



Procedure 011:

Collection and sampling of ringed seal

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1. Aim of procedure

This procedure describes all the different steps in collection and sampling of polar bear for the Environmental Specimen Bank (ESB). This procedure describes every step of the sampling and handling of samples to ensure that the procedure can be used in a clear way. The procedure should cover all aspects of reproducibility, quality and registration of data for the sampling material.

2. Field sampling

2.1. Trapping methods and handling of the animals

The ringed seal samples are mainly collected during hunting, or if other scientific sampling campaigns are being carried out. The seals are shot in accordance with the local hunting legislation with regards to time of the year, hunting weapon and ammunition. The seals are slaughtered in the field and the samples collected there, put in aluminum foil and in a plastic bag that is labelled. Back in civilisation, the samples should be frozen at -20°C before they are being transported frozen to Tromsø. The samples are then sorted in Tromsø, teeth are being collected and sent for age determination. The seals are evaluated with regards to sexual maturation before the samples that will be used in the Environmental Specimen Bank are being stored until they are shipped frozen to the Environmental Specimen Bank.

2.2. Registration of field data

The following data should be registered in the field

Følgende data registreres i felt:

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- Time and place for hunting
- Length and weight (weight only by the hunters who has a scale). The diameter (circumference) is measured below the fore flippers.
- Blubber thickness (see 3.3)
- The hunters are provided with field sheets that should be filled out.

Liver:

After measuring the animal, the slaughtering begins and a liver sample (100-200 g) is cut out and wrapped in aluminum foil and put in a plastic bag. The sample should be frozen as soon as possible when returning from the field.

Kidney:

A kidney sample (100-200 g) is cut out and wrapped in aluminum foil and put in a plastic bag. The sample should be frozen as soon as possible when returning from the field.

Blubber:

A piece of blubber (ca 10x10cm) is cut from the skin and towards the muscles. It should be cut from a central place in the dorsal side, and within roughly 60% of the body length, counted from the head. The blubber thickness should be measured (this is used together with length and weight measurements for estimation of total blubber content). The piece of blubber should be wrapped in aluminum foil and put in a plastic bag. The sample should be frozen as soon as possible when returning from the field.

Muscle:

A muscle sample (100-200 g) is cut out and wrapped in aluminum foil and put in a plastic bag. The sample should be frozen as soon as possible when returning from the field.

Other:

Genitals (testes/uterus with ovaries) are also collected, labelled and frozen (when back from field). One lower jaw with teeth should be collected for age determination.

3. Transport of samples

3.1 Packing

The samples should be transported frozen and packed as specified above. The way of packing and the material should be chosen to minimise thawing of samples during transport by e.g. including freezing elements in the parcel. The parcel should be labeled with name and address of the sender and should be addressed to a contact person at Norwegian Polar Institute (NPI). The parcel should be labeled with information stating that it contains biological material that should be kept cold.

3.2 Transport from the field

The samples should be sent frozen by a shipping company from Longyearbyen to NPI in Tromsø and the transport time should be as short as possible. Before transport, a contact person at NPI should be informed



about the expected time of delivery to ensure that the samples are being received and handled responsibly. If a transport company is used, the parcel must be sent in a traceable manner.

4. Sampling in the lab

Not relevant

5. Registration of data, marking and freezing samples

Data from field data sheets and information regarding age and state of sexual maturation should be sent as an excel file to the Environmental Specimen Bank as soon as the data is available.

6. Transport to the Environmental Specimen Bank

The frozen samples should be packed in polystyrene-insulated boxes, which are sent as freezing goods or shipped to ESB with agreed means of transportation.

Prior to transportation, a contact person at the ESB must be informed of the delivery date to ensure that the shipment is received in due time. If post or shipping companies are used, the parcel must be sent in a traceable manner. After arrival, personnel at ESB will register the samples and store them frozen at -25 ° C in the freezer of the Environmental Specimen Bank.