

## Disinfecting Clothing and Bedding

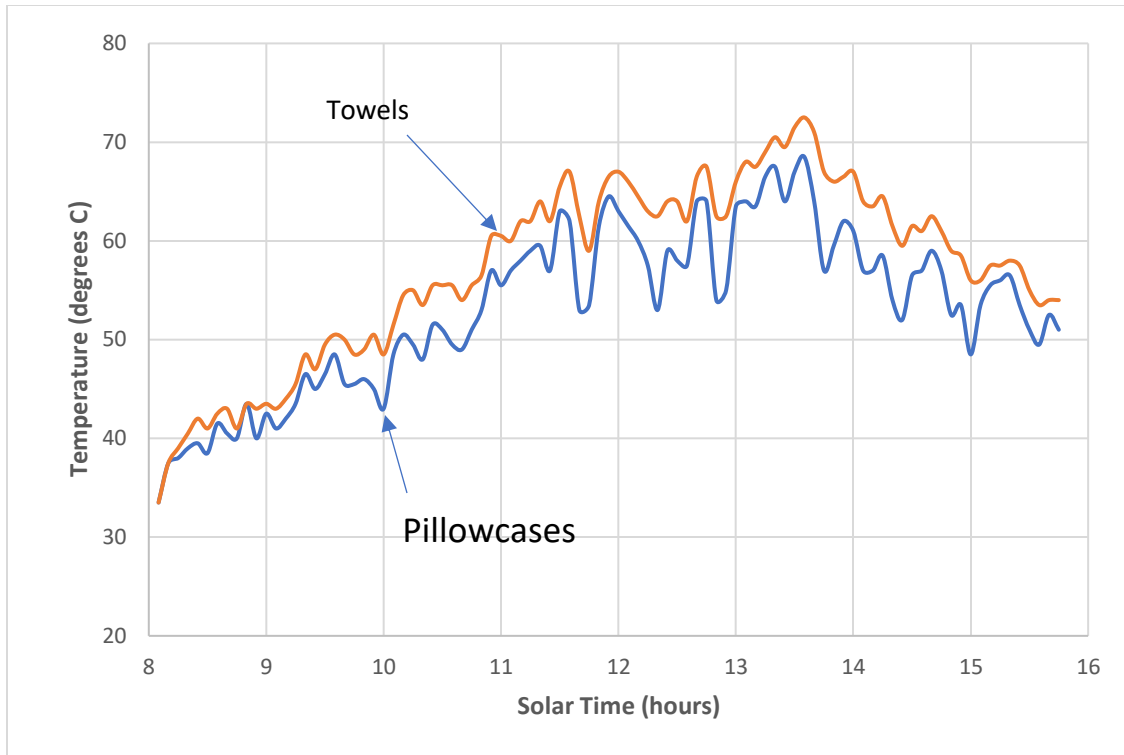
In some parts of the world flies lay eggs in wet laundry, the laundry dries, the clothing is worn, and body heat causes the eggs to hatch. The larvae bite the person, in some cases causing great pain. Insects and insect eggs can be killed by temperatures inside the Solar Household Energy Bank, even on a cloudy day.

The photo below shows a test setup. The keys are that the clothing must be dry (the Solar Household Energy Bank does not do well with large drying tasks such as drying clothing) and the clothing must be flat on the base of the Solar Household Energy Bank.



**This photo shows the test set up for killing insect eggs. Two temperature loggers are under the clothing, one on the left and one on the right. The stack on the left is 3 pillowcases on top of each other, and the stack on the right is a thick towel folded into thirds. A bucket of water is used to support the top clear plastic layer, and because heating wash water is a common need for many people.**

The top layer of clothing gets hot due to sunlight, and heat is conducted through the stack, but not conducted through the insulating straw layer. The measured temperatures at the bottom of the laundry stack on a hot but cloudy day are shown below. About 55°C is required for half an hour to kill just about any multi-cellular organism, including insects, and their eggs. This was easily exceeded.



**This figure shows the measured temperatures at the bottom of the two stacks of laundry. They easily exceeded the required 55°C. One can see the times when cloud cover was extra thick.**

I would not go with more than 3 layers of laundry as used in these tests, unless strong sun and high temperatures were expected. Again, the laundry must be flat on the base of the Solar Household Energy Bank with no air gaps between the layers.