

# How do I drain my drainage layer?

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## How Do I Drain the drainage layer in my bioactive?

Reptiles and amphibians that come from tropical biomes have higher humidity requirements such as [Frogs](#) and most [gecko](#) species, will need to be misted or sprayed more often to keep the humidity higher, thus putting excess water into the soil. With the proper bioactive substrate the water will go through the substrate into your needing a drainage layer in the enclosure. The drainage layer is essentially mimicking your ground water on planet earth while ensuring the substrate stays healthy in an enclosed high humidity environment.

Over saturation of your drainage layer can cause many issues, One of the quickest to happen is that it can have an odor. This smell comes from hydrogen sulfide which is made by anaerobic bacteria due to lack of airflow, creating stagnant water. This excess water will need to be drained periodically as part of regular maintenance when the water gets too high to prevent the stagnant water's bad bacteria from seeping into the soil, killing plants and the clean up crews necessary to keep the soil going for healthy bioactivity. Drainage layers are an essential part of a high humidity environment allowing the soil to drain effectively, letting the clean up crews properly aerate the soil for plant root growth and nutrient dispersion. You never want to drain this layer completely, but you don't want to have it over filled either. A good rule of thumb is that it should never go past the halfway point of the drainage layer.

<https://www.thebiodude.com/blogs/how-do-i-create-a-bioactive-vivarium/drainage-layers-and-bio-active-terrariums>

[The Bio Dudes drainage layers](#) have been created to be easily used as well as being a natural material, you can see the drainage layers water level through the side of your terrarium so it can be drained easily. To help you drain this, you can make an access point by pre-inserting an aquarium airline pipe or short cut PVC tube in one of the corners while you set the terrarium up so you can easily access the water. Even the [SuperGrow](#) layer can have a hole cut for the access opening. To drain the drainage layer you can use things such as a pipette, an aquarium pump, a turkey baster or the preinsterted aquarium air line pipe or PVC for access, creating a negative suction to get the water out. You can do this through the terrarium without an access point or preinsterted pipe, but it will take a bit more of your time to do. You can also utilize a bulkhead with a drain valve to activate whenever necessary. This will require you to drill your glass and silicone in the appropriate size bulkhead.

Using the aquarium airline pipe to create a mouth siphon is a common thing done in zoos and aquariums. Normally done using a bucket, clips and air line tubing, sticking one end of the tube in the water, and the other inside your mouth, sucking on the tube and as quickly as you can putting the end of the tube into a bucket to get the water before your mouth does (ew), clipping the tube to the bucket so you don't have to hold it while it drains. We have found an easier way to do this using almost the same method, Using clips, tubing and a bucket along with a turkey baster. Using the turkey baster to suction the end of the tube clipped to the inside the bucket, safely keeping the water out of your mouth. Plant roots that establish themselves in the drainage layer will also continually soak up nutrient rich water, which helps with positive bacteria development as well as larger, healthier plants! While you may not need to drain this often, it is a good idea to know what problems you can prevent for peace of mind.

-E. Grosenheider

The Dude Abides