Lab 4

1.

Reagent Name	Reqd. PPE	Critical Safety Hazards	Reactivity	Disposal
Pickle	Standard	None	Non-reactive	Solid trash/Sink
Sodium bicarbonate	None	Standard	Non-reactive	Hazardous waste
Silver nitrate 0.100N	None	Standard	Non-reactive	Hazardous waste
5% Potassium Chromate	Environmental	Standard	Non-reactive	Chromate must not go down the drain, requires thorough rinsing into Hazardous Waste
Sodium chloride	None	Standard	Non-reactive	Solid trash/Sink
Ammonium Hydroxide	None	Standard	Non-reactive	Hazardous waste
Silver chloride	None	Standard	Non-reactive	Hazardous waste (use Ammonium Hydroxide to rinse)

2. $N = M \times n \Rightarrow M = \frac{N}{n} \Rightarrow M = \frac{1.0007 \text{ eq/L}}{1 \text{ eq/mol}} = 1.0007 \text{ mol/L} = 1.0007 \text{ M}$
3. $0.1000 \text{ g NaCl} \times \frac{1 \text{ mol NaCl}}{58.443 \text{ g NaCl}} \times \frac{1 \text{ mol AgNO3}}{1 \text{ mol NaCl}} \times \frac{1 \text{ L AgNO3}}{0.1000 \text{ mol AgNO3}} \times \frac{1000 \text{ mL}}{1 \text{ L}} = 17.11 \text{ mL } AgNO_3$ should be close to the volume used to standardize the silver nitrate in part b.
4. $28.0000 \text{ g pickle} \times \frac{280 \text{ mg Na}}{28 \text{ g pickle}} \times \frac{1 \text{ g}}{1000 \text{ mg}} \times \frac{1 \text{ mol Na}}{22.990 \text{ g Na}} \times \frac{1 \text{ mol AgNO3}}{1 \text{ mol Na}} \times \frac{1 \text{ L AgNO3}}{0.1000 \text{ mol AgNO3}} \times \frac{1000 \text{ mL}}{1 \text{ L}} \times \frac{20 \text{ mL}}{100 \text{ mL}} = 24.36 \text{ mL } AgNO_3$ should be close to the volume used to titrate the pickle in part c.