Chemical safety fact sheet: Cyanides

The acutely toxic cyanide anion (CN^-) is present in certain laboratory chemicals, occurs naturally in a number of foods and plants and is produced by certain bacteria, fungi and algae.

Inorganic cyanides such as sodium cyanide (NaCN) and potassium cyanide (KCN) produce toxic, flammable hydrogen cyanide gas (HCN) slowly on contact with moisture and rapidly on contact with acids. HCN is a colourless gas with a bitter almond odour, detectable at 1-5 ppm. NaCN and KCN are both white solids, odourless when dry. In damp air, cyanide salts may have a slight HCN odour. Not everyone can detect it and a person's sense of smell, subject to fatigue, can fail to detect it over time.

Whether researchers use cyanide compounds ('cyanides') as reagents or generate cyanides *in situ*, the same cyanide precautions must be followed.

Hazards

Cyanides are acutely toxic to humans, in that they act as chemical asphyxiants, disabling the biochemistry of cellular respiration even in the presence of adequate oxygen levels in the blood.[3]

Liquid or gaseous HCN

- Eye, skin or inhalation exposure to HCN gas, which is generated when cyanides salts come con

- **Eye contact**: Immediately flush eyes with water for 15 min. Seek immediate medical attention.
- **Inhalation**: Move person to fresh air. **Do not** provide mouth-to-mouth resuscitation. Seek immediate medical attention.

Spill response

- Alert others and clear the immediate area where the spill occurred.
- **Only attempt cleanup if you have been tra**