**A Sample Flow Chart for Forensics**

Solubility (--) Iodine test (--) HCl (--) CaSO4

Test for starch reaction

(+) (+) blue-black (+) bubbles

Cornstarch CaCO3

NaOH test

on the solution (+) milky solution=Ca(NO3)2

(--) precipitate=MgSO4

NaOH test

On a dry sample (+) ammonia smell=NH4Cl

(--)

HCl test

(On dry sample) (+) bubbles=NaHCO3  OR Na2CO3

(--)

Check pH of fresh solution

pH is about 8 = NaHCO3 pH is about 12 = Na2CO3

Flame Test (+) Red=LiCl (+ conductivity) Green = Boric Acid

(on dry sample) Purple=KCl (+ conductivity)

(--) Yellow-orange=NaCl OR NaCH3CO2 (+ conductivity)

Check pH of fresh solution

pH is about 7 = NaCl pH is about 9 = NaCH3CO2

Benedict’s test (+) Glucose (also – conductivity)

(--)

Sucrose (--conductivity) (with heat, dissolves more quickly in water than salt)

Source: Unknown

\*\* Note: This is one of many possible flow charts you or your students may develop. Ordering of tests may (and should!) vary. It is not guaranteed to be 100% accurate, although all efforts have been made to verify. Do not consider this an official resource!\*\*