

Humans as the subject of investigation (3)

including tasting, eating & drinking and chemicals on the skin

See also CLEAPSS Student Safety Sheets 3, 6 and 7

Source	Hazard	Comment
Investigations where chemicals are placed on skin	 HEALTH HAZARD  IRRITANT  ENVIRON. HAZARD  HIGHLY FLAMMABLE	<p>Hazardous chemicals may be placed on the skin during evaporation tests or when investigating perspiration. Where possible, it is safest to use substances which are deliberately intended for skin use, eg surgical spirit.</p> <p>DANGER: Cobalt chloride (or thiocyanate) may cause allergic skin reaction or asthma-like symptoms if inhaled. Suspected of causing genetic defects or cancer if inhaled. May damage fertility. Toxic to aquatic life. These risks are negligible when impregnated on paper but skin contact must be minimised, although there is no evidence of problems from typical school use.</p> <p>DANGER: Surgical spirits BP is highly flammable, harmful if swallowed and may cause damage to organs.</p>
Investigations involving tasting, eating and drinking	 TOXIC  BIOHAZARD	<p>Eating and drinking should not take place in laboratories and in some circumstances it may be illegal under the <i>COSHH Regulations</i>.</p> <p>Use of disclosing tablets in accordance with the manufacturer's instructions is considered low hazard. Tasting small amounts of dilute solutions (eg, sugar, salt) must be done under hygienic conditions, using a drinking straw, cotton bud or impregnated filter paper.</p> <p>DANGER: PTC (phenyl thiocarbamide, phenylthiourea, PTU), used in genetics testing, is fatal if swallowed and may cause an allergic skin reaction. It must be used only in carefully controlled, very small, amounts.</p> <p>Consuming alcohol in any form or caffeine in the form of <i>ProPlus</i> tablets is not acceptable. Use caffeine in cola drinks or coffee instead but limit total caffeine intake by avoiding it before and after testing. Limited amounts of <i>Red Bull</i> might be used if students drink it anyway, although it contains other components as well.</p>

Typical control measures to reduce risk

- Ensure only willing volunteers are used and reassure them if results are exceptional or surprising.
- Use water or surgical spirit for testing evaporation on skin.
- If using cobalt chloride (or thiocyanate) paper on the skin, handle with forceps and wash skin afterwards.
- Do not conduct taste tests in laboratories; use dining areas or food technology rooms.
- Observe scrupulous hygiene – no sharing of cups, spoons, straws, etc.
- Use only specially-purchased food- or pharmaceutical-quality chemicals for tasting.

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, could somebody taste the wrong substance by accident or as a result of mischief?
- **How serious would it be if something did go wrong?**
eg, could it become life-threatening?
- **How can the risk(s) be controlled for this activity?**
eg, can it be done safely? Does the procedure need to be altered?

Emergency action

- **Hazardous chemicals in mouth** Wash out mouth
- **Hazardous chemicals swallowed** Wash out mouth. Do NOT make victim vomit. Consult a medic.