

## Chemical treatments for managing *Varroa* mites

■ Essential oil    
 ■ Organic acid    
 ■ Synthetic chemical

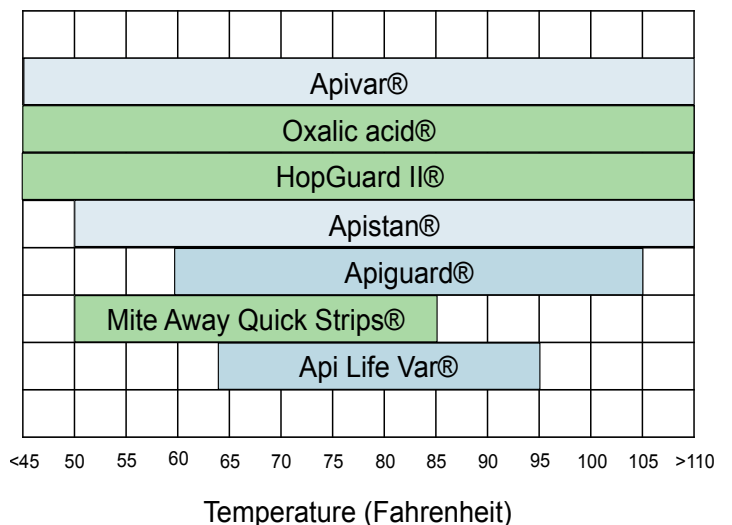
Chemical Treatment	Active Ingredient	Method	Efficacy	Cost per colony	Treatment duration	Can you treat with supers on?	Time to wait after treatment ends before you can super
Apiguard®	Thymol	Tray with gel sits on brood frames	74-95%	\$3.30 - \$6.80	28 days (2 times for 14 days each)	No	Can super immediately after treatment ends
Api Life Var®	Thymol, eucalyptus oil, menthol	Tablets placed on the corners of the brood nest	70-90%	\$4.48 - \$7.12	21-30 days (3 times at 7-10 day intervals)	No	1 month
MiteAway Quick Strips®	Formic acid	Pads placed on brood nest	61-98%	\$4.40 - \$7.25	7 days	Yes	Supers can be left on during treatment
Oxalic Acid	Oxalic acid dehydrate	Dribble brood nest or vaporize entrance	82-99%	\$0.25 - \$0.37	10 minutes	No	2 weeks
Hop Guard II®	Hops beta acids	Strips inserted in brood nest	75-99%	\$3.33 - \$3.80	28 days	Yes	Supers can be left on during treatment
Apivar®	Amitraz	Insert strips into brood nest	95%	\$5.00 - \$6.90	42-56 days	No	2 weeks

The treatments Apistan® and CheckMite+® are not included in this table because we do not recommend beekeepers use them. They remain in wax for years and mites have developed resistance. There have also been cases of resistance to Apivar®. It is important to rotate treatments, remove treatment strips promptly, and practice Integrated Pest Management to reduce the likelihood of resistance developing to any treatment. Make sure you monitor after the treatment is finished (or regularly every month) to determine efficacy.

Efficacy levels are cited from **Honey Bee Health Coalition, 2017. Tools for *Varroa* management: a guide to effective *Varroa* sampling and control**, 5<sup>th</sup> edition. These levels refer only to treatments applied as specified by the label.

Treatment costs per colony vary depending on supply companies and order size.

### Treatment Temperature Windows



Temperature (Fahrenheit)