

Varroa Monitoring Method Comparison

Criteria	Soapy Water Wash	Alcohol Wash	Sugar Shake
Effectiveness	High (90-95%)	Very High (up to 99%)	Moderate (60-80%)
Kills Bees	Yes (1-2 min)	Yes (instant)	Sometimes (5-15%)
Kills Mites	Yes (within 1 min)	Yes (instant)	No
Safety for Beekeeper	Safe	Flammable/toxic	Very Safe
Environmental Safety	Biodegradable	Toxic if spilled	Very Safe
Cost	Low	Medium	Low
Ease of Use	Easy	Easy	Requires dry bees
Speed of Results	Fast (1-2 min)	Fast (1-2 min)	Medium (5-10 min)
Best Use Case	Routine monitoring, field use	High-accuracy monitoring	Low-lethality, educational use
Bee Sample Size	300 bees	300 bees	300 bees
Reusable	Yes	Yes	Yes

References

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- Berry, J. A., Owens, W. B., & Delaplane, K. S. (2013). Small-cell comb foundation does not control Varroa mites in colonies of honeybees of European origin. Apidologie, 44, 610-618.
- Dietemann, V., et al. (2013). Standard methods for varroa research. Journal of Apicultural Research, 52(1), 1-54.
- BeeAware (2024). Monitoring for Varroa. <https://beeaware.org.au/archive-pest/varroa-mite/monitoring-varroa-mite/>