

Ethidium Bromide - Good working practices

Before commencing any work practice that involves the use of EB a full and thorough risk assessment must be undertaken in compliance with the COSHH Regulations and safe systems of work/safe operating procedures developed. COSHH risk assessment forms, including Safe Operating Procedure forms, can be accessed at:

<http://www.ed.ac.uk/health-safety/online-resources/risk-assessments>.

If practical you must use a safer, less hazardous alternative, for information on alternatives see: <http://www.ed.ac.uk/health-safety/guidance/hazardous-substances/ethidium-bromide>.

In the unlikely case of a less hazardous alternative not being a practical approach you should take cognisance of the following good practice:

- Where practical consider the use of ready to use gels. Gels for high throughput DNA electrophoresis, with the ethidium bromide content ready cast in the gel are readily available.
- Always minimise the potential for spills when working with EB by minimising the quantity used.
- Where practicable, always purchase ready-made stock solutions from reputable chemical suppliers rather than mixing your own solutions, this simple, albeit more expensive, measure removes the high hazard inhalation route of exposure and consequently minimises the more serious health effects.
- If you must mix your own solutions, because of its mutagenicity, stock solutions of this compound should always be prepared in a fume cupboard or glove box.
- Activities/experiments capable of generating EB dust or aerosols of EB solutions must be conducted in a fume cupboard or glove box to prevent exposure by inhalation.
- Protective gloves suitable for protection against EB must be worn at all times while handling this substance, [see [Ethidium Bromide - Hand Protection](#)]. Double gloving is recommended.
- When working with EB you must wear a properly fastened laboratory coat with the sleeves rolled down. If you are working double gloved wear the cuffs of the first pair of gloves under the laboratory coat cuff and the cuff of the second (top most) pair over the coat cuff.
- When working with solutions in a fume cupboard the wearing of close fitting safety spectacles is recommended, if working on the open bench a full face visor is recommended.
- If working on the open bench always work on containment trays and if running gels cover the bench in benchcote or similar material.
- Always transport solutions of EB, or contaminated gels, in a secondary container
- Gloves must be removed immediately after working with EB and before touching any other surfaces.

- If making up stock solutions always ensure that the container is properly labelled with the name of the chemical and the appropriate orange hazard warning sign.