

Name _____ Teacher _____ Date _____

3.2GL: Observing Plants' Mass Changes, Part 1 Worksheet

Use this worksheet to harvest your radish plants by separating them from the gel and drying them in preparation for Activity 3.4: Observing Plants' Mass Changes, Part 2. *If the mass you measure is less than 0.01g, record it as $<0.01g$. For our purposes, we will treat this as a zero when doing any calculations with it.*

A. Steps for harvesting

Check the box as you complete each step.

The day before:

- The day before this activity, fully hydrate the gel by watering one last time.

The day of:

- Place an empty container on the digital scale and tare the scale.
- Grasp the radish stem close to the gel and carefully slide or wiggle the entire radish plant and the attached gel out of the test tube.
- Keeping the plant intact, remove the gel from the plant roots by gently squeezing the roots between your thumb and fingers over the empty container.
- Mass the gel. Record the wet mass of your gel here. _____grams
- About 1.4% of the gel is dry mass. Estimate the dry mass of your gel here. _____grams.
- (Optional) Dry out your gel and mass it. Do you get the same result?
- Tare the scale again with a clean empty container.
- Mass the plant. Record the wet mass of your plant here. _____grams
- About 7% of the radish plant is dry mass. Estimate the dry mass of your plant here. _____grams.
- Mass your empty envelope or paper bag and record here: _____grams
- Carefully place the harvested plants in the envelope or paper bag to dry. Use a marker to label your envelope.
- Allow the plants to dry in a sunny windowsill or drying oven until Activity 5.1

B. Observations

Record your macroscopic-scale observations below. Use drawings and/or words.

Observation idea starters: How much have your radish plants grown? Which is larger, the roots or the stem/leaves? What colors are the leaves, stems, and roots? Has the gel changed in any way? How?