





| Substance | Hazard | Comment |
|---|---|--|
| Barium chloride Solid |  TOXIC | DANGER: toxic if swallowed, harmful if inhaled. For a 15-minute exposure, the concentration of barium should not exceed 1.5 mg m^{-3} . |
| Barium chloride Solution (if 0.4 M or more) |  HARMFUL | WARNING: harmful if swallowed. |
| Barium chloride Solution (if less than 0.4 M) | LOW HAZARD | - |
| Barium nitrate(V) and Barium peroxide Solids |   OXIDISING HARMFUL | DANGER: oxidiser; harmful if swallowed or inhaled. For a 15-minute exposure, the concentration of barium should not exceed 1.5 mg m^{-3} . |
| Barium nitrate(V) Solution | LOW HAZARD | - |
| Barium sulfate(VI) Solid | LOW HAZARD | Unlike most barium compounds, barium sulfate(VI) is LOW HAZARD because it does not dissolve in water or acids. Hence it is safe to eat a 'barium (sulfate) meal', before being X-rayed. |

Typical control measures to reduce risk

- Use the lowest concentration possible.
- Use the smallest quantity possible.
- Wear eye protection.
- Wash hands after handling barium compounds.

Assessing the risks

- **What are the details of the activity to be undertaken? What are the hazards?**
- **What is the chance of something going wrong?**
eg, somebody drinking a toxic solution by mistake.
- **How serious would it be if something did go wrong?**
- **How can the risk(s) be controlled for this activity?**
eg, can it be done safely? Does the procedure need to be altered? Should goggles or safety spectacles be worn?

Emergency action

- **In the eye** Flood the eye with gently-running tap water for at least 10 minutes. Consult a medic.
- **Swallowed** Do no more than wash out the mouth with water. Do **not** induce vomiting. Consult a medic.
- **Spilt on the skin or clothing** Brush off any solid. Remove contaminated clothing. Drench the skin with plenty of water.. Rinse contaminated clothing with water.
- **Spilt on the floor, bench, etc** Scoop up any solid. Try to avoid raising dust. Rinse the area with water, diluting greatly. Solutions should be treated with mineral absorbent (eg, cat litter).