Barium compounds

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)*	**Currently not classified as hazardous**	–
Barium nitrate(V) *Solid* **Barium peroxide** *Solid*	**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*	**Currently not classified as hazardous**	–
Barium sulfate(VI) *Solid*	**Currently not classified as hazardous**	Unlike most barium compounds, barium sulfate(VI) is currently not classified as hazardous because it does not dissolve in water or acids. Hence, barium sulfate(VI) is safely used as a 'barium meal' to examine the gastrointestinal tract for abnormalities during X-ray examinations.

Typical control measures to reduce risk

- Use the lowest concentration possible.
- Use the smallest quantity possible.
- Wear eye protection.
- Wash hands after transferring/dispensing 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 all emergency situations, alert the responsible adult immediately. Be aware that actions may include the following:

- In the eye — Irrigate the eye with gently-running tap water for at least 20 minutes. Call 999/111.
- In the mouth/swallowed — Do no more than rinse and spit with drinking water. Do **not** induce vomiting. Call 999/111.
- Spilt on the skin or clothing — Brush solid off contaminated clothing and remove clothing. Irrigate the affected area with gently-running tap water for at least 20 minutes as appropriate. Call 999/111 as appropriate. Rinse clothing.
- 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).

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