

Cleaning Equipment In A Boiling Soda Solution

This document has been written during the 2020 COVID pandemic.

At some point you will reach the stage when you have a pile of equipment that needs to be cleaned & sterilised before it can be used again. Boiling your equipment in a solution of soda is an excellent way of achieving this. It is also a very good way of eliminating wax moth. I've included some pictures of the damage that unchecked wax moth can do to your equipment. They have the potential to render your expensive equipment to a pile of trash in a very short space of time if left unchecked. If you have followed my advice regarding steam cleaning your old brood boxes full of used comb, you will have lots of equipment that requires a thorough clean to get rid of old propolis & cocoon residue. This boiling process also allows for the cleaning of such items as stands, floors, queen excluders, crown boards & roofs.

This practise is not without risk. You will need to take extreme caution. Invest in some industrial grade cotton work wear. You will need to make sure that this work wear covers your body sufficiently to prevent burns from both the fire & boiling soda solution. Wear sturdy boots, eye protection & industrial grade rubber gloves that reach your elbow.

Make sure that you have sufficient wood available to keep a small fire going for at least six hours. It needs to be cut to size & dry. I'm lucky in that I have a wood burner & use wood that has been cut ready for use over the winter. Broken down pallets are fine, you will get through a number of them in the time it takes to complete this task.

Choose a fine day. It will help if you can notify your neighbours in advance of your intentions. On the day, you will need to notify the local fire brigade of your task in hand. Use a local non emergency number, **01268 909 408** is the number that I found on the internet which covers the Cardiff area.

DON'T RING 999 (unless you've not followed my guidance & your shed is now on fire)

Garden fires are frowned upon during the present COVID restrictions. However once I explained to the Fire Brigade of the importance of hive maintenance to prevent disease to honey bees, they were most supportive. They will ask what time you will be lighting your fire & also the time it will be extinguished.

You may also wish to make the local authority aware of your intentions. A number of councils have joined forces to cover such activities as noise pollution, food hygiene, smoke nuisance etc. The number that covers my area is **0300 123 6696**. I now have a letter from them endorsing my use of a fire. It is considered part of an industrial process that needs to be undertaken as part of best practise in beekeeping. I ring them each time I undertake this task. They are then in a position to answer directly to any complainers without having to contact me.

You will need a large metal vessel to clean your equipment in. I first used a dust bin that cost me about £15. All though I was able to clean all of my equipment, it was to be honest a bit on the small side. I have since obtained an old water header tank. I had to seal the pipe that is in the base of the tank, a compression joint worked fine (mine was imperial, check before you buy). I did need to take an angle grinder to the top of the tank. It had a large lip that prevented me from being able to insert a brood box and immersing it completely.

If you've never used such tools as an angle grinder, ask for assistance. There are numerous risks involved that could result in fire, severe injury (loss of an eye or limb) or potentially death.

You will need a large space to complete this task. Not only will you have a fire, but two piles of equipment, one dirty the other just cleaned.

I start by assembling a sturdy base of breeze blocks to contain my fire. Make sure your chosen vessel sits steadily on them prior to lighting your fire. Gather sufficient wood for burning, & have it ready to feed your fire. I remove my boiling tank until the fire is well established.

Unroll a hosepipe and have it ready to fill your boiling tank. Fill 2 buckets & leave these to one side where they are easily accessible. They are your first line primary fire extinguisher if your fire gets out of hand. They can also be used to quench burns after you have ignored my advice about wearing proper protective clothing.

Light your fire, let it get going and become well lit. Now place your boiling tank on top of the breeze block base. Fill the tank to a level deep enough to submerge a brood box. Add 2 x 1Kg bags of soda crystals to your tank of water and stir until dissolved.

Leave your hose pipe unrolled and connected to the tap, with the water turned off. This is your secondary Fire extinguisher.

It takes roughly an hour for my fire to get the tank of soda solution to a rolling boil. During this time I need to continually feed the fire from my pile of wood.

Once the soda solution is up to temperature, you can start cleaning your equipment. I use an old scrubbing brush to clean off the wax & propolis that is stuck to my equipment. The dedicated frame cleaning tool that I purchased from Thornes is a really useful item along with an old hive tool to use as a scrapper. Be prepared to spend a couple of hours cleaning your equipment, this is not a quick job. You will need to top up your solution with fresh water during this time as quite a bit will evaporate. The fire will also need to be fed with more wood.

I normally start by cleaning all of my dirty frames, once they have been scrubbed they are then left to soak in tubs of clean water. After I've scrubbed the rest of my equipment I then give everything a good soak with the hose pipe.

The fire is left to burn out naturally. I dispose of the dirty soda solution into the sewerage system. Note that you are likely to have two waste water systems. One is for rain water that will end up in the local river, the other for foul water that will be cleaned at the sewage station. It is advised that you inform anyone living with you that you are about to take the next step in the process, unless you're happy to pull grandma out of the sewer.

I have a manhole in my garden that gives access to the sewer waste. I lift the manhole using the edge of a spade and lever it up gently. Once the manhole cover has been raised up a couple of inches, I slide a screw driver followed by a length of wood under it, this will prevent it from falling back into place. Wearing leather gardening gloves I then remove the manhole cover. Having worked for BT in my previous life, lifting access covers to underground cable systems is something that I've been trained to do. If it's outside your comfort zone, seek assistance. Be careful when replacing the sewerage cover after use that you don't drop it in the hole. You're in for a messy job retrieving it if you do. I suggest you practice this task before you start cleaning your equipment until you feel confident. Alternatively, pour the waste water into your sink. It is advised that you purchase a substantial gift for your partner in lieu of compensation for a ruined kitchen if you choose this option.

Once I've finished disposing of the waste, I have a general tidy up of my garden. The clothing that I wear is by now filthy. If you've taken my advice and worn cotton work wear, it will stand a good long hot wash in your washing machine. I use a biological detergent, with a cup of soda added to help get my clothes clean.

I'm happy to leave my cleaned equipment in the garden long enough for it to get rained on. Rain being slightly acidic will help neutralise any remaining soda residue that may still be present. Then after a couple of days in the sunshine, your cleaned equipment will be ready for storage.



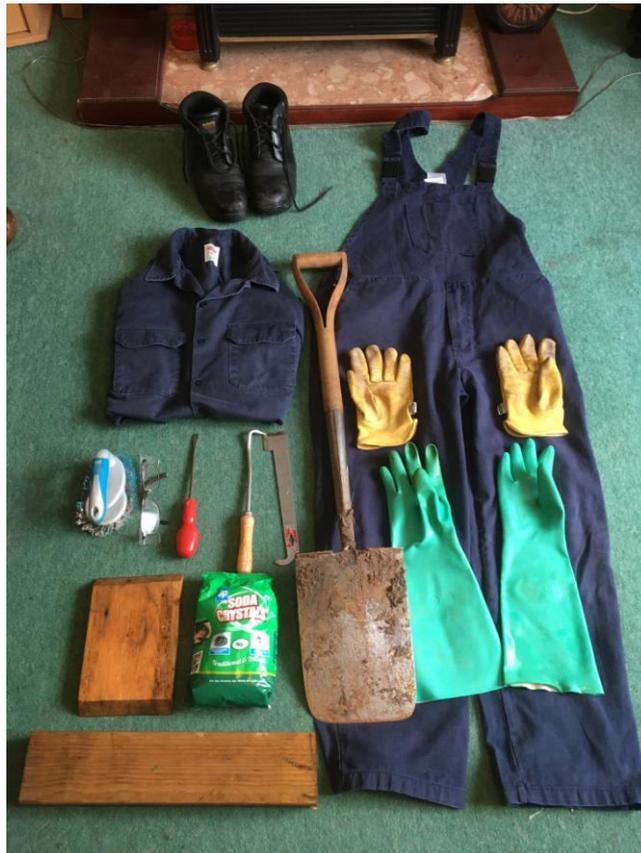
You'll need plenty of wood to complete this task



My first sterilising set up.



This bin was too small to fully submerge a National Brood Box



You'll need to use the right equipment to complete this task safely. Can you identify the incorrect PPE?



This set up using an old water tank proved to be far more successful



Clean equipment being soaked



Rinsed equipment soaked by rain



Wax moth damage to brood frame



Wax moth damage to brood frame



Clean equipment ready for storage

