

CERTAN

Summary



B 401 (also known as Certan) is a safe and environmentally friendly product based on a concentrated solution of *Bacillus thuringiensis*, a microorganism. B401 is used after the honey harvest, when the frames are stored. A single application will provide 100% efficacy against wax moth right up to the installation of the frames again the following season. As B401 only kills young wax moth larvae, it must be used as a preventative, before the combs are infested.

WHAT IS B 401?

B 401 is a concentrated solution of *Bacillus thuringiensis* subspecies *aizawai*, a micro organism, harmless to man & honeybee alike.

B 401 has up to 100 % efficacy against the larvae of the wax moth (*Galleria mellonella*)

B 401 is a 100 % biological product that leaves no residue in wax or honey, does not alter the taste of honey, and is environmentally friendly. B401 is suitable for organic farming in accordance with Council Regulation EEC No 2092/91 modified on 24th June 1991.

B 401 ensures protection over a long period. One application is enough to protect frames until the following season.

WHEN TO USE B 401?

B401 should be used after the honey harvest, when the frames are stored. Protection will be effective right up to the installation of the frames again the following season.

B 401 can also be used to protect decoy or empty hives.

Please note that B 401 only kills young wax moth larvae and must be used as a preventative before the combs are infested.

HOW TO PREPARE B 401?

B 401 is made of spores from *Bacillus thuringiensis* and must be diluted in water to 5% (i.e. 1 volume of B 401 for 19 volumes of water).

Shake the bottle of B 401 vigorously before adding the required amount to the corresponding water volume and mixing.

Once diluted, the solution must be used the same day. Before mixing, calculate the amount of product required to treat the desired number of frames.

QUANTITY OF SOLUTION

For up to 100% wax moth control, apply 1.5 ml of solution per 10 centimetres squared of comb, on both sides of the frame. The guide below may make the calculation of the required quantities of B 401 easier.

Type of frame	N° of frames treated with 120 ml of B401
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Dadant brood nest	50-70
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Langstroth	70-100
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B 401 is packed in 120 ml bottles (10-15 Dadant supers) and in 1-litre bottles (85-125 Dadant supers) and is available from beekeeping dealers.

HOW TO APPLY B 401?

Before use, the mixture should be shaken well to get a homogeneous solution.

The solution should be applied evenly all over both sides of the frame using a sprayer

Before storing, let the frames dry in an aired room to avoid mould

STORAGE & CONSERVATION

B401 should be stored at a temperature between 5° C and 20° C. If stored in a cool place (under 12°C) and in its well-sealed original bottle, B 401 can be kept for several years.

SAFETY OF B 401

Unlike paradichlorobenzene, which is a toxic product and forbidden in the UK for any agricultural use, B401 does not leave any residue in the wax or the honey.

B 401 is harmless to bee larvae and adult bees.

Aizawai serotype 7 (present in B 401) is the sole variety of *Bacillus thuringiensis* to give excellent results against wax moth. Some other types of *Bacillus thuringiensis* are toxic to humans & bees