

Chapter 3

SALTS

A. BINARY COMPOUNDS

10. Anhydrous Aluminium Bromide **



The ideal vessel for this experiment is a 250ml tubulated retort with a wide neck (at least 15mm in diameter). However, a distilling flask of similar size with a delivery tube 15cm long and 15 mm in diameter sealed on its neck may be used as a substitute.

Sixty grams of bromine, previously dried with concentrated sulfuric acid are placed in a small dropping funnel with a long delivery tube. The neck of the funnel is protected with a drying tube.

Ten grams of aluminum (30-mesh or turnings) are placed in the vessel. The funnel is fitted into a rubber stopper covered with aluminum foil and adjusted so that the tip of the funnel is about 50mm from the bottom of the vessel.

The bromine is added, drop by drop, slowly ($\frac{1}{2}$ –1 hour) so that the reaction mixture remains liquid. Towards the end of the addition gentle warming is needed. The pale-yellow fluid bromide is then distilled (b.p. 260–270°C) directly into a wide-necked four-ounce glass-stoppered bottle fitted on to the side-arm of the flask or retort with a wad of dry glass wool; m.p. 97°C, b.p. 255°C.

Yield = 52–55g

[CAUTION: The compound fumes in moist air and reacts violently with water. White crystals.]