



LSRA 2 – Acids and Bases

Lab Standard Risk Assessment 2: Concentrated Acids and Bases

If referencing this standard to cover your lab work, the scope of the work must match this standard and the below controls must be communicated and followed by all operatives. All lab work must be in accordance with chemical safety hand book.

Task Scope: Use of concentrated acids and basic solutions for cleaning, digestion, dissolution, reactions, synthesis, preparation of stocks and reagents. Examples include Hydrochloric, sulphuric, glacial acetic, phosphoric acids, concentrated hydroxides and ammonia solutions. This assessment does not cover HF work or mixtures of acids or other substances – for example piranha or aqua regia.

Persons at Risk	Operatives	Lab Technicians	Others in lab
Exposure Routes	Inhalation	Skin contact	Eye contact
Hazards			
	Corrosive – destroys living tissue on contact	Reaction hazards – generates heat when mixed with water, reacts violently with bases, may liberate toxic or flammable gases during reactions	

Control Measures

Fume cupboard used where possible - good general ventilation	Corrosives cabinet storage	Minimise emissions, e.g. lidded containers	Experienced operatives	Segregate according to chemical compatibility
Minimise quantities used	Labelled containers	Labelled waste containers	Chemically compatible equipment	Only well understood reactions are authorised

Personal Protective Equipment

		
Safety glasses	Disposable gloves	Lab coat

Emergency Arrangements

Spills: <500ml – ventilate area – neutralise, confirm pH with indicator paper, wipe up with absorbent materials

>500ml - evacuate area – ventilate area – call EHCs (8787)

First Aid: contact EHCs (8787); eye and skin contact – wash with eyewash or running water, remove contaminated PPE and clothing

Risk - Low