

EPA approved Varroa Mite Treatments:

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Type	Varroa mite Treatment/ Active ingredient	Method <i>(see EPA Regulation for details, required PPE and directions for use)</i>	Efficacy	Treatment Duration <i>(see Label for details)</i>	Temperature requirements <i>(daytime)</i>	Supers allowed?	Brood Presence	Colony size <i>(frames of bees-FoB)</i>	Other considerations	EPA Reg. link
Essential Oil	Apiguard® / Thymol (25%)	Gel laid in tray/sheet on top of the frames in the center of the brood nest. Gel slowly evaporates and bees help spreading it around the hive trying to remove it. Series of applications can be done during the treatment dependent on temperature, colony size and mite infestation levels.	74% - 95%	Total of 4-6 weeks of series of gel dose applications, using new gel dose with each time (see label for details).	60F - 105F Temperature sensitive (see label).	NO, but you can add supers immediately after treatment is completed and gel cans are removed. Don't use during nectar flow.	Doesn't penetrate brood cappings, so presence of capped brood lowers the efficacy.	Can be used with Nucs & small colonies in smaller doses. Best to combine weak colonies before treatment.	Reduce the entrances, close screened bottom boards. Workers must have access to the gel - you need at least 1/4" space between top of the gel can & the bottom of the inner cover, so rim spacer or extra hive box can be added for proper evaporation. Overdosing can cause absconding, increased mortality and defensiveness.	7967 1-1
	Api Life Var® / Thymol (74%), Eucalyptus oil (16%), Menthol (4.7%)	Flat tablets/ waffles placed on the top of the frames in the corners of the brood nest (not over the broodnest!)	70% - 90%	3 applications with total of 26-32 days: 1st: 7-10 days 2nd: 7-10 days 3rd: 12 days	64F - 95F	NO, and need to wait 1 month before adding supers. Don't use during nectar flow.	Doesn't penetrate brood cappings, so presence of capped brood lowers the efficacy.	The colony should be at least 8-20 FoB (frames of bees).	Reduce the entrances, close screened bottom boards. Apply in the morning or evening (coolest temperatures). Don't apply when robbing is happening.	7329 1-1
Organic Acid	Formic Pro / Formic Acid (42%) new/improved form	Pads/strips placed across the top of the frames over the brood nest.	83% - 97%	2 options: - 2 strips for 14 days or - 1 strip for 10 days, replaced with 2nd strip for 10 days- total of 20 days	50F - 85F during treatment, with 1st 3-4 days being critical.	YES, supers can be left during treatment. Colony should be well fed before the treatment and have food reserves.	Penetrates wax cappings - effective with brood present, kills mites in capped brood.	Colony should be at minimum of 10,000 bees, covering approximately 6 deep frames.	Need 1/2" bottom opening of the width of the hive (remove entrance reducer), close screened bottom boards (if used). Don't disturb the colony during the treatment , best if applied 3 days after an inspection to minimize queen mortality & absconding. Dead brood removal and bee mortality may be observed.	7571 0-3
	MiteAway Quick Strips® / Formic Acid (46.7%) original form	Pads placed across the top of the frames over the brood nest.	61% - 98%	2 options: - 2 strips for 7 days or - 21 day treatment (1 strip for 14 days, replaced with 2nd strip for extra 7 days).	See details for Formic Pro.	See details for Formic Pro.	See details for Formic Pro.	See details for Formic Pro.	See details for Formic Pro.	7571 0-2
	Api-Bioxal / Oxalic Acid dehydrate 97%	Powder oxalic acid with 3 allowed methods : 1/ vaporized at the hive entrance with special vaporizer 2/ dribbled/ trickled over the seems of bees (O.A. mixed with 1:1 sugar syrup) 3/ sprayed on clustered bees in packages (oxalic acid is mixed with 1:1 sugar syrup).	82% - 99%	10 minutes or less.	No restrictions, best if between 37F - 100F with humidity less than 65%.	YES, supers can be left during treatment.	Doesn't penetrate brood cappings, so presence of capped brood lowers the efficacy.	Can be used with packages, swarms and colonies as long as they are broodless.	Very quick and effective treatment during naturally or planned broodless periods (winter, dearth, swarming, splits, requeening, queen removal/ isolation/caging, brood removal). Can be used as a "clean up" Varroa treatment following the application of a different acaricide where Varroa infestations continue to be problematic.	7329 1-2
	EZ-OX Tablets or Powder / Oxalic Acid dehydrate	Tablets (1g each) or Powder are used in methods similar to Api-Bioxal, but 2g/ brood chamber is allowed (see label).	82% - 99%	same as Api-Bioxal above	Same as Api-Bioxal above	Same as Api-Bioxal above	Same as Api-Bioxal above	Same as Api-Bioxal above	Same as Api-Bioxal above	1017 43-2
	VarroSan / Oxalic Acid dehydrate 18.42%	Extended release fiber strip hung over the brood frames, used when mite infestation is 1%- 2% . Use 1 strip per 2.5 frames of bees (FoB). No more than 4 strips per brood box.	96.8 %	42 - 56 days	No restrictions, best if more than 37F and less than 100F.	YES, supers can be left during treatment, but need to be separated from treatment by at least 1 box with no strips.	Doesn't penetrate brood cappings, but with extended treatment period it kills mites emerging from brood cells.	Can be used with packages & small colonies: 1 strip per 2.5 Frames of Bees (FoB).	Extended release method allows for killing generations of varroa mites, which can hide under the brood cappings. Treatment can be used with brood present.	9441 3-3
	Hop Guard 3® / Potassium Salt of Hop Beta Acids (16%)	Cardboard strips are hung between the brood frames. Add 1 strip per 5 frames of bees (FoB), add more strips depending of colony size up to 4 strips per large colony. No more than 2 strips per brood box is allowed.	70% - 85%	up to 28 days (apply every 7 days).	55F - 100F	YES, supers can be left during treatment.	Doesn't penetrate brood cappings, so presence of capped brood lowers the efficacy.	Colonies, newly installed packages and nucs, best if broodless.	When treating colonies during hot /humid weather- fully open hive entrance, remove inner covers (if present), open screened bottom boards (if present) and insert a rim or spacer under the lid. Leave strips in the hive for 14 days and no later than 30 days.	8362 3-2
Synthetic Chemical	Apivar® / Amitraz (3.33%), formamidine insecticide	Strips hung between brood frames so bees can walk on them on both sides. Add 1 strip per 5 frames of bees, add more depending on colony size up to 4 strips per large colony. No more than 2 strips / brood box is allowed (see label). The insecticide is distributed on bees feet & bodies and kills mites by impairing nerve functioning.	95%	42 to 56 days. 42 days is a standard, but can be extended by extra 14 days when brood nest moved away from the treatment. Reposition the strips.	None, best if used in early spring before honey flow or early fall after honey harvest.	NO, suppers can be added 2 weeks after completion of the treatment.	Brood can be present as the length of the treatment allows for killing mites from capped brood.	Strong Nucs and colonies of at least 5 frames of bees.	Varroa mite resistance to the treatment was reported. If used- need to be rotated with other treatments. Don't use more than 2 treatments per year. May cause adult bees mortality.	8724 3-1
	Apistan® CheckMite+®	Not recommended by CBA (CT Beekeeper Association) due to the known toxicity and environmental consequences (mites developed resistance and chemicals stay in wax).								

Follow the law - use label for details of required PPE, safety requirements and directions to use before treating your bees. Contact your State Apiary Inspection for help.