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| <p>Johns Hopkins University</p> <hr/> <p>Johns Hopkins Hospital</p> | <p>The Johns Hopkins University/The Johns Hopkins Hospital<br/> <b>Health, Safety and Environment Manual</b><br/> <b>Laboratory Safety</b></p> | <i>Policy Number</i>                           | HSE802      |
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|   | <i>Subject</i>   | <b>Hazard Assessment of Laboratory Workers</b> | <i>Page</i> |

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## **I. POLICY**

In accord with the Johns Hopkins Chemical Hygiene Plan, it is the policy of Johns Hopkins that laboratory work and procedures be assessed for hazard severity and segregated into one of the following hazard categories. The principle investigator designates the appropriate hazard category for the procedure or protocol to be used in the laboratory. The hazard categories are as follows: high hazard, medium hazard, low hazard and no hazard. Departments may implement a more detailed assessment plan according to their need.

**High hazard procedures** are those procedures which pose a significant hazard to the laboratory workers. Examples of high hazard procedures are as follows: working with high levels of radioactive materials such as radioactive iodination, use of P32 and gamma emitters, working with human tissue or potentially infectious material, working with pure compounds and making stock solutions of human carcinogens and compounds with a IDLH (immediate dangerous to health and life) level of 5 ppm or less. See list of extremely toxic chemical substances in HSE 704.

Protective equipment required for use of these high hazard procedures are as follows:

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| chemical fume hood, biological safety cabinet or other appropriate containment  | Required |
| laboratory coat or gown that covers the complete front of an individual and covers the area above the knees when seated | Required |
| appropriate gloves  | Required |
| appropriate protective eyewear  | Required |

**Medium hazard procedures** are those procedures which pose a hazard to the laboratory worker in the event of an exposure due to a splash or an accidental release. Examples of medium hazard procedures are as follows: working with radioactive materials not listed in as high hazard, working with biological material not listed as high hazard, preparing working solutions from stock solutions of materials listed as high hazard, working with other hazardous material not listed as a high hazard.

Protective equipment for use with medium hazard procedures are as follows:

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| chemical fume hood, biological safety cabinet or other appropriate containment | Recommended |
| laboratory coat or gown  | Required    |
| appropriate gloves   | Required    |
| appropriate protective eyewear   | Required    |

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**Low hazard procedures** are those procedures which pose a minimal hazard to the laboratory worker in normal use and would only pose a hazard if a significant amount of this material is splashed or spilled. Examples of low hazard procedures are as follows: working with radioactive materials that are contained within scintillation vials, working with biological material that are contained within serum bottles and other primary containment, working with solutions of low hazard materials such as buffers and salt solutions, conducting microscopic work with media inside culture tubes, clean-up of material from completed experiments.

Protective equipment required for low hazard procedures are as follows:

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| chemical fume hood, biological safety cabinet or other appropriate containment | Optional    |
| laboratory coat or gown  | Required    |
| appropriate gloves   | Required    |
| appropriate protective eyewear   | Recommended |

**No hazard procedures** are those procedures conducted in a lab which pose no hazard to the laboratory worker. Examples of no hazard procedures are as follows: entering data into a computer system, reviewing data and preparing reports, reviewing published documents, viewing of fixed slides microscopically.

Protective equipment required for no hazard procedures are as follows:

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| chemical fume hood, biological safety cabinet or other appropriate containment | Not applicable |
| laboratory coat or gown  | Optional       |
| appropriate gloves   | Not applicable |
| appropriate protective eyewear   | Not applicable |

The principal investigator should review each protocol and procedure to be used in the laboratory and classify these procedures based upon these criteria. The procedures should then be identified as to what hazard ranking has been given to the procedure and all laboratory personnel should be trained in the proper procedures, the identification of proper protective equipment and should be expected to comply with this information.

## **II. REVIEW CYCLE**

Annually