

DOC-LABOR GmbH

DOC-Characterisation of Natural and Technical Waters
Humic Substances Analysis
Ultrapure Water Analysis / Ultrapure Chemicals Analysis
LC-OCD-OND Components



Sampling and Shipping (2026-05-25)

Raw waters, Pre-Treatment and Demineralized waters > 50 ppb TOC

The minimum sample volume is 40 ml. Glass or plastic (PP, PE, PET) flasks can be used, but closures should not be lined with rubber or polyurethane foam. If you are not sure whether the flasks are clean, you may apply the same soaking routine described below. The same precautions as described above are recommended for sampling. On-site available 250 ml or 500 ml PET bottles filled with mineral water are very convenient.

Ultrapure (UPW) and demineralized waters < 50 ppb TOC

- Use borosilicate glassware, e.g. Schott 1L flasks with GL45 Teflon-lined closures in red or white. Do **not** use blue PP caps.
- Soak flasks and closures in UPW or lab water for at least 3 days in the dark. Since desorption of potentially present organic contaminants decreases rapidly with time, this "3-day soak" provides sufficient confidence that the surfaces are organic-free. Keep full – or rinsed – flasks in the dark until the day of sampling. Flasks and closures will still be wet inside. For outside drying, you may use ambient air or a heating cabinet. The flasks remain wet inside, and we tolerate this – any drying process may contaminate the flask interior.
- For labeling flasks, do **not** use felt-tip pens. Label flasks with adhesive tape or labels containing all necessary information.
- On the day of sampling, the person collecting the sample **must not** wear perfumes, hair conditioners, creams, etc. The sampler **must not** speak, sneeze, or cough during sampling!
- On-site sampling: **Before** opening the flask, think about where to place the closure upside down! Do not touch the dispenser ring or glass thread. Fill the flask twice to about 30% of its volume with the sample, close, shake, and discard. Rinse, then start sampling – try to hold your breath! Leave some air space and close the flask.

Sample Preservation

Generally, organics are stable at ambient temperatures and do not alter during transport. Therefore, do **not** treat samples in any way. The only threat is microbial degradation, and this is the reason why samples are sometimes shipped in insulated boxes with cooling devices (cooling devices alone are useless). Technical waters, including waters from pre-treatment and town waters, usually have low bacterial activity, and organics remain more or less unaltered for the first few days.

Only for wastewaters prior to biodegradation we recommend pasteurization of closed flasks at 60–80 °C for at least 30 minutes and up to 2 hours. A hot water bath (e.g., a "tea kettle") with a temperature indicator can be used on-site.

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Packing and Shipping

All flasks and bottles **MUST** be taped and then wrapped with an adequate soft material to secure them against impact during transportation (50ml: 0,5cm, 100ml:1cm, 500ml:5cm)

Please use only one of these forwarders: FedEx, UPS or DHL. Samples should ideally reach our laboratory within 2–3 days after sampling. For longer transit times or warm-season shipments of heavily loaded samples, pasteurization prior to shipping is recommended.

Please provide us the tracking-ID by sending an email to: doc@doc-labor.com

Our address is the following:

Name:	DOC-Labor GmbH
Street:	Eisenbahnstraße 6
Zip-Code/City:	76229 Karlsruhe
Country:	Germany

For customs:

- Declare raw waters always as “Ordinary, natural, water for analysis of no commercial value” (Customs Tariff number 25010010). Otherwise it can cause problems with local food authorities.
- Ultrapure Water has to be declared as “Ultrapure water for analysis of no commercial value” (Customs tariff number: 28530010).
- The commercial value of shipment needs to be below 20 € or 20 USD, otherwise TAX may be imposed.

For any further questions or special sample types, don't hesitate to ask us.

Your DOC-Labor GmbH Team