Safety Data Sheet

Revision Date: 17 October 2016

Product Name: DetectX® Palladium Screening Fluorescent Detection Kit

Section 1: Identification

Product Name: DetectX® Palladium Screening Fluorescent Detection Kit

Also known as: Catalog Number K007-F1

Manufacturer / Supplier
Arbor Assays
1514 Eisenhower Place
Ann Arbor, MI 48108-3284 Telephone 734-677-1774 (U.S.)
U.S.A. Fax 734-677-6860 (U.S.)

Recommended Use For Research Use Only

Section 2: Hazard(s) Identification

Classification: Regulation (EC) No. 1272/2008 [CLP/GHS]

Dimethyl sulfoxide:
Flammable, Category 4
Irritant, Class 2

Hydrochloric acid:
Skin Irritant, Class 2
Eye Irritant, Class 2

Sodium borohydride:
Substances which, in contact with water, emit flammable gases, Category 1
Acute Oral Toxicity, Category 3
Skin Corrosion, Category 1C
Eye Irritant, Category 1
Reproductive Toxicity, Category 1B
Specific Organ Toxicity, Category 2

Sodium hydroxide:
Serious eye damage, Category 1
Corrosive to metals, Category 1
Skin corrosion, Category 1B

Hazard statements:
Combustible liquid.
May be harmful/toxic if inhaled, absorbed through skin, swallowed.
May be irritating to eyes, respiratory system and skin.
May damage fertility. May damage the unborn child.
Harmful to aquatic organisms.
May cause long-term adverse effects in aquatic environment.

Precautionary statements:	Keep away from heat, open flames, hot surfaces, sparks. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Wear protective gloves, clothing, and eye/face protection.

Section 3: Information on Ingredients

Components: Palladium Standard (C016-100UL)
PdX™ Palladium Detection Reagent (C017-3ML)
Sodium Borohydride Stock Solution (X026-110UL)
Borohydride Buffer (X027-5ML)
Sample Diluent (X028-60ML)

Description:	Chemical Name	CAS No.	Percent
Palladium Standard, C016-100UL:	Hydrochloric acid	7647-01-0	< 5.0%
Detection Reagent, C017-3ML:	Dimethyl sulfoxide	67-68-5	100%
Borohydride Stock, X026-400UL:	Sodium borohydride	16940-66-2	< 10.0%
Borohydride Stock, X026-400UL:	Sodium hydroxide	1310-73-2	< 50.0%

Additional components of the kit are non-hazardous or the specific chemical identity and/or exact percentage (concentration) of composition have been withheld as a trade secret.

Section 4: First Aid Measures

	Detection Reagent C017-3ML (DMSO, 100.0%)	Standard C016-100UL (HCl, < 5.0%)	Borohydride Stock X026-110UL (NaBH4, < 10%; NaOH, < 50%)
Inhalation	If inhaled, remove to fresh air.	If inhaled, remove to fresh air.	If inhaled, remove to fresh air.
Skin Contact	Wash thoroughly with soap and water.	Wash thoroughly with soap and water.	Wash thoroughly with plenty of water.
Eye Contact	Rinse eyes with water as a precaution.	Get medical attention. Rinse eyes with water extensively.	Get medical attention immediately. Rinse eyes with water extensively.
Ingestion	If swallowed, wash out mouth with water if person is conscious.	Get medical attention. If person is conscious, give large amounts of water.	Get medical attention. If person is conscious, give a cupful of water.

Section 5: Fire Fighting Measures

	Detection Reagent C017-3ML (DMSO, 100.0%)	Standard C016-100UL (HCl, < 5.0%)	Borohydride Stock X026-110UL (NaBH4, < 10%; NaOH, < 50%)
Extinguishing Media	Suitable: Water spray, alcohol-resistant foam, carbon dioxide, or dry chemical.		Dry chemical powder.
Firefighting	Protective Equipment: Wear self-contained breathing apparatus if necessary.		
	Specific Hazard(s): HCl - Emits toxic fumes under fire conditions. NaBH4 - Emits oxides of Carbon and Boron; Hydrogen.		

Section 6: Accidental Release Measures

Cleanup Procedures	Wear appropriate protective clothing. Avoid breathing vapors, mist or gas. Avoid source of ignition. Contain spill to prevent migration. Wipe up spill, place in suitable, closed container for appropriate disposal. For Borohydride Stock, material may be absorbed with dry sodium carbonate or other inert material. For all components, wash area of spill with soap and water.
Waste Disposal	Dispose of in accordance with federal, state, and local regulations.

Section 7: Handling and Storage

Handling	Avoid getting components of this kit on you or in you. Always wear appropriate protective clothing. Always wash hands and other exposed areas thoroughly after using this kit. Do not eat or drink while using this kit. Qualified and experienced professionals should only handle this kit.
Storage	Store according to the package insert instructions.

Section 8: Exposure Controls / Personal Protection

Engineering Controls	No special engineering controls are required when working with this kit. Use with adequate ventilation.
Protective Equipment	Safety glasses are recommended to prevent eye contact. Chemical resistant gloves, lab coat should be worn to prevent skin contact.

Section 9: Physical and Chemical Properties

	Detection Reagent C017-3ML (DMSO, 100.0%)	Standard C016-100UL (HCl, < 5.0%)	Borohydride Stock X026-110UL (NaBH4, < 10%; NaOH, < 50%)
Appearance	Clear, colorless liquid	Clear, colorless liquid	Clear, off-white liquid
Odor	Slight	Pungent	None to mild hydrocarbon
Boiling Point	189°C (372°F) at 1,013 hPa (760 mmHg)	100°C	130°C (270°F)
Melting Point	18.4°C (65.1°F)	0°C	Not available
Flash Point	87°C (189°F)–closed cup		99°C (210°F)
Ignition temperature	301°C (574°F)		Not available
Density	1.1 g/cm3	Essentially the same as water	NaBH4: Not available NaOH: 1.0 g/cm3
Vapor Pressure	0.55 hPa (0.41 mmHg) at 20°C (68°F)	Essentially the same as water	NaBH4: Not available NaOH: 14 mm Hg
Water Solubility	Complete	Complete	Complete
pH	N/A	Acidic (0.1)	Alkaline (14+)

Section 10: Stability and Reactivity

Stability	This material is stable until the expiration date on the kit if stored as directed.
Conditions to Avoid	Extreme temperatures.
Incompatibles	Strong oxidizing agents, phosphorus halides, strong acids, metals (such as aluminum), cyanides, sulfides, sulfites, and formaldehyde.

Section 11: Toxicological Information

Route of Exposure

Skin Contact	May cause skin irritation.
Skin Absorption	May be harmful if absorbed through the skin.
Eye Contact	May cause eye irritation.
Inhalation	May be harmful if inhaled. May be irritating to respiratory tract.
Ingestion	May be harmful if swallowed. May be irritating to digestive tract.
Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

Harmful to aquatic organisms. May cause long-term adverse effects in aquatic environment.

Section 13: Disposal Considerations

Dispose of waste materials, unused components and contaminated packaging in compliance with country, state, district and local regulations. If unsure of the applicable requirements, contact the authorities for information.

Section 14: Transport Information

U.S. and Canadian Transportation; DOT

Proper Shipping Name	Chemical Kits
UN Identification Number	3316
Class and Description	9, Miscellaneous
Packing Group	N/A
Hazard Label	Class 9

International Air Transportation (IATA)

Proper Shipping Name	Chemical Kits
UN Identification Number	3316
Class and Description	9, Miscellaneous
Packing Group	III
Hazard Label	Class 9

Section 15: Regulatory Information

Product related information

The product is not subject to classification according to the sources of literature known to us.

Observe general safety regulations when handling chemicals.

Safety Statements

Avoid release to the environment.

Risk Statements

Harmful if swallowed. Harmful to aquatic organisms, may cause long-term adverse effects in aquatic environment.

U.S. Regulatory Information

Sara Listed: Yes. The Formaldehyde (CAS# 50-00-0) and Sodium Azide (CAS# 26628-22-8) contained in this product are subject to SARA 313 reporting requirements.

Section 16: Other Information

Disclaimer: For Research Use Only. Not for diagnostic, therapeutic, or other uses.

Further Information: The information contained in this document is accurate to the best of our knowledge and is provided in good faith. This document is intended only as a guide to the appropriate precautionary handling of the materials contained in this kit by properly trained personnel using this kit. Final determination or suitability of any materials is the sole responsibility of the user. Arbor Assays shall not be held liable for any damage resulting from use or handling of this product.