






# Barium compounds

| Substance  | Hazard  | Comment   |
|--|---|---|
| <b>Barium chloride</b><br>Solid  | <br>TOXIC  | Until recently, it was classed as HARMFUL if swallowed or if dust is breathed in. It is irritating to the eyes, skin, lungs etc.  |
| <b>Barium chloride</b><br>Solution<br>(If 1 M or more)                     | <br>TOXIC  | Until recently, it was classed as HARMFUL if swallowed. It is irritating to the eyes, skin, lungs etc.  |
| <b>Barium chloride</b><br>Solution<br>(If 0.1 M or more but less than 1 M) | <br>HARMFUL  | It is harmful if swallowed and irritating to the eyes, skin, lungs, etc.  |
| <b>Barium chloride</b><br>Solution<br>(If less than 0.1 M)                 | LOW HAZARD  | -   |
| <b>Barium nitrate(V)</b><br>Solid  |  <br>OXIDISING /<br>HARMFUL | It is harmful if swallowed and inhaled.   |
| <b>Barium nitrate(V)</b><br>Solution                                       | LOW HAZARD  | -   |
| <b>Barium sulfate(VI)</b><br>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. See a doctor.
- **Swallowed** Do no more than wash out the mouth with water. Do **not** induce vomiting. Sips of water may help cool the throat and help keep the airway open. See a doctor.
- **Spilt on the skin or clothing** Brush off any solid. Remove contaminated clothing. Drench the skin with plenty of water. If a large area is affected or blistering occurs, see a doctor. Rinse contaminated clothing with water.
- **Spilt on the floor, bench, etc** Scoop up any solid. Rinse the area with water, diluting greatly. Solutions should be treated with mineral absorbent (eg, cat litter).