

LHRHa Liquid

LHRHa Liquid is Exclusively Distributed by Syndel for Fish Culture

- LHRHa Liquid is effective in advancing maturation (ovulation and spermiation)
- LHRHa Liquid contains a synthetic analogue of mammalian GnRH
- LHRHa Liquid is available as a safe, sterile injectable
- LHRHa Liquid has been tested in Channel catfish and numerous other fish species

Presentation

LHRHa Liquid is formulated to provide a sterile, liquid injectable in a multi-use container. LHRHa Liquid is available at a concentration of 80ug LHRHa per mL solution in 100ml/vials. (80 ug/ml X 100 ml = 8 mg/vial)

Recommended Practices for Injection

- *Cleanliness* - Ensure that all equipment is clean and, if possible, sterilized. Wear gloves.
- *Accurate Maturation Selection is critical to ensure only fully mature fish are injected*
- *Injection* - Inject using a sterile needle and syringe of the appropriate size fish being treated.
- Ensure that both males and females are injected at the same time to promote synchronization.
- *Recovery* - After the fish has recovered from sedation (5 to 10 minutes), return it to the breeding tank. More than one fish may be induced at the same time.

Recommended Dose & Administration Method

Typically, a total dose of 120ug/kg is sufficient to induce maturation. This can be given as a single injection, or as a priming dose (20ug/kg) and a resolving dose (100ug/kg), depending on your needs and optimization for your fish species and facility.

- LHRHa Liquid comes ready to use and requires no further dilution.
- Administer to fish as an intraperitoneal (IP) or intramuscular (IM) injection.
- Inject either as a single injection, or a priming and resolving dose.
- Can be injected immediately prior to the normal spawning season.
- Repeat injections may be given to fish treated long before normal spawning.

Sedation for Handling

Sedation and/or Anesthesia with TMS (*MS-222, Tricaine methanesulfonate*) or Aquacalm is recommended prior to injection. The sedation bath should be prepared as per product instructions. Make sure to mix thoroughly BEFORE adding the fish and ensure appropriate aeration. Always handle fish gently. Avoid contact between the anesthetic solution and eggs or milt.

Stability & Storage

When stored at refrigerated temperatures (~4°C) and out of direct sunlight, the shelf life of LHRHa Liquid exceeds 2 years. Freezing of the product should be avoided.

Safety Precautions

LHRHa Liquid contains a physiological agent used to stimulate ovulation or spermiation. Workers should avoid direct self-injection. Keep out of reach of children

General Remarks

- LHRHa Liquid is manufactured from GMP source products and under strict cGMP guidelines.
- Environmental conditions will play a significant role in the reproductive process and may affect fish's physiological response to LHRHa Liquid.

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Example: Catfish Injection Guidance Chart

Fish Size (Kg)	Injection# 1 (20ug/Kg)	Injection #2 (100ug/Kg)
1.00	0.25 ml	1.25 ml
1.25	0.30 ml	1.60 ml
1.50	0.35 ml	1.90 ml
1.75	0.45 ml	2.20 ml
2.00	0.50 ml	2.50 ml
2.25	0.55 ml	2.80 ml
2.50	0.65 ml	3.10 ml
2.75	0.70 ml	3.40 ml
3.00	0.75 ml	3.75 ml
3.25	0.80 ml	4.10 ml
3.50	0.85 ml	4.40 ml
3.75	0.95 ml	4.70 ml
4.00	1.00 ml	5.00 ml

Note: Please contact Syndel representatives to determine availability in your country.