

Hive inspections are key to the early detection and reporting of exotic bee pests, and also supports beekeepers to recognise high priority established pests for reporting and management.

Why an alcohol wash?

Alcohol washing is a quick and effective method for detecting the presence and monitoring the level of Varroa mites within a honey bee colony. Alcohol washing can remove over 90% (with multiple washes) of external Varroa mites present on adult honey bees. This method can also detect Tropilaelaps mites.

Why has the alcohol wash method been reviewed?

The National Bee Biosecurity Steering Committee identified the need for a consistent alcohol wash method to support Australian beekeepers. This recognises there are various versions of the method that may have slight differences which can create uncertainty on how best to perform the activity.

Who reviewed the method?

An expert working group comprised of researchers and biosecurity surveillance officers was established to review the method. The group included representatives from State and Territory governments, the Australian Honey Bee Industry Council, and researchers from the Commonwealth of Scientific and Industrial Research Organisation (CSIRO) and Plant and Food Research New Zealand (NZ).

What about sugar shaking or drone uncapping?

While sugar shake and drone uncapping are useful detection methods, the Varroa response in New South Wales has proven alcohol washing to be more effective.

Why is washing the sample three times important?

The number of washes is the most important part of the method and is key to achieving the highest volume of mite recovery. The first wash aims to kill the mites and subsequently kills the bees as well. The second and third washes aim to dislodge the mites and extract them from the bees so you can see them. Without the additional washes you are less likely to detect mites that may be present in your hive.

How do I perform an alcohol wash?

Information on the materials needed and the steps to perform an alcohol wash is detailed in the [Alcohol washing factsheet](#).



Is washing for 15 seconds long enough?

In this method there are a total of three washes, each with a duration of 15 seconds. Washing for 15 seconds is a sufficient amount of time, and provided you perform three washes in total, has a high mite recovery. The wash duration also reduces ongoing fatigue which is particularly important if you are washing multiple hives.

A recent study by Plant and Food Research NZ showed repeated washing of the bee sample recovered more Varroa; washing once recovered about 70%, washing twice recovered just above 80%, and three washes recovered more than 90% of the Varroa.

Q&A: Alcohol washing

Where in the hive do I collect my sample from?

Varroa mites feed on and reproduce on honey bee brood. Therefore, the nurse bees that take care of the brood cluster (the main area where larvae are developing) are more likely to have Varroa on them compared to bees found in the honey supers. This methodology targets the central brood cluster which is where you are mostly likely to find nurse bees and therefore Varroa (attached to these nurse bees).

Which is the best frame to choose?

The best frames to collect your sample of bees are those from the centre of the brood cluster in your brood box. The best frames should have good coverage of brood (this can be capped or uncapped brood) with lots of bees on both sides of frames. This means you are most likely to capture a good coverage of nurse bees tending to the developing brood where varroa are reproducing. Make sure you have identified the queen and ensured the queen is not present on the frame you sample from.

What are some general safety and biosecurity considerations before I begin?

- Ensure you follow all relevant jurisdictional requirements when working with beehives including any current biosecurity orders, processes for bee material disposal, and fire conditions/bans.
- Ensure fire controls (e.g. a foam, dry powder, a CO² extinguisher, rack and/or water) are easily accessible as this activity involves flammable liquids.
- Plan bee activities when weather conditions are favourable i.e. minimal rain or wind.
- Always follow biosecurity practices to limit the spread of exotic and established pests and diseases when moving between hives and sites:
 - Ensure all materials and hive tools are clean and free of debris before and after use.
 - Clean all equipment away from hives and bees.

Where can I report my results?

Make sure to record details including date, apiary location, hive number, and results, this information is vital so teams can respond effectively should a positive be reported.

How to submit your results and samples is explained on your State or Territory government department of agriculture website. A list of state and territory reporting links can be found at

www.beepestblitz.com.au

If no mites are found, dispose of dead bees and any other hive debris. Making sure all used equipment and material is thoroughly cleaned.

If any mites are suspected, keep the sample, and report the finding immediately to the relevant state/territory agriculture agency through the

Exotic Plant Pest Hotline 1800 084 881.



**It's time
to bee aware**

**If you see anything unusual,
call the Exotic Plant Pest Hotline**

**EXOTIC PLANT PEST HOTLINE
1800 084 881**

Biosecurity is everyone's responsibility, play your part and check your hives.