Mite Washing Protocol

## Mite Washing Solution

Equal parts bleach and water + 0.2% dish soap

(ex. 500 mL water to 500 mL bleach + 2 mL dish soap)

Note: Do not use Clorox. It has extra chemicals which make the soap congeal

Use new soap if you begin to see the soap congeal

## Mite Washing Protocol

* Fill the centrifuge tubes with enough mite washing solution to cover the plant material
* Shake the tubes vigorously and then let sit for 5 mins
* Samples can be stored like this in a refrigerator overnight if necessary

## Mite filtration

The mite washing solution should have knocked the mites off the rose plant. Now we need to separate the Eriophyid mites from the plant materials and other mites, so we can count them. We will do this by straining the mites through a stack of fine sieves

* Stack the sieves from largest mesh to smallest (No. 500 on bottom, No. 270, then No. 80 on top)
* Take your centrifuge tube and pour out the mite washing solution through the sieves
* Rinse the plant tissue thoroughly with running tap water over the sieves
* Discard the rinsed plant material into a designated sanitation container
* Rinse out the tube with water from a wash bottle while holding it over the sieves

## Mite sorting

At this point, you should have a stack of sieves with different mites stuck on them. The smallest mesh (at the bottom of the stack) has the Eriophyid mites we want. The largest mesh should just have plant materials on it. We want to rinse the stuck mites into containers where we can count and identify them

* Take the smallest sieve (No. 500) and hold it upside down at an angle so water will flow into the petri dish
* Spray the backside of the mesh with a wash bottle filled with tap water, starting from the highest edge and working down to the edge nearest to the petri dish
  + Be sure to rinse off the sides of the sieve as well

These will be the mites that you can now count and record at 50x magnification using your microscope. Make sure to label anything which will not be immediately recorded onto a datasheet.

For sieves No. 270 and No. 500, rinse them in the same manner into a centrifuge tube. Label and date this tube and set it aside in the refrigerator for predatory mite identification.