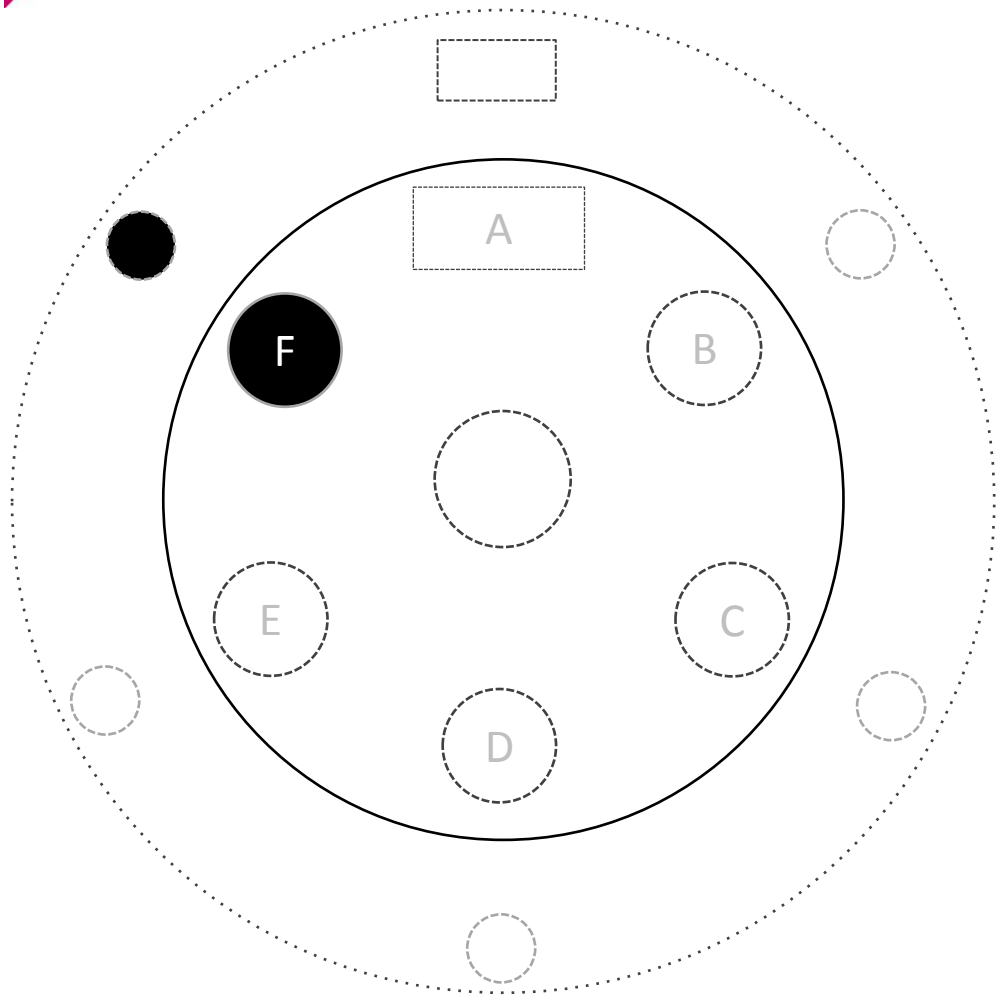

Ammonia chemistry

Wear eye protection. Work in a well-ventilated room.

Procedure

1. If not already laminated, put this sheet into a plastic wallet.
2. Place a 9 cm Petri dish over the black solid-line circle. Remove the Petri dish lid.
3. Place the following test reagents in the Petri dish in the correct positions **A – F** **as well as** in the matching outer-ring circles*.

   A = Universal indicator paper – damp (a 1-2 cm strip).
   B = Hydrochloric acid, 0.1 M with Universal indicator (2 drops)
   C = Copper(II) salt solution, 0.1 M (2 drops).
   D = Iron(II) salt solution, 0.1 M (2 drops)
   E = Iron(III) salt solution, 0.1 M (2 drops)
   F = Zinc salt solution, 0.1 M (2 drops)
4. Place a small watch glass in the centre circle.
5. Using a spatula, put 3-5 granules of anhydrous calcium chloride on the watch glass, add 0.5 cm^3 (~ 10 drops) of 2 M ammonia.

   Immediately place the lid on the Petri dish.
   Ammonia gas is given off. Do NOT inhale near Petri dish.
6. Observe carefully for 5-10 minutes (and take photos?).
7. Explain your observations.
8. **Disposal**: See notes on page 1.

**For comparison – to see what effect the ammonia has on the test reagents.*

2M ammonia solution is CORROSIVE to eyes and IRRITANT to skin.

See notes on page 1 about ammonia gas.