

Viper Gecko (*Hemidactylus imbricatus*)

Difficulty: Low



Viper geckos are miniature, terrestrial lizards native to western Pakistan and India, where they can be found primarily in rocky steppe habitats. These geckos are primarily active at night, particularly around sunset, but they will also come out occasionally during the day. Their diet is insectivorous, which means that they require insects for food.

Viper geckos are “micro geckos,” which means that they only grow 3-4” long! Although this size means they’re not very handleable, they’re still quite interesting to watch and can be trained to accept food from human hands or tongs. With good care, viper geckos should be capable of living 10-15 years.

What You Need for a Bioactive Viper Gecko Terrarium

- Front-opening 12”L x 12”W x 12”H terrarium
- [60w Exo Terra Daytime Heat Lamp](#)
- [5.5” Arcadia Ceramic Reflector Clamp Lamp](#)
- Rheostat
- [12” Arcadia ShadeDweller Arboreal UVB kit](#)
- [6” Bio Dude Glow & Grow LED](#)
- [Zilla 24/7 Digital Timer Power Center](#)
- [Exo Terra 2qt Mister](#)
- [Bio Dude Digital Thermometer / Hygrometer](#), x2

- [Bio Dude 10 Gallon Terra Sahara Bioactive Substrate Kit](#)
- [Bio Dude Leopard Gecko Clean Up Crew Pack](#)
- [Bio Dude 10 Gallon Terra Sahara Plant Pack, Basic](#)
- [Natural manzanita branch](#)
- [Texas - Oklahoma - Mexico Flagstone/Slate Rock](#)
- [Bio Dude Rock Water Bowl, small](#)
- Exo Terra Worm Dish, medium
- [Repashy Calcium Plus vitamin and mineral supplement](#)

Terrarium Size

The minimum enclosure size recommended for housing a single viper gecko is **12”L x 12”W x 12”H**, or a 10 gallon aquarium. However, when it comes to choosing a terrarium for pet reptiles, keep in mind that larger is always better! This gives them enough room to hunt, exercise, and thermoregulate to satisfaction.

Unlike most pet reptiles, viper geckos generally get along when housed in groups. The key is to give them enough space to get away from each other as needed, and provide plenty of resources (heat, hides, food, water, etc.) to reduce competition. You can keep a group of males or a group of females, but if you want to keep a mixed group, there should only be one male. Up to three geckos can be comfortably kept in a 24”L x 18”W x 18”H terrarium.

Lighting

Technically speaking, pet viper geckos can survive without UVB lighting — instead relying on supplements for their vitamin D3 requirement. However, this is not best practice, as UVB provides benefits beyond just vitamin D3 synthesis, such as: preventing illness, improving nervous and digestive function, and improving mental health.

In other words, we strongly recommend installing appropriate UVB lighting as part of your gecko’s setup! The **12” T5 SO 2.4% Arcadia ShadeDweller Arboreal UVB kit** is likely to work the best for a viper gecko in a 12-18” tall enclosure with a mesh top. Because UVB lamp efficacy is affected by basking distance, a viper gecko’s basking area should be 8-12” directly below the lamp.

Your UVB bulb must be replaced every 12 months to maintain its output. Zoo Med and Reptile Systems lamps can also be used, but note that a different bulb and/or fixture will change the basking distance, so you will need a Solarmeter 6.5 to prevent potentially burning your pet. Resist the temptation to use other, cheaper brands — when it comes to UVB, *brand matters!*

Because this is a bioactive setup, you will also need a plant light to encourage healthy plant growth. We recommend using one or two **6” Bio Dude Glow & Grow LED lamps**, depending on the length of your terrarium. The terrarium should be evenly illuminated as a result.

Both lighting and heating should be on for 12 hours/day, or synced with your local sunrise and sunset times for seasonal cycling.

Heating

The temperatures within a viper gecko's terrarium should be as follows:

- **Basking area temperature:** 90-95°F
- **Cool zone temperature:** 75-85°F
- **Nighttime temperature:** 70-75°F

To create a basking area for your viper gecko, you will need a low-wattage white heat bulbs like the **60w Exo Terra Daytime Heat Lamp** and a heat lamp fixture like the **5.5" Arcadia Ceramic Reflector Clamp Lamp**. Place the lamps in a cluster on the extreme left or right of the setup. If the basking area gets too warm, you can plug the lamp into a lamp dimmer like the **Zoo Med ReptiTemp Rheostat** and reduce the heat output that way. If the basking area is too cool, you will need higher-wattage bulbs.

Use a digital probe thermometer like the **Bio Dude Digital Thermometer / Hygrometer** to track your temperature gradient, with one temperature probe on the basking spot and one on the cool side.

Humidity

Viper geckos don't need much moisture in their environment, but they still need access to a humid microclimate to be able to stay hydrated and shed cleanly. Shoot for an **average of <50% humidity**, although occasional fluctuations higher are fine. Keep track of your humidity levels with a digital hygrometer like the **Bio Dude Digital Thermometer / Hygrometer**, with the probe secured to a branch in the middle of the enclosure, preferably in a shaded area. Make sure to provide a moist cave or hiding place at all times.

To provide a source of dew-like drinking water and refresh your gecko's humid hide, use an **Exo Terra 2qt Mister** to give things a spritz every 2-3 days, depending on how humid your local climate is. Don't forget to keep your plants watered! As long as the enclosure is ventilating well, watering shouldn't cause problems for your gecko.

Substrate

To create a bioactive viper gecko enclosure that will be successful in the long-term, you can't just use any old substrate, add a few bugs and plants, and call it a day. A thick layer of bioactive-compatible substrate is essential!

Because this will be a semi-arid vivarium, you won't have to worry about a drainage layer. So you can skip right to the soil! You'll need a sandy soil-like mix that mimics steppe conditions, drains well, and nourishes your plants. If you want to make your own, you will need to start with a mixture of 50% plain topsoil, 40% sand, and 10% gravel. To create a 4" layer, you'll need at least 10 quarts of substrate. Mix that with leaf litter, moistened sphagnum moss, and one dose of **12qt Bio Shot** to inoculate your soil with beneficial microfauna.

Alternatively, you can let The Bio Dude do the work for you with **The Bio Dude's 10 Gallon Terra Sahara bioactive substrate kit!**

To make the substrate functional, make sure to add drought-tolerant CUC organisms like powder blue/orange isopods, giant canyon isopods, dwarf isopods, and temperate springtails. Superworms are also an option!

Decorating the Enclosure

Enclosure décor is more than just making your setup look good. It's also an important part of providing *environmental enrichment*, which enhances your pet's quality of life by providing opportunities to express natural behaviors. In fact, functionality should always be considered MORE important than how the setup looks!

Given that viper geckos are a terrestrial species, you will need enrichment items like cholla wood, caves, cork flats, rocks, ledges, and foliage to give them ample opportunities to explore and hide. Make sure to clutter it up! Although it seems counterintuitive, the more opportunities your pet has to hide, the more comfortable it will be out in the open.

Live plants in particular are critical to helping your mini-ecosystem function properly. Appropriate plants for a bioactive viper gecko terrarium include: aloe, gasteria, haworthia, iceplant, elephant feed, crassula, and agave. The nice thing about setting up a vivarium for viper geckos is that they're too small to damage your plants!

Feeding Your Viper Gecko

Viper geckos are insectivores, which means that they need to eat a varied diet of insects in order to get proper nutrition. Feed juveniles daily to every other day, and adults 2-3 days. Offer enough insects for the gecko to eat consecutively in a 5-minute period. Feeders should be no larger than the gecko's head.

The key to providing a healthy, balanced diet for any reptile is VARIETY! Here's a quick list of foods that are safe to feed to your viper gecko:

Best insects: crickets, dubia roaches, discoid roaches, hornworms, silkworms, mealworms, superworms, isopods

Don't forget to keep your CUC well fed as well! Pre-made formulas like Bio Dude BugGrub are convenient and reliable.

Supplements

Although feeder insects should be gutloaded with a specialized gutload formula and water crystals for 24-48 hours prior to feeding, they will also need to be "dusted" with an appropriate supplement powder just before. There are many options, but the **Arcadia Earthpro supplement system** is excellent. If that's too complicated for your taste, Repashy CalciumPlus is a reliable all-in-one. For best results, use as directed by the label.

Drinking Water

Viper geckos should have access to a small bowl of water at all times. The water should be kept clean at all times, with the dish scrubbed out with veterinary-grade disinfectant (not vinegar) weekly to discourage bacterial growth.

Care information courtesy of [ReptiFiles](#).

