



Guideline for collecting oil spill samples

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Materials

- For sampling oil spills RWS Laboratory stocks wide mouth glass bottles supplied with an inert ETFE (Teflon) lining in the lid. Each bottle contains a piece of oil-absorbing ETFE-net. Only open the bottles during sampling to avoid contamination.
- For personal safety use nitrile gloves. These disposable gloves provide the best personal protection against oil and oil products. Use new gloves for each sample to avoid contamination.
- RWS Laboratory uses a sample information form for forensic analysis requests. The current version of the "Sample information form forensic analysis requests" is available on the website of the Helpdesk Water:
<https://www.helpdeskwater.nl/onderwerpen/emissiebeheer/@176272/analyseboek-emissies/> .

Before sampling

- First, decide whether it is necessary to collect samples. Availability of other evidence can make oil spill identification expendable. Contact RWS Laboratory for advice.

Sampling

Note: When sampling oil, it is important to touch the ETFE-net as little as possible and only with clean nitrile gloves. It is best to first open the bottle without gloves. Then put on clean nitrile gloves and remove the ETFE-net from the bottle.

Water samples

- Wipe the water surface with the absorption net or dip the net several times in the water. Be careful, the ETFE-net does not float. It can be helpful to connect the net to a long stick or fishing rod especially when it is not possible to move close to the spill.
- Put the net in the bottle and close the lid firmly. A proper positioning of the Teflon insert is important to obtain a vapour tight connection of the lid. Avoid parts of the net from sticking between the bottle and the lid, to avoid leaking.
- In case of a large oil slick, always take multiple samples from distinctive locations. Include samples with different visual appearance; colour, thickness of layer and viscosity. Use a separate bottle for each sample.
- For tar balls, use the sample bottle to scoop these out of the water.
- It is also possible, in case of a thick oil layer and viscous oil, to sample oil directly from the water surface by pushing the bottle into the oil in such a way that the oil runs into it.

Samples from ships

- In case of a tapping point, oil can be tapped directly into the pot. Collect first a small amount of oil in a waste can to clean the tap.
- In other situations, preferably use the ETFE-net to absorb or wipe off oil. When sampling oil from the deck of a ship avoid collecting dirt together with the oil. Optional an additional sample



can be taken from a (nearby) location of the deck that is seemingly free from the fresh spilled oil. The additional sample can be used to check whether the oil is contaminated with dirt.

- Be aware of inhomogeneity. For example, when a bilge is inhomogeneous, take multiple samples in separate clean bottles, but do not combine or mix multiple samples in one bottle.
- In case of a large open bilge tank, always take samples at two distinctive locations.
- Do not assume all fuel tanks will contain the same fuel oil. Often this is not the case.

Sending samples to the laboratory

- Create a forensic case number: F yyyyymmddXY = year, month, day and 2 initials of case manager (e.g. F20210902SK) and inform/consult how the samples should be transported.
- Attach to every sample bottle a label with information, like: date, time, sample taker, location (name or lat/long coordinates) and additional peculiarities.
- Complete the Sample information form for forensic analysis requests. Provide a telephone number of the sample taker, for potential requests of additional information.
- Place the samples in the transport container and seal with numbered cable ties. Label the container with a sticker "Forensic oil samples" for proper response upon arrival at the laboratory.
- Store samples in a cool and dark place. In case of small amounts of volatile samples (gasoline or diesel), cooled transport is recommended.
- When samples are transferred to another person, register both the names of the deliverer and the recipient together with signatures on the backside of the sample information form.

Additional information

In case of calamities, red-handed discharges and assumed illegal discharges it is important to collect additional evidence, in addition to collecting samples. This can be photographs or information about the suspects, like name of a ship. The more evidence the stronger the case!

Extensive information is available on the internet: <https://www.bonnagreement.org>

- Instruction for sampling: **Counter-pollution Manual - Chapter 2.9 (OSINet)**.
- Estimation of amounts of spilled oil: **BAOAC photo atlas**. This contains many photographs of oil slicks and gives directions how to estimate the thickness and volume of an oil slick

Contact / Telephone numbers of the RWS-laboratory

Laboratory

Kees Kooistra 06-11876984
Sanne Keeman 06-29129483

Calamities outside office hours

Lab-staf 06-10929064

Consult about sample transport

Sample transport phone 088-7973793

Requests for transport containers, bottles with EFTE-nets

Erna Betten 06-11022565
Heleen Swier 06-50166177