

Seed Viability Lab

Ever wondered how long you can save your seeds and have them still be viable?

A seed which can germinate given the right conditions of moisture, temperature, light etc is called "viable". The seeds that are not viable are dead and of no use. Seeds should be stored at proper moisture and temperature to maintain their viability. Normally seeds stored in dry air at room temperature remain viable till the next growing season. For prolonged storage low humidity and low temperatures (15 C) are required.

Items needed:

Bean Seeds – any seed will work but larger seeds are easier to cut open or try using seeds purchase in the soup section of the grocery store verses from a seed catalog.

TTC (triphenyltetrazolium chloride) - Can be purchased at Carolina Biological Supply

Gloves

Razor Blade or Knife

Step 1 – Soak Bean Seeds overnight in TTC.

Step 2 – Students will need to wear gloves for this activity. Using your gloved hand remove your beans from the TTC solution and place them on a paper plate or thick layer of napkins.

Step 3 – Using extreme caution and with the blade facing away from you, cut open your seeds

Step 4 – Observe the color of the tissue inside your seeds. Seeds with living tissue will be red. Uncolored spots will indicate poor viability.

Student Work:

1. Sketch your observations below

2. Based on your observations, how would you describe the seed's viability? Why?

This is a free resource provided by Georgia Agricultural Education
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