Collection and processing of Day Grab samples for benthic analyses

Sample collection:

- Collect samples for faunal analysis within a radius of 200 m. Deployment and recovery rates should not exceed 1ms-1.
- After retrieval of the Day Grab, take care not to spill the sample once the grab is on board. Carefully open the flaps and allow the surface water to drain.
- Record the thickness of material at the centre of the grab to the nearest centimetre. Reject samples less than **7 cm** thick in mud and **5 cm** in hard packed sands (Figure 1a-d). Reject sample where 'washout' of surface seen.
- Note the surface colour and the colour change with depth (as a possible indicator of redox state). Also note any smell (hydrogen sulphide, oil residues). Note a description of the sediment, to include important observations such as concretions, surface features etc.
- Remove one sediment sub-sample from an undisturbed area using a 3 cm ∅ corer to maximum depth (Figure 2a). Transfer the sub-sample into a sealable, labelled (inside and outside) plastic bag and place into a labelled plastic box. Store samples frozen at – 20 °C. Wash the syringe thoroughly before collecting the next sample.
- Remove one meiofauna sub-sample from an undisturbed area using a 3 cm ∅ corer to a depth of 5 cm. Transfer the sub-sample into a labelled (inside and outside) 250 ml plastic pot. Store samples preserved in 5% fomalin. Wash the syringe thoroughly before collecting the next sample (Figure 2b,c).
- Release the remaining sediment in the grab into a plastic bin, placed beneath the chute of the grab table (Figure 2d) for macrofauna processing. Rinse the grab thoroughly to avoid loss of sample.

Collection and processing of Day Grab samples for organics and metals analyses

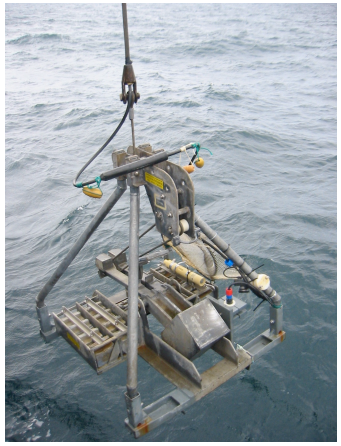

Fig 5a

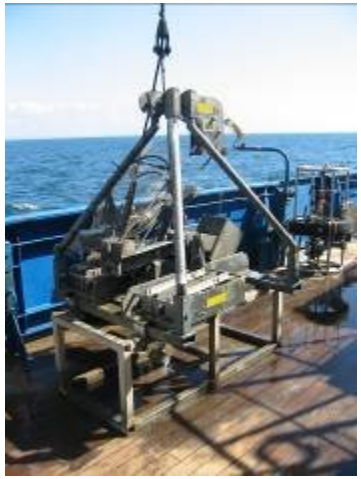

Fig 5b

Sample collection:

- Collect samples for organics analysis within a radius of 200 m. Deployment and recovery rates should not exceed 1ms-1.
- After retrieval of the Day Grab, take care not to spill the sample once the grab is on board. Carefully open the flaps and allow the surface water to drain.
- Sample sediment surface for organics analysis by means of a stainless steel metal spoon. Transfer sample into a labelled glass jar (Figure 5a, b).
- Sample remaining sediment surface for metal analysis by means of a stainless steel metal spoon. Transfer sample into a labelled bag and place into labelled plastic pot .
- Store all samples frozen at – 20 °C. Wash the syringes thoroughly before collecting the next sample.
- Release the remaining sediment in the grab into a plastic bin, placed beneath the chute of the grab table and discard.

Collection and processing of Hamon Grab samples for benthic analyses





Sample collection:

- Empty grab contents into 60 litre plastic box (reject samples < 5 litres)
- Describe sediment (e.g. ‘shelly muddy sand’)
- The sample is labelled (station number) and transfer to the processing area of the deck.
- Remove an ~ 500ml sediment sub-sample, using a plastic scoop. Sample should be made up of a number of aliquots from the full depth and surface area of the grab (less material may be taken sample is small/v course).
- The cobble fraction (>64mm) should not be included in the PSA subsample as this fraction will be analysed under a different methodology (for specific details consult the cobbles SOP if this methodology is required for the purpose of the study).
- Transfer sample into a labelled bag and place into labelled plastic pot .
- Store all samples frozen at – 20 °C.
- Pour off majority of water over the sieving table
- Photograph sample in box.
- Measure sample volume using a calibrated bucket (carry out over the sieving table so that any water within the sample is not lost)