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## Anesthetizing Sea Cucumbers

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**Protocol status:** Working

**We use this protocol and it's working**

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## Abstract

This protocol is for anesthetizing sea cucumbers. After soaking the sea cucumber in the menthol/ethanol/saltwaer solution for 30-60 minutes the sea cucumber should be flacid and relatively unresponsive to poking. No sea cucumber has eviscerated during surgery after being anesthetized although they do contract and appear like they are trying. The anesthesia wears off quickly after being placed back in salt water.

This protocol is based on the method for anesthetizing *Apostichopus japonicus* as published in the citation below

### Citation

YUSUKE YAMANA, TATSUO HAMANO AND KEN-ICHI YAMAMOTO (2005)  
. Anesthetizer of the adult sea cucumber *Apostichopus japonicus*. NIPPON SUISAN GAKKAISHI 71(3):299-306.

[10.2331/suisan.71.299](https://doi.org/10.2331/suisan.71.299)


[LINK](#)

## Materials

### MATERIALS

 Ethanol

 Menthol

 Salt Water



- 1 Add .5 grams of menthol crystals to 100 ml of ethanol and stir/shake until dissolved 1m
- 2 Dilute to 10% menthol/ethanol solution by adding 900 ml of salt water 1m
- 3 In a separate container, add 400 ml diluted menthol/ethanol solution and 600 ml saltwater to create a 40% diluted solution 1m
- 4 Add sea cucumber to diluted solution and wait 30 minutes. After 30 minutes, gently poke and observe the reaction. If unresponsive, it is anesthetized. Otherwise, wait another 5-10 minutes and poke again. 30m

#### Expected result

Once anesthetized, the sea cucumber can be removed from the solution and will remain relatively unresponsive for 10-30 minutes.

#### Note

If feeding tentacles are relaxed and hanging out of the mouth, it is anesthetized.

## Citations

YUSUKE YAMANA, TATSUO HAMANO AND KEN-ICHI YAMAMOTO. Anesthetizer of the adult sea cucumber *Apostichopus japonicus*

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