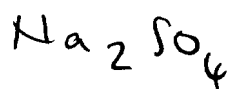


1. Assume that you need 0.3 moles of HCl. You have 37% hydrochloric acid on hand, density 1.18. How many milliliters will you need? (Atomic weights, H = 1.01; Cl = 35.45) (4 pts).

$$\frac{36.46 \times 0.3 \times 100}{37 \times 1.18} = 25.1 \text{ mL}$$

2. Show valid formulas for two common drying agents and name them! (4 pts)

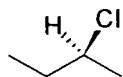


sodium sulfate



calcium chloride

3. Below is an alkyl halide similar to the one we prepared:



a. Is this a primary, secondary or tertiary alkyl halide? (2 pts).

b. Show a full, valid name for this compound! (3 pts)

(S) - 2 - chlorobutane

4. You neutralized excess hydrochloric acid with sodium bicarbonate. Show a balanced equation for this reaction! (2 pts)

