II. DANGEROUS CHEMICALS

ALTHOUGH many chemicals may be regarded as potentially dangerous, special care is needed when using the following:

(1) Concentrated sulphuric acid \( \text{H}_2\text{SO}_4 \)

This can cause a serious burn if brought in contact with the skin. In preparing dilute solutions of sulphuric acid the concentrated acid should always be added slowly to the water with continuous stirring to dissipate the large amount of heat evolved. Never add water to the concentrated acid.

(2) Caustic soda \( \text{NaOH} \)

The solid should not be allowed to come in contact with the skin. In preparing solutions of caustic soda there is a considerable evolution of heat which may cause a thick glass vessel to crack. Such solutions are therefore best made by slowly adding the solid (with care to prevent splashing) to water contained in a porcelain dish or an iron or stainless steel vessel standing in a sink.

(3) Concentrated nitric acid \( \text{HNO}_3 \)

Strongly corrosive and should not be allowed to come in contact with the skin, which it stains a deep yellow.

(4) Concentrated hydrochloric acid \( \text{HCl} \)

Care should be taken when opening a bottle of this acid, as fumes are immediately evolved which will cause pain if they come in contact with the eyes.

(5) Formic acid, Carbolic acid (Phenol) \( \text{HCOOH} \)

Powerful skin irritants.

(6) Concentrated ammonia \( \text{NH}_2 \)

Care should be taken when opening a bottle of concentrated ammonia; the stopper may fly off due to pressure. The bottle should be kept in a cool place and must never be allowed to remain in the sun.

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FIRST AID

(1) Acid burns. Flood the affected area with water and then wash with a dilute solution of sodium bicarbonate.

(2) Caustic soda burns. Flood the affected area with water and then wash with very dilute acid, e.g. vinegar.

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APPENDIX II

(7) Hydrogen peroxide '100 vols.' Perhydrol \( \text{H}_2\text{O}_2 \)

This must be kept in a cool place as great pressure may be set up in the bottle if left in the sun or near a source of heat.

(8) Diethyl ether (B.P. 34-6 °C.) \( (\text{C}_2\text{H}_5)_2\text{O} \)

Highly volatile and inflammable. Forms explosive mixtures with air.

(9) Carbon disulphide (B.P. 46 °C.) \( \text{CS}_2 \)

Highly volatile and inflammable. Poisonous. Forms explosive mixtures with air.

N.B. A foam fire extinguisher should be at hand in any room where diethyl ether or carbon disulphide is used.