

Food testing (2)

See also *CLEAPSS Student Safety Sheet 4*

Substance	Hazard	Comment
Sakaguchi test Used to test for proteins	 CORROSIVE  HIGHLY FLAMMABLE  ENVIRON. HAZARD	The test involves mixing three solutions: sodium hydroxide (~1.3 M), naphthalen-1-ol in ethanol (~0.07 M) and sodium chlorate(I) (hypochlorite) (~ 1.5 M). See relevant <i>CLEAPSS Student Safety Sheets</i> . Despite these hazards, it is safer to use than either form of Millon's reagent because it does not need to be heated and only a few drops are required. The biuret test is safer still (see <i>CLEAPSS Student Safety Sheet 4</i>). DANGER: Corrosive to skin and eyes, highly flammable.
DCPIP Used to test for Vitamin C	Currently not classified as hazardous	See <i>CLEAPSS Student Safety Sheet 70, Dyes and indicators</i> . Also known as PIDCP.
Saliva Used to break down starch	Currently not classified as hazardous	See <i>CLEAPSS Student Safety Sheet 3, Human body fluids and tissues</i> . Negligible risk.
Clinistix Used to test for glucose	Currently not classified as hazardous	The tip of the stick contains a minute amount of a known carcinogen and should not be touched. The sticks should be stored and disposed of safely. It is normally used for testing urine.
Albustix Used to test for proteins	Currently not classified as hazardous	This will not detect all proteins. It is normally used for testing urine.

Typical control measures to reduce risk

- Wear eye protection and use the smallest possible amounts of chemicals.
- Use the least-hazardous substance that achieves the required effect.

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 chemicals spit out of a heated test tube?
- How serious would it be if something did go wrong?
eg, could ethanol (in the Sakaguchi test) catch fire, or acid splash into the eye?
- 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 Remove contaminated clothing. Then drench the skin with plenty of water. If a large area is affected or symptoms occur, call 999/111.
- Other ethanol fires Allow fires in sinks, etc to burn out. Fires at the top of test tubes, beakers etc can be smothered with a damp cloth or heat-resistant mat if this can be done safely.
- Spilt on the floor, bench, etc For small amounts, use a damp cloth. Rinse well. For larger amounts, cover with mineral absorbent (eg, cat litter) and scoop into a bucket. Neutralise alkali with citric acid. Rinse with water.