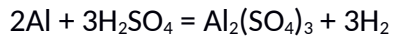


**Question:**

Calculate the volume of hydrogen gas liberated at 25 degree celcius and 735mm when 15.0g of aluminium react with tetraoxosulphate (IV). (R=63.36LITRES-mm/deg.mole)

**Solution:**

$$pV = nRT$$

so:

$$V = nRT/p$$

$$n(\text{H}_2) = 3/2 n(\text{Al})$$

$$V(\text{H}_2) = 2/3 n(\text{Al}) RT / P = 2 m(\text{Al}) R T / 3 M(\text{Al}) p = (2 * 15.0 * 63.36 * 298) / (3 * 27 * 735) = 9.51 \text{ (L)}$$

**Answer:**

Volume of hydrogen gas is 9.51 L.