



Dart Frog Emergency Kit #5: Amphibian Bloat (Including Tadpoles)

Includes:

- **5mL 3ppm Methylene Blue Solution**
- **5mL Amphibian Ringers Solution**
- **2 Pairs of Non-Sterile Vinyl Gloves**
- **1mL Syringe**

This kit is provided Free of Charge by Houston Frogs and is the same we use for treatment of bloat in amphibians, including tadpoles. Bloat is usually caused by a bacterial or viral infection but can also be symptomatic of organ failure. Bloated frogs will usually sit in water for long periods of time, are lethargic, and generally have no appetite. Bloated tadpoles will generally have “a bubble or bubbles” under their skin.

The included methylene blue was manufactured by Kordon LLC, was diluted to 3ppm using distilled water, and repackaged in our laboratory. An SDS for methylene blue is included in this kit. The included Amphibian Ringers Solution was prepared by Carolina Biological and is typically used to treat dehydration in amphibians as well as to increase appetite but can also aid in osmoregulation. The SDS is attached to this sheet.

The included products are repackaged in our laboratory at Houston Frogs LLC. If you choose to use any of the products in this kit, you agree to hold harmless Houston Frogs LLC, the owner, and all subsidiaries and affiliates for any negative reactions, damages, or other harm caused by this kit. Remember that it is best to consult a veterinarian before using any products on your animals. By using this product, you also agree that you have consulted a licensed veterinarian about the use of ringers solution and methylene blue on your animal(s). By providing this product for free, we are not engaging in the practice of veterinary medicine nor recommending it be used on your animals. Use at your own risk.

How we treat bloated frogs:

For frogs exhibiting bloat (puffiness, enlarged stomach or limbs that occur suddenly), we primarily use amphibian ringers solution and, if problems persists, use a 3ppm solution of methylene blue, which is a broad-spectrum and gentle synthetic antibiotic. We put approximately 2-3mL of ringers solution (or methylene blue solution) in a 16-32oz deli container, then put on a pair of vinyl gloves, rinse the gloves with distilled water, then gently capture the affected frog so it can be transferred to the prepared bath. We generally allow the frog to soak for approximately 30 minutes (up to a maximum of 8 hours), then return it to a treatment tub. It is helpful to put a vented lid on the container while the frog is soaking, so the frog does not jump out.

A treatment tub typically consists of a large, clean plastic tote with moistened (using distilled water) paper towels on the bottom. This tub will reduce the chance that the amphibian escapes during treatment and becomes further injured. It's very important to keep this treatment tub sanitary and to change the paper

towel daily, to ensure the paper towel is moist but not saturated with water, and to spray down the tub (without the frog in it) once a week with 70% isopropyl alcohol, wipe it down, then spray down with distilled water, then wipe dry, to sanitize it.

If the initial ringer solution soak does not work as desired, we will generally follow it with a 15-30 minute soak in 2-3mL of 3ppm methylene blue solution. If neither the ringer solution bath, nor the methylene blue bath reduce bloating, the frog may need aspiration to remove fluid buildup, which is best performed by a local exotics vet.

For tadpoles:

Tadpole bloat is easy to observe as a bubble under the skin, often causing the tadpole to become buoyant. Typically, bloat is caused by too high of ammonia levels in the water or bacterial infection. Either issue is generally caused by poor water quality i.e. not conducting semi-frequent water changes (once per week is what we have found to be best). The methylene blue solution is diluted to 3ppm and is easiest to add with a 1mL syringe. We draw up 0.5mL of 3ppm methylene blue solution for a 1 quart/32oz container or .25ml for a 16oz container and dose accordingly. It's best to measure by water volume, not just by the container size. We will conduct a water change about 3-5 days after dosing and if the tadpole is still bloated, another dose will be added into the water and the cycle continued until the bloat subsides. Bloat is often times fatal to tadpoles, but we have saved many in the past using this method.

For more information, visit us at www.HoustonFrogs.com