

# Culture technique for Hagfish

Capture and maintenance of hagfish (*Myxine glutinosa*).

1. Collect hagfish with a hagfish cage using mackerel intestines as bate. Strong smelling bate is best for attracting the hagfish. Between Kristineberg and Lysekil in the mouth of the Gullmar fjord there are small, deep areas that go down to 60-70 m in depth. In these areas the bottom is softer so the hagfish can dig themselves down into the mud. One of these areas goes down to 60 m and the cage is positioned at 57-58 m on the coordinates N 58° 15',7; E 11°27',5.
2. The cage is recovered the next day, slowly opened and the fish poured carefully into a 50L thermos with deepwater from 30 m. The fish are transported in the thermos to the center.
3. The fish are kept in a square tank (80\*80\*80 cm). Put about 10 cm of mud from the sampling place on the bottom of the tank. Run deep water from 30 m depth through the tank and cover the tank with a net to prevent the fish escaping. Cover the tank with a black plastic cover over the tank to keep out light.
4. Pour the fish into the tank slowly so that they do not produce too much slime. They will burrow into the mud and will stay there until they are fed. During the breeding period they do not eat very much.
5. Feed the hagfish once a week with rinsed shrimps.

*Additional information:*

**Kinya G. Ota and A, Shigeru Kuratani (2006).** *The History of Scientific Endeavors towards understanding Hagfish Embryology. Zoological Science 23: 403-418.*

**Shigeru Kuratani and Kinya G. Ota (2008).** *Hagfish (Cyclostomata, Vertebrata): searching for the ancestral developmental plan of vertebrates. Bioassays 30:167-172.*

**Kinya G. Ota and Shigeru Kuratani (2008).** *Developmental Biology of Hagfishes, with a Report on Newly Obtained Embryos of the Japanese Inshore Hagfish, Eptatretus. Zoological Science 25: 999-1011.*

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Adult hagfish: *Hagfish collected in the wild.*

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Equipment: *Hagfish cages.*

Food: *Rinsed shrimps (*Pandalus borealis*).*

Water tank: *Tank, ca 1/2 cubic with mud. Black plastic and net (10 mm sized) for covering the tank.*

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