The Percentage of Copper in Malachite
Datasheet
Part I – Percentage of Cu in $CuCO_3 \cdot Cu(OH)_2$

Name: _____

Date: _____

Partner: _____

Mass of empty crucible _____ g

Mass of crucible and $CuCO_3 \cdot Cu(OH)_2$ _____ g

Mass of $CuCO_3 \cdot Cu(OH)_2$ _____ g

Mass of crucible and CuO (1st heating) _____ g

Mass of crucible and CuO (2nd heating) _____ g

Mass of crucible and CuO (3rd heating) _____ g (if necessary)

Mass of crucible and CuO (4th heating) _____ g (if necessary)

Mass of CuO (best) _____ g

Mass of copper in CuO formed _____ g
(Show your calculations)

Percentage of copper in $CuCO_3 \cdot Cu(OH)_2$ (experimental) _____ %
(Show your calculations)

Percentage of copper in $CuCO_3 \cdot Cu(OH)_2$ (theoretical) _____ %
(Show your calculations)

Percent Error _____ %
(Show your calculations)

Student Signature:_____ Instructor Initial:_____

The Percentage of Copper in Malachite
Datasheet
Part II – Relative Number of Cu Atoms in $CuCO_3 \cdot Cu(OH)_2$

Mass of $CuCO_3 \cdot Cu(OH)_2$ (from part I) _____ g

Mass of one mole of $CuCO_3 \cdot Cu(OH)_2$ _____ g/mole

Number of moles of $CuCO_3 \cdot Cu(OH)_2$ _____ moles
(Show your calculations)

Mass of Cu (from part I) _____ g

Mass of one mole of Cu _____ g/mole

Number of moles of Cu _____ moles
(Show your calculations)

Experimental mole ratio $\left(\frac{moles\ of\ Cu}{moles\ of\ CuCO_3 \cdot Cu(OH)_2} \right)$ _____

Theoretical mole ratio from formula $\left(\frac{moles\ of\ Cu}{moles\ of\ CuCO_3 \cdot Cu(OH)_2} \right)$ _____

Percent Error _____ %
(Show your calculations)