6.2.1 PROTOCOLS FOR SAMPLING THE WATER COLUMN FROM BOATS & AIRCRAFT

Overview

Quality assurance and control measures (see appropriate Protocol) and safety issues (see appropriate Protocol) should be adhered to. The Protocol identifies how samplers should be fastened, where the sample should be collected from, and how to minimize the potential for sample contamination.

Sources

EMAN-N (2005), Environment Canada and B.C. WLAP (2005 c), Environment Canada (2001)

At a glance

sample from the upstream side

1 In moving water, always sample from the upstream side to prevent contamination of the sample from gas or oil. This will make sure that neither your body nor your actions can affect the water being sampled (e.g., by disturbing the bottom material of sediment and biota). Grab samples can be collected while the boat is anchored or drifting along mid-channel.

2 When using a weighted sampler in rivers or lakes, you can either anchor or keep the boat running depending on the circumstances. For example, if there is a danger of ice floes, do not anchor the boat. Keep the engine running to make sure that the boat can be moved out of danger.

grab sample

3 For samples at water depths less than 50 cm, the sample may be collected by hand (grab sample). Dip and fill the bottles directly from the water. Hold the bottle near its base and remove the cap (lid) without touching the inside of the cap. Plunge the bottle, neck downward, below the surface to a depth of about 20 cm. Immediately turn the bottle until the neck points slightly upwards with the mouth directed into the current (see Figure 2). Hold the bottle facing upstream at arm's length while it fills. If conditions permit, before filling the bottle with the sample water, rinse all bottles as directed by the laboratory.

4 Unless specified by the laboratory, fill the bottles to approximately 0.5cm from the top with the sample water. This allows the water to expand and/or also allows for the addition of preservatives. Preserve and complete field analyses as necessary. Cap each bottle immediately after filling, tape the lids closed on all the sample bottles so that they do not accidentally come off and carefully place in a chilled cooler or backpack.

5 For samples collected at depth, follow instructions in the section titled *Protocol for sampling the water column in lakes and streams at depth*.