

Guide to Preserving Marine Mammal & Sea Turtle Samples

In each kit you will find 2 types of preservative: DMSO and Formalin. Alcohol is also a useful preservative, but has not been included in kit, but you can use rubbing alcohol, spirits (e.g. vodka, etc.). Finally, placing samples **USE GLOVES WHEN HANDLING THESE CHEMICALS**. Keep these chemicals away from children and discard of them properly.

CHEMICALS IN THE KITS

DMSO: Skin preserved in DMSO can be used for genetic studies and help scientists learn how animals from one region are related to animals from another (e.g. we have learned that bottlenose dolphins on Great and Little Bahama Banks are not closely related and form separate populations, but what about Crooked Island bank, or Mayaguana?). The skin can be collected in any condition. Even old pieces can be useful. The DMSO containers are the smallest plastic containers in the kits (about 1-2 inches long and skinny). Containers with DMSO are ready for samples to be put directly in the container. Label, then seal the container with the Parafilm by stretching it tightly around the lid. As a secondary precaution the container can be placed in the freezer. If you have no more DMSO, place the skin in a piece of foil, then in a Whirlpack bag (or ziplock) and freeze. [The DMSO provided is actually 20% Dimethyl sulfoxide (DMSO) diluted in bottled water and then supersaturated with regular table salt.]

FORMALIN: Tissue samples preserved in formalin can be used to determine if the animal has a disease or illness. Kits from 2008 have formalin in plastic containers (about 3 inches tall) with a green lid, but the 2009 kits have formalin in a powdered form. You do not have many formalin containers in your kit and you will have to choose which tissue to preserve. If you see some abnormality (the colour or texture is markedly different) in a particular organ, choose that tissue. Remember to take a section that includes both the normal looking *and* abnormal looking area. Take only a 1 inch by 1 inch sample and place in the labeled formalin container. After 24 hours the formalin has to be discarded and replaced with new formalin. After this change, seal the container with the Parafilm by stretching it tightly around the lid. **Formalin is a dangerous, hazardous chemical and must be used with extra caution.** When discarding formalin, be sure not to discard near a potable water supply. Any extra tissue left over can be placed in a Whirlpack bag (or ziplock) and placed in the freezer. [The already mixed formalin provided is actually 10% formaldehyde diluted in sea water.]

	DMSO (& FREEZE)	FORMALIN (1 inch x 1 inch cube)	FREEZE	ALCOHOL
SKIN	X		remainder of sample	
BLUBBER		X	remainder of sample	
MUSCLE		X	remainder of sample	
ORGANS (heart, lung, liver, kidney, reproductive organs)		X	remainder of sample	
TEETH			X	
EARBONES			X	
EYES			X	
PARASITES				X (or freeze)
STOMACH CONTENTS				X (or freeze)

TO PREPARE POWDERED FORMALIN (in 2009 kits):

Take a clean liter soda bottle, half fill it with seawater (from the beach, not the harbour unless clean), add the full 40 gram package, shake well, cap loosely and place in the sun to warm up. This will help the powder dissolve faster. After the majority of the powdered formalin has dissolved, add the remaining 500 mls so that the container is full. Then dispense to the smaller containers that the samples will be placed in.

Please remember to keep notes of all samples collected including the time of collection and label every sample container, every bag, with this minimal information:

Date

Location

Type of sample (e.g. right lung)

Animal ID (if more than one animal)

IF YOU COLLECT SAMPLES, PLEASE CALL BMMRO 1 242 366 4155 TO FIND OUT WHERE TO SEND THEM.