

Self-Heating Can

PChem 312 worksheet

- 1) The exothermic reaction is the reaction of calcium oxide with water; write out the balanced reaction:
- 2) The formation of calcium oxide is an endothermic reaction involving the decomposition of calcium carbonate; write out the endothermic reaction which forms calcium oxide:
- 3) Use the heats of formation to determine the enthalpy of exothermic reaction:

Answer ~ -64 kJ/mol

- 4) Use the heats of formation to determine the enthalpy of endothermic reaction:

Answer ~ +180 kJ/mol

- 5) If the desired temperature of the internal liquid is 75 deg C how many grams of reactant are required?

Answer: ???