

# Materials and packaging techniques for the shipment of *Ciona intestinalis*

*Specimens used for experiments were collected from natural populations.*

## **Collection and grading for quality**

1. This method for shipping uses 25-150 individuals, collected from natural populations the day before shipment.
2. On arrival in the lab prior to dispatch, animals should be carefully checked and dead dying animals removed.
3. Animals can be sized and graded by the criteria reported in the identification protocol at this stage (ASSEMBLE-JRA1- Protocol -04.00).
4. Animals should be placed in the laboratory circulation system preferably with the siphons facing downwards
5. Animal are 'stabilised' by holding at least a day in the laboratory circulation system before shipment

## **Shipment**

1. Healthy animals specimens should be placed in 2 litres of seawater (full salinity) within a plastic bag. Density should be not more that 10 specimens / 2litre (10 specimens / bag) (but could rise to 25 if necessary). 4 bags may be put into a polystyrene box (55 X 35 X 20 cm) meaning a total of (N= 40 specimens/box).
2. Bags were tied closed after oxygenation (100%O<sub>2</sub>)
3. These bags are placed in polystyrene boxes (55X35X20 cm).
4. The spaces between the bags are packed with ice (between 1 to 2 kg)  
*Melted ice appeared to be the most cost-effective cooling system.*  
*Melted ice allowed a successful transport duration of 48-72 h.*
5. When the animals arrive in the laboratory please refer to the recovery protocol for unpacking and handling (ASSEMBLE-JRA1- Protocol -05.00).

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Régis Lasbleiz, Laurent Leveque, Gaëtan Schires, Paola Cirino

Station Biologique de Roscoff, France  
Stazione Zoologica Anton Dohrn, Italy

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*Animals: Healthy adults collected at Roscoff.*

*Apparatus: Polystyrene transport containers (55x35x20), plastic bags, seawater, ice pack, dry ice.*

*Parameters: Key parameters for packaging conditions (T°, O<sub>2</sub>, seawater quality); density of *Ciona* (number of specimens/litre);  
Transport conditions (duration, impact of movements, impact of variable external temperature).*

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*Additional information:*

*After shipping, transport's seawater must be eliminated by an appropriate treatment before the outlet into environment.*

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Edited by **Francesca Paloa Cuscunà, Euan Brown**

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