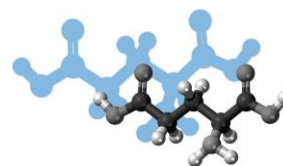


SAFETY SHEET

Demo Lecture – Light and Chemistry

Substance	Hazard	Comment
NaCl	-	Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
CaCl ₂		P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
CuSO ₄		H302 Harmful if swallowed H315 Causes skin irritation H319 Causes serious eye irritation H410 Very toxic to aquatic life with long lasting effects P273 Avoid release to the environment. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P501 Dispose of contents/ container to an approved waste disposal plant
K ₂ CO ₃		H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
FeCl ₂		H302 Harmful if swallowed H314 Causes severe skin burns and eye damage P280 Wear protective gloves/ protective clothing/ eye protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
luminol	-	Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008



NaOH(s)		H290 May be corrosive to metals H314 Causes severe skin burns and eye damage P280 Wear protective gloves/ protective clothing/ eye protection P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Household bleach		H314 Causes severe skin burns and eye damage H290 May be corrosive to metals P280 Wear protective gloves / protective clothing / eye protection P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
UV Lamp		Do not shine directly into eyes Do not expose skin to the light for excessive periods of time

Typical control measures to reduce risk

- Wear goggles whilst doing the demonstration
- Do the demo on a table, ca. 3 feet away from the front row of your audience
- Keep careful control of stocks and UV source to prevent theft
- Be careful not to shine the UV torch in the eyes
- Wear gloves whilst making up the NaOH(aq) solution
- When demonstrating the flame tests with metal salts and a Bunsen burner, have a beaker of cold water next to the flame, to cool the nichrome wire.

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, Is there the possibility of theft or foolish behaviour?*
- How serious would it be if something did go wrong?
- How can the risk(s) be controlled for this activity?

Emergency action

- **In the eye** If solutions get in the eye, rinse for several minutes. Remove contact lenses if present and easy to do so and continue rinsing. If eye irritation persists see a doctor.
- **On skin** If bleach or NaOH(aq) solution is spilt on skin, remove contaminated clothing and rinse with water.
- **Swallowed** Do no more than wash the mouth with water. Do **not** induce vomiting. See a doctor.
- **Spilt on the floor, bench, etc** Wipe any spilled ethanol solutions up with absorbent cloths.
- **Ethanol catches fire** Report immediately to a fire marshal. Trained personnel: use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

