

The aim: of this project is to test the effects of climate on decomposition using tea bags.

Method: Bury tea under ambient conditions in the field.

The protocol is identical for woven and nonwoven bags.

Use only Lipton Green tea (EAN 87 10908 90359 5 or EAN 87 22700 05552 5) and Rooibos tea (EAN 87 22700 18843 8).



Preparation 1:

- a. Determine the airdry weight of at least 5 empty bags, separated in bag mesh, string and label (n=5 for each).
- b. Determine the weightloss of tea of (those) 5 bags after at least 48h in an oven at 60 or 70°C.

Preparation 2:

1. Mark the tea on the white side of the label using a black marker. (when you give Rooibos and Green tea different numbers or letters, the bags cannot be confused when digging up).
2. Weigh the tea bags **air dried**, not oven dried (0.001g digits).
3. In one location, dig two holes of ca 5 cm diameter and 8 cm deep, at least 15 cm apart. You can choose the location of the bags to your own convenience.
4. Take one green and one rooibos bag and place each bag in a separate hole. Leave the string and the label above the ground.
5. Write down the date on the backside of this form.
6. Close the holes. You can place a stick next to the bags and attach the string of each bag to a stick. That will make it much easier to find back the bags.
7. Repeat this at least two more times ca. 1 m apart from each other. In total you will have buried 6 bags per location.
8. Wait ca 80-90 days. In the tropics, an incubation time of 60-70 days is sufficient.
9. Find back the tea.
10. Carefully follow the string and dig up the tea without tearing holes in the fabric.
11. Write down the date.
12. Remove **all** soil parts and roots and let the tea bags dry (60 or 70 degrees, 48 hours. If you cannot dry them directly after harvest, dry them as much as you can, e.g. by putting them in the sun). Sometimes soil parts are easier to remove after you have dried the bags for a little. If root in growth is very high, clean the bag, remove the tea from the bag, remove all roots.
13. Remove the tea from the bag. Weigh the oven dried tea (0.01 or 0.001g).
14. Upload the data in the correct dataform. Note that the website (www.teatime4science.org -> publications) provides a separate file for woven and nonwoven bags. Make clear how to link woven and nonwoven bags in the separate file if they were linked in space.

It would be very helpful, but not obligatory if you could also measure or obtain: Soil C and N content (determined by combustion), Soil pH (determined with a demi water extraction), Median air temperature (during the incubation period from the closest weather station you know of) and classify Shading, Human impact, Soil texture, Ecosystem/vegetation, Soil depth, Rooting depth, Slope and Aspect. Classification is indicated below.

Thank you for your cooperation!