

## **ISMASH - In Situ Mussel And Snail Homogenizer**

*Peter R Girguis, Jon G Sanders, Christopher DiPerna*

The ISMASH is composed of two units: a blender apparatus, which contains a frame housing two small hydraulic motors, two blender bodies, and the attached lids; and an RNA preservative solution, which is contained in a collapsible plastic container and connected to the blender via plastic tubing.

### **DIMENSIONS:**

Blender apparatus: ~360 x 150 x 350 (mm; L x W x H)

Preservative bags: ~170 x 170 x 170 each

### **OPERATION:**

- 1) remove magnetic lid from blender base and put aside
- 2) drop in organism to be preserved
- 3) reattach lid (magnets seal automatically)
- 4) compress preservative container with manipulator until dense solution is visible  
    escaping check valve on lid
- 5) engage blender motor

This entire process took between 10 and 15 minutes aboard JASON. Samples are contained in blender bodies and recovered aboard ship.

### **HYDRAULIC SPECIFICATIONS:**

*Minimum tested flow rate: 8 L/min @ ~50 bar (more is better)*

*Maximum specified flow rate: 18 L/min @ 138 bar*

*Connections: SAE 8 o-ring bore seal; equivalent to 12mm hydraulic line (we can provide adapters as necessary)*

Motors may be connected individually or in series, depending on available hydraulics ports.

