Guideline for collecting oil spill samples

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Materials

- For sampling oil spills RWS Laboratory stocks wide mouth glass pots supplied with an inert Teflon (PTFE) lining in the lid. Each pot contains a piece of oil absorbing net (Teflon / ETFE). *Only open the pots during sampling to avoid contamination.*
- For personal safety use disposable nitrile gloves. 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: https://iplo.nl/thema/water/monitoring-water/monitoring-chemie/@176272/analyseboek-emissies/ .

Sampling

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

Ensure that all sources and contaminated locations are sampled. A distinction is made between liquid oil and solid oil products/tar balls and liquid oil from tanks. Pay close attention to the homogeneity of the oil.

Place the oil absorbing net with oil or the solid oil in the pot and close it tightly. The Teflon insert is important for properly closing the pot. Be careful that the oil absorbing net does not get stuck between the rim of the pot and the lid, as this will cause leakage of volatile components and possibly liquid oil.

Liquid / water-based oil

- Wipe the water surface with the absorption net or dip the net several times in the water. Be careful, the oil absorbing 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 approach close to the spill.
- Take at least two samples at the spill location. 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 pot and clean new nitrile gloves for each sample.
- Pay attention to homogeneity. For example, if the bilge is not homogeneous, do not mix, but take sub-samples with a clean pot for each sub-sample. With a large open bilge tank, always take a sample from at least two places.

Oil products from a tank

- In case of a tap or valve, oil can be tapped directly into the pot. First let some oil run into a waste container to pre-rinse the tap.

- Assume all fuel tanks will contain different fuel oil.

Animals or objects (quay, jetty, ship's hull, buoy, etc.)

- For animals, try to collect small pieces of fur or feathers in the pot. Alternatively, use the oil absorbing net.
- Use the oil absorbing net to absorb or wipe off oil. Try to take as little dirt from the animal or object as possible. Take an additional sample from a spot on the animal or object just next to the (fresh) pollution, so that it can be assessed whether the dirt from the animal or object has influenced the sample of the fresh pollution.

Solid substance

- Keep tar balls intact as much as possible and choose the largest one that fits in the pot.
- Use a clean scoop/spatula or, if necessary, a sample pot to scoop solid substance from the water or beach. An aluminium container (with holes) is also an option.

Sending samples to the laboratory

- Compose a forensic case number: F yyyymmddXY = year, month, day and 2 initials of case manager (e.g. F20210902SK) and consult how the samples should be transported.
- Attach to every sample pot a label with information, at least: date, time, sample taker and contact information, location (possably lat/long coordinates) and additional peculiarities.
- Complete the Sample information form for forensic analysis requests.
- 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 cool and dark. In case of small amounts of volatile samples (gasoline or diesel), cooled transport is strongly 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 video recordings, witness statements, ship administration, particulars of suspects, etc. 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).**
- Estimating oil spills, layer thickness and discharge volume: **BAOAC photo atlas**.

If samples are not taken in accordance with the procedures, the laboratory reserves the right to refuse processing the samples.

Contact / Telephone numbers of the RWS-laboratory

Laboratory

Kees Kooistra	06-11876984
	kees.kooistra@rws.nl
Sanne Keeman	06-29129483
	sanne.keeman@rws.nl

Calamities outside office hours

Lab-staff	06-10929064

Address to send or deliver samples

Rijkswaterstaat Laboratorium
t.a.v. Kees Kooistra / Sanne Keeman
Maerlant 13,
8224AC Lelystad

Consult sample transport

Sample transport phone	088-7973793

Requests for transport containers, pots, EFTE-nets

Erna Betten	06-11022565
Heleen Swier	06-50166177