


## SOP for the safe use of Diaminobenzidine (DAB)

University of Washington

Standard Operating Procedures for Chemicals or Processes	
#1 Process (if applicable)	Diaminobenzidine (CAS ID # 91-95-2) is a red-to-brown hygroscopic solid that comes in various forms. It is widely used in immunohistochemistry procedures as a precipitating substrate for the detection of peroxidase activity. It produces an intense brown stain that is easily observed in cell and tissue specimens. Synonyms include DAB, 3,3',4,4'-Biphenyltetramine, 3,3',4,4'- Tetraaminobiphenyl.
#2 Chemicals	Diaminobenzidine (CAS ID # 91-95-2) is a red-to-brown hygroscopic solid that comes in various forms. Synonyms include DAB, 3,3',4,4'-Biphenyltetramine, 3,3',4,4'- Tetraaminobiphenyl.
#3 Personal Protective Equipment (PPE)	Identify the required PPE. If a respirator is required, contact EH&S before using. Protective clothing and equipment is not a substitute for adequate engineering controls. PPE must be selected on the basis of the hazards present, the type of materials used, and the manner in which they will be handled. Always consult with the PI and lab-specific SOP to determine task appropriate PPE before carrying out any procedures. The basic laboratory PPE must be worn when working with Diaminobenzidine: eye protection, lab coat and gloves.
#4 Environmental / Ventilation Controls	All work with Diaminobenzidine must be handled within a fume hood. Check for proper operation of the fume hood prior to use.
#5 Special Handling Procedures & Storage Requirements	<ul style="list-style-type: none"> <li>• Handling Precautions               <ul style="list-style-type: none"> <li>o Do not get in eyes, on skin, or on clothing.</li> <li>o Avoid dust formation.</li> <li>o Know the location of the nearest emergency safety shower and eyewash station.</li> <li>o Always wash hands immediately after work is complete or when gloves are removed.</li> </ul> </li> <li>• Storage Precautions               <ul style="list-style-type: none"> <li>o Store tightly closed containers in a dry, cool, and well-ventilated space.</li> <li>o Keep refrigerated.</li> <li>o Keep away from direct sunlight.</li> <li>o Store separately from incompatible chemicals.</li> </ul> </li> </ul>
#6 Spill and Accident Procedures	<p><b>For Accidents:</b></p> <ul style="list-style-type: none"> <li>o In the event of a fire, suitable fire extinguishing media includes use of water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</li> <li>o Skin contact - Thoroughly rinse affected areas in emergency shower with water for 15 minutes. Remove all contaminated clothing.</li> <li>o Eye contact – Flush using the emergency eye wash station for 15 minutes.</li> <li>o DO NOT perform mouth to mouth CPR for individuals with inhalation exposure, to prevent the rescuer from becoming exposed.</li> <li>o If personnel have become exposed and need medical assistance, dial 911.</li> </ul> <p><b>• For Spills:</b></p> <ul style="list-style-type: none"> <li>o Avoid dust formation and aerosols. If appropriate, moisten first to prevent dusting.</li> <li>o Sweep up spillage and collect in suitable container for disposal.</li> <li>o Follow decontamination procedures specified in Section 10.</li> <li>o If the spill is minor and does not pose a threat to personnel, contact EH&amp;S at 206.543.0467 during normal business hours (Monday – Friday, 8 AM – 5 PM) for</li> </ul>

	spill cleanup assistance (dial 911 if spill occurs after hours and assistance is needed).	
#7 Waste Disposal	Diaminobenzidine must be disposed of as hazardous waste and in accordance with Chemical Waste Management Procedures. <ul style="list-style-type: none"> <li>• Do not let this chemical enter the environment.</li> <li>• Label chemical wastes "HAZARDOUS WASTE" with the chemical constituents, and the date the waste was generated.</li> <li>• Contact EHS for waste pick-up.</li> </ul>	
#8 Special Precautions for Animal Use (if applicable)	*	
Particularly hazardous substance involved?	<input checked="" type="checkbox"/> YES:	Blocks #9 to #11 are Mandatory
	<input type="checkbox"/> NO:	Blocks #9 to #11 are Optional.
#9 Approval Required	Approval from PI prior to first use.	
#10 Decontamination	<ul style="list-style-type: none"> <li>• Solvent wash all contaminated surfaces with acetone followed by washing with a soap and water solution.</li> <li>• Dispose of contaminated materials (gloves, wipes, etc.) as hazardous waste.</li> </ul>	
#11 Designated Area	Fume hood at _____. Check that the fume hood is operating properly before starting the procedure.	
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Signature: 		Date: 02/17/2022

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*\*to be filled in by PI or Supervisor*