person is conscious, wash out mouth with water. Obtain medical attention.

Section 5. Fire Fighting Measures

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment: Use respirator. Toxic gases can be evolved.

Section 6. Accidental Release Measures

Wear protective clothing to prevent contact with eyes and skin. Ensure adequate ventilation. Collect on absorbent material and dispose of in accordance with federal, state and local environmental control regulations. Do not let product enter drains.

Section 7. Handling and Storage

Handling: Use only with adequate ventilation. Wear eye protection and compatible chemical-resistant gloves.

Storage: Store in a refrigerator.

Section 8. Exposure Controls/Personal Protection

Exposure limits: Contains no substances with occupational exposure limit values.

Engineering controls:

Use enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.

Personal protection:

— **Hand protection** - Compatible chemical-resistant gloves.

Eye protection - Chemical safety goggles.

Skin protection - Lab coat.

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Section 9. Physical and Chemical Properties

Appearance:	Brown liquid	Flash point:	Not determined
Odor:	None	Autoflammability:	Not determined
pH:	Not determined	Vapor pressure:	Not determined
Boiling point:	Not determined	Relative density:	Not determined
Melting point:	Not determined	Solubility:	Not applicable

Section 10. Stability and Reactivity

Chemical stability: Stable under recommended storage conditions.

Conditions to avoid: Direct sunlight

Materials to avoid: Strong oxidizers.

Hazardous reactions/decomposition products: Carbon monoxide, carbon dioxide, nitrogen oxides.

Section 11. Toxicological Information

Information on toxicological effects

Acute Toxicity: No data available.

Serious eye damage/eye irritation: No data available.

Germ cell mutagenicity: No data available.

Carcinogenicity: No data available.

Reproductive Toxicity: No data available. May cause congenital malformation in the fetus.

Acute effects:

May cause skin irritation, eye irritation, mucus membrane irritation. May be harmful if swallowed, inhaled or absorbed through the skin.

Chronic effects:

Not determined.

RTECS#: DV8753000

Toxicity data: ipr-mus LD50: 330 mg/kg

Only selected RTECS data is shown.

Section 12. Ecological Information

No data available.



Section 13. Disposal Considerations

Observe all federal, state and local environmental disposal regulations.

Section 14. Transport Information

DOT (US): Not dangerous goods

RID/ADR: Not regulated

IMDG: Not dangerous goods

IATA: Not dangerous goods

Section 15. Regulatory Information

SARA:

SARA 302 - No chemicals in this material are subject to the reporting requirements.

SARA 313 - This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III.

SARA 311/312 Hazards - Acute Health Hazard, Chronic Health Hazard

Risk phrases:

R36 - Irritating to eyes.

R45 - May cause cancer.

R68 - Possible risk of irreversible effects

Safety phrases:

S53 - Avoid exposure - obtain special instructions before use.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

California Prop. 65 components:

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16. Other Information

The information contained in this Material Safety Data is believed to be accurate but it is the responsibility of the user to determine the applicability of these data to the formulation of necessary safety precautions. Vector Laboratories, Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material safety Data Sheet.



SAFETY DATA SHEET

Date of Issue:

April 15, 2015

Section 1. Identification

Product Name: Nickel Chloride (component of DAB Peroxidase Substrate Kit)

Catalog No.: SK-4100 - Nickel

Manufacturer/Supplier USA:

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Burlingame, CA 94010
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Vector Laboratories Ltd.
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Bakewell Road, Orton Southgate
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Tel: (01733) 237999 Fax: (01733) 237119
Email: vector@vectorlabs.co.uk

Section 2. Hazards Identification

GHS Classification:

Acute toxicity, Oral - Category 3, H301
Acute toxicity, Inhalation - Category 3, H331
Respiratory sensitization - Category 1, H334
Skin irritation - Category 2 - H315
Skin sensitization - Category 1, H317
Germ cell mutagenicity - Category 2, H341
Carcinogenicity - Category 1B, H350
Reproductive toxicity - Category 1B, H360
Acute aquatic toxicity - Category 1, H400
Chronic aquatic toxicity - Category 1, H410

GHS Label:



Signal Word: Danger

Hazard Statements:

H301 + H331 - Toxic if swallowed or if inhaled
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H315 + H317 - Causes skin irritation. May cause an allergic skin reaction.
H341 - Suspected of causing genetic defects.
H350 - May cause cancer.
H360 - May damage fertility or the unborn child.
H400 + H410 - Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when handling this product. Wash skin thoroughly after handling. Avoid release to the environment. IF ON SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician. If exposed or concerned: Get medical advice/attention.

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Section 3. Composition/Information on Ingredients

Component:	CAS#:	EC#:	% by weight:
Nickel chloride	7791-20-0	231-743-0	5%

Section 4. First Aid Measures

Inhalation: Remove to fresh air. Obtain medical attention.

Skin contact: Wash thoroughly with water for at least 15 minutes. Obtain medical attention.

Eye contact: Wash thoroughly with water for at least 15 minutes. Obtain medical attention.

Ingestion: Do not induce vomiting. If person is conscious, wash out mouth with water. Obtain medical attention.

Section 5. Fire Fighting Measures

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment: Use respirator. Toxic gases can be evolved.

Section 6. Accidental Release Measures

Wear protective clothing to prevent contact with eyes and skin. Ensure adequate ventilation. Collect on absorbent material and dispose of in accordance with federal, state and local environmental control regulations. Do not let product enter drains.

Section 7. Handling and Storage

Handling: Use only with adequate ventilation. Wear eye protection and compatible chemical-resistant gloves.

Storage: Store in a refrigerator.

Section 8. Exposure Controls/Personal Protection

Exposure limits: TLV 0.1 mg (Nickel)/m³.

Engineering controls:

Use enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.

Personal protection:

Hand protection - Compatible chemical-resistant gloves.

Eye protection - Chemical safety goggles.

Skin protection - Lab coat.



Section 9. Physical and Chemical Properties

Appearance:	Light green liquid	Flash point:	Not determined
Odor:	None	Autoflammability:	Not determined
pH:	Not determined	Vapor pressure:	Not determined
Boiling point:	Not determined	Relative density:	Not determined
Melting point:	Not determined	Solubility:	Not applicable

Section 10. Stability and Reactivity

Chemical stability:	Stable under recommended storage conditions.
Conditions to avoid:	Not determined.
Materials to avoid:	Strong reducing agents, organic materials, metals.
Hazardous reactions/decomposition products:	Oxygen.

Section 11. Toxicological Information

Information on toxicological effects

Acute Toxicity: No data available.

Skin corrosion/irritation: No data available.

Respiratory or skin sensitization Germ cell mutagenicity: In vitro tests showed mutagenic effects

Carcinogenicity: Possible human carcinogen.

Reproductive Toxicity: Presumed human reproductive toxicant.

Acute effects: Toxic if swallowed or inhaled. Irritating to skin. May cause sensitization by skin contact.

Chronic effects: Carcinogen

RTECS#: QR648000

Toxicity data: orl-rat LD50: 105 mg/kg

Only selected RTECS data is shown.

Section 12. Ecological Information

Avoid release to the environment. Very toxic to aquatic life.

Section 13. Disposal Considerations

Observe all federal, state and local environmental disposal regulations.

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Section 14. Transport Information

Title 49.173.4: Small quantities for highway and rail. Not classified as dangerous in the meaning of transport regulations.

DOT (US): Not regulated

RID/ADR: Not regulated

IMDG: Not regulated

IATA: Not regulated

Section 15. Regulatory Information

SARA:

SARA 302 - No chemicals in this material are subject to the reporting requirements.

SARA 313 - The following components are subject to reporting levels: Nickel chloride, CAS-No. 7791-20-0

SARA 311/312 Hazards - Acute Health Hazard, Chronic Health Hazard

Risk phrases:

R25 - Toxic if swallowed.

R36/38 - Irritating to eyes and skin.

R43 - May cause sensitization by skin contact.

R45 - May cause cancer.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S36/37 - Wear suitable protective clothing and gloves.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S53 - Avoid exposure - obtain special instructions before use.

S60/61 - This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

California Prop. 65 components: WARNING! This product contains a chemical known to the state of California to cause cancer or possible reproductive harm.

Section 16. Other Information

The information contained in this Material Safety Data is believed to be accurate but it is the responsibility of the user to determine the applicability of these data to the formulation of necessary safety precautions. Vector Laboratories, Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material safety Data Sheet.

Date of Issue or Revision: April 15, 2015

Section Revised: N/A



SAFETY DATA SHEET

Date of Issue:

May 1, 2015

Section 1. Identification

Product Name: DAB (3,3'-diaminobenzidine) Peroxidase Substrate Kit

Catalog No.: SK-4100 - Other Kit Components

Manufacturer/Supplier USA:

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Burlingame, CA 94010
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Tel: (650) 697-3600 Fax: (650) 697-0339
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EU Supplier United Kingdom:

Vector Laboratories Ltd.
3 Accent Park
Bakewell Road, Orton Southgate
Peterborough, PE2 6XS, United Kingdom
Tel: (01733) 237999 Fax: (01733) 237119
Email: vector@vectorlabs.co.uk

Section 2. Hazards Identification

GHS Classification:

These components have been classified as non-hazardous based on the physical and/or chemical nature and/or concentration of ingredients.

GHS Label: Non-hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

Section 3. Composition/Information on Ingredients

No ingredients are hazardous according to OSHA criteria.
No components need to be disclosed according to the applicable regulations.

Section 4. First Aid Measures

Inhalation: Remove to fresh air.

Skin contact: Wash thoroughly with soap and water.

Eye contact: Flush eyes with water as a precaution.

Ingestion: Do not induce vomiting. Wash out mouth with water.

Section 5. Fire Fighting Measures

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment: Use respirator for fire fighting if necessary.

Section 6. Accidental Release Measures

Wear protective clothing to prevent contact with eyes and skin. Ensure adequate ventilation. Collect on absorbent material and dispose of according to federal, state and local environmental regulations.

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Section 7. Handling and Storage

Handling: Use only with adequate ventilation. Wear eye protection and compatible chemical-resistant gloves. Handle in accordance with good industrial hygiene and safety practice.

Storage: Keep container tightly closed and store according to product label.

Section 8. Exposure Controls/Personal Protection

Exposure limits: Contains no substances with occupational exposure limit values.

Engineering controls: Use enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.

Personal protection:

Hand protection - Compatible chemical-resistant gloves.

Eye protection - Chemical safety goggles.

Skin protection - Lab coat.

Section 9. Physical and Chemical Properties

Appearance:	Liquid	Flash point:	Not determined
Odor:	None	Autoflammability:	Not determined
pH:	Not determined	Vapor pressure:	Not determined
Boiling point:	Not determined	Relative density:	Not determined
Melting point:	Not determined	Solubility:	Not applicable

Section 10. Stability and Reactivity

Chemical stability: Stable under recommended storage conditions.

Conditions to avoid: pH extremes.

Materials to avoid: Not applicable

Hazardous reactions/decomposition products: Not determined.

Section 11. Toxicological Information

Acute effects:

No data available.

Chronic effects:

No data available.



Section 12. Ecological Information

No data available.

Section 13. Disposal Considerations

Observe all federal, state and local environmental regulations.

Section 14. Transport Information

DOT (US):	Not dangerous goods.
RID/ADR:	Not regulated.
IMDG:	Not dangerous goods.
IATA:	Not dangerous goods.

Section 15. Regulatory Information

SARA:

SARA 302 - No chemicals in this material are subject to the reporting requirements.
SARA 313 - No chemicals in this material with known CAS #s are subject to the reporting requirements.
SARA 311/312 Hazards - No SARA Hazards.

California Prop. 65 components:

This product does not contain any chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Section 16. Other Information

The information contained in this Material Safety Data is believed to be accurate but it is the responsibility of the user to determine the applicability of these data to the formulation of necessary safety precautions. Vector Laboratories, Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Material safety Data Sheet.

Date of Issue or Revision: May 1, 2015

Section Revised: N/A