

Incubator Cleaning and Care

The inside of the average incubator is a great place for growing all kinds of organisms apart from the eggs we want to grow. The very nature of the incubator, warm and moist, makes it ideal for the development of many different bugs. Add the waste products and bugs introduced to the incubator at hatching time, and we soon have a very good brew of organisms which will be detrimental to the future hatching success. We are often asked how to clean incubators, and what should we use to effectively sterilise the machines.

The principles of incubator cleaning are the same from the smallest hobby incubator to the largest commercial incubator with 100,000 eggs. Until recent times, the most common method of disinfecting an incubator was to use formalin and condies crystals. These components were mixed in a bowl in the incubator and produced a gas which fumigated the interior of the incubator. This is a very cheap material and very toxic, and was reasonably effective at killing everything (operators included). This effectiveness is often lost because of a lack of physical cleaning of the incubator. The cheapness is also poor value when considering that the material is very dangerous.

Effective incubator cleaning consists of two steps, physical cleaning, followed by sanitising:

STEP 1 There is no substitute for elbow grease. An incubator not physically clean will not respond to later sanitisation. Physical cleaning is best when done as soon as possible after the removal of the chicks at hatch time. Allowing the waste material of the hatching process to dry on the inside of the incubator greatly increases the later workload of cleaning. Physical cleaning is usually best when assisted by a detergent. The froth and bubble from detergents is not a disinfectant or a sanitiser, but they are cleaners. Detergents are intended to lift dirt and usually contain surfactants which hold the dirt so it can be washed away. The best cleaning is done using a mechanical device such as a sponge mop or broom for bigger machine, or a hand sponge for small machines.

STEP 2 Sanitising or Sterilising. Once the surfaces are physically clean, a sanitiser will kill bacteria, virus and fungus spores so that these will not contaminate the next setting of eggs. The selection of sanitising agent is often a confusing process and many different products are available. Formaldehyde is now considered too dangerous to use.

Chlorine is a very common disinfectant found in most homes as household bleach. The usual dilution on the bottle is correct as a spray rinse in the incubator, and a few drops in the water tray are an excellent fumigator. Bleach becomes inactive in the presence of organic material. So is only good on nice clean surfaces. NappiSan is an oxygen bleach which is also effective as an incubator disinfectant but can be corrosive on metals. Other disinfectants are available (see list below) and all have a useful place.

The method of application of the sanitising agent is also important. Two different main methods are used.

- One is the spraying or misting of chemical into the incubator and onto the surface of the incubator with a small pump pack. The incubator should be warm and run after the application of the sanitiser.
- The other method is fumigation where a sanitiser is evaporated into a gas form and the fumes reach all corners of the incubator. This method is most suited to larger incubators.

STEP 3 This last step is not so much about the cleaning of the incubator but of its future life. A very common problem with incubators and hatchers of all sizes, from the smallest to the largest, is corrosion caused by moisture and disinfectants. Cleaning an incubator involves getting it wet, then sprayed with disinfectants. Many of the disinfectants are by nature corrosive and result in a degrading of incubator components. However the corrosive nature of most of these products greatly reduces once they are dry. Washing an incubator, leaving it wet and storing it away on the shelf is a great way to have a failure as soon after start up next season. After washing, and sanitising, dry the incubator by leaving the unit run for at least a day or so to completely dry out. This ensures no moisture is left in the system to corrode away at vital components.

Common incubator disinfectants:

- Virkon is now available in small 50 gram sachets. Virkon turns pink when mixed with water and indicates it is active and ready to use; use your own spray bottle to disinfect.
- F10 is a broad spectrum incubator disinfectant.

See Cleaning tips for a Bellsouth 100 incubator on [Bellsouth YouTube channel](#)

