

Johns Hopkins Bayview Medical Center

GENERAL CLINICAL RESEARCH CENTER

Policy No. 146

Dry Ice Handling and Storage in the Sample Processing Lab

Original Date: July 11, 2002

Previous Date: None

Reviewed Date: None

Purpose: To provide guidelines on the safe handling and use of dry ice

Definitions:

Dry ice is frozen carbon dioxide, the gas we exhale as we breathe. It is much denser and colder than traditional ice. Dry ice is -109.3°F (-79.5°C). In addition, dry ice does not melt, it sublimates.

Sublimation is the process of going directly from a solid to a gas. Dry ice bypasses the liquid form, giving it its name "Dry" Ice. **As dry ice sublimates, its volume expands; if such expansion is impeded, explosion can result.**

Procedure:

1. Storage:

- a. Dry ice is stored in a designated, insulated container.
- b. Dry ice is never to be stored in a completely airtight container. Proper ventilation is necessary.
- c. Do not store dry ice in a refrigerator or freezer.

2. Handling

- a. Always handle dry ice with care and use a non-metal scoop.
- b. To avoid skin burns, wear additional cryoprotective gloves when cleaning up a spill

3. Disposal

- a. Dry ice is to be disposed of at room temperature in a well-ventilated area.
- b. It will sublime from a solid to a gas.

4. Burn Treatment

- a. Treat dry ice burns the same as a regular heat burn. If only red, it will heal in time as any other burn. If the skin blisters or comes off, medical treatment is essential.
- b. Complete a JHBMC Incident Report and report to Employee Health/Emergency Room as needed.

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