



Chemical Fact Sheet

Dimethylbenzanthracene Chemical Safety Fact Sheet



Dimethylbenzanthracene (DMBA) is used to induce cancer and heritable genetic damage in laboratory animals. DMBA can be created via combustion processes and is carcinogenic; exposure to DMBA must be minimized by only using the material in a chemical fume hood and by wearing a laboratory coat, chemical-resistant gloves and safety glasses.

Personnel working with DMBA must wash their hands and arms with soap and water immediately after handling the material. All surfaces should be wiped down with an appropriate cleaning agent following dispensing or handling. Waste materials generated during the use of DMBA should be treated as a hazardous waste, and disposal should be coordinated through your satellite accumulation area (SAA).

Training

Only individuals who have received proper training may use DMBA at the Harvard Institutes of Medicine (HIM) and New Research Building (NRB). The training shall include reading this data sheet, understanding the chemical's material safety data sheet (MSDS), and receiving appropriate instruction from supervisors on laboratory procedures.

Exposure risks from Dimethylbenzanthracene

- According to its MSDS, DMBA is a carcinogen, mutagen, and teratogen.

The Following Practices Must Be Followed Within Laboratories Using Dimethylbenzanthracene

- Provide job-specific training to staff.
- Provide appropriate employee chemical hygiene plan training for all work processes.
- **It should be used in a chemical fume hood. If a chemical fume hood is not available then respirator use is required. No one can use a respirator without medical clearance and a respirator "fit test".**
- Limit access to work areas when using this chemical.
- Do not eat, drink, smoke, chew gum, apply cosmetics or lip balm within laboratory areas that have hazardous materials.
- Wear appropriate personal protective equipment (PPE) (laboratory coat, gloves, **safety glasses with face shield.**)
- Change disposable gloves frequently.
- Wash hands with soap and water after each glove removal.
- Dimethylbenzanthracene is toxic and needs to be disposed of as a toxic hazardous waste. Materials that contact DMBA should be disposed of as contaminated hazardous waste through the laboratory's SAA.
- Call 617-432-1901 if there has been a chemical spill.

Occupational Exposure Limits

U.S. Occupational Safety and Health Administration does not have a permissible exposure limit for DMBA. Other non-regulatory advisory groups such as the National Institute for Occupational Safety and Health and the American Conference of Governmental Industrial Hygienists also do not have recommended exposure limits. As such, all employee exposure should be prevented using the methods discussed above. If you are exposed to DMBA, you must wash with soap and water and flush the affected area and report the incident to your institution's occupational health services department and your supervisor.

Also See:

- MSDS for Dimethylbenzanthracene
- HIM/NRB Chemical Hygiene Plan, which is available on the HIM/NRB Environmental Health and Safety Webpage: <http://www.himnrbehs.com/himnrbehs/chemicalSafety.asp>