

DETERMINING FORAGE MOISTURE CONTENT USING A MICROWAVE OVEN

1. Chop fresh forage into 1 to 2 inch lengths for ease of handling.
2. Weigh out approximately 100 grams (3.5 ounces) of chopped forage.
3. Spread forage thinly on a microwave-safe dish and place into microwave. **(Place a cup of water in the microwave to prevent sample from igniting once dry.)**
4. Heat for 2 minutes and reweigh.
 - a) If forage is not completely dry, reheat for 30 seconds and reweigh. (Microwaves vary considerably in drying capacity. It is better to dry for short intervals and reweigh until the last two weights are constant, than to overdry and run the risk of burning and damage to oven.) Continue this process until back-to-back weights are the same or charring occurs.
 - b) If charring occurs, use the previous weight.
5. Calculate moisture content using the following equation:

$$\% \text{ Moisture Content} = \frac{W1 - W2}{W1} \times 100$$

W1 = weight of forage before heating

W2 = weights of forage after heating

Dry matter (DM) is the percentage of forage that is not water. DM equals 100% minus percent water.

Results on an “as-fed basis” reflect total nutrient concentration including water of sample analyzed or to be fed.

SOURCE: Southern Forages 3rd Edition, Page 303