

Taking and dispatching samples from heat transfer system

The regular testing of samples from the heat transfer system is an important prerequisite for ensuring the safe, reliable operation of a heat transfer system. However, reliable statements can only be made if the samples have been taken in accordance with these instructions.

1. Prerequisites for taking samples from heat transfer system

The system must be fitted with an appliance that makes it possible to take samples directly from the main product flow. If samples are to be taken from the system while hot, a method must be available to cool down the sample to a temperature well below 100 °C (below 80 °C if possible). Figure 1 shows an example of a method for taking samples.

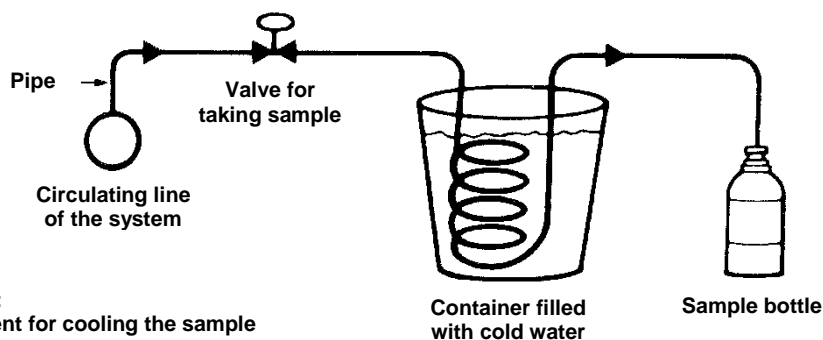


Figure 1:
Equipment for cooling the sample

2. Sample bottle and waste disposal container

The sample must be collected in an aluminium bottle (approx. 500 ml) provided by FRAGOL for this purpose, which is fitted with a self-sealing, self-locking cap. Any samples sent in unsuitable or leaking bottles will not be tested. A waste disposal container must be provided for any flushed fluid.

3. Safety measures

The use of protective glasses or a protective mask, heat-resistant, insulated gloves and protective clothing is urgently recommended when taking samples.

4. Taking samples

Samples should be taken from the main flow while the system is in operation. The sampling point must be sufficiently flushed to ensure that the sample is definitely representative of the main flow. Cooling the sample below 100 °C prevents the loss of moisture and low boilers through evaporation before the liquid enters the sample bottle. The sample can also be taken from the main flow if the facility is cold and not in operation. However, it is essential that the sample taken is truly representative of the entire batch.

5. Preparing the sample for dispatch

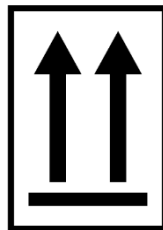
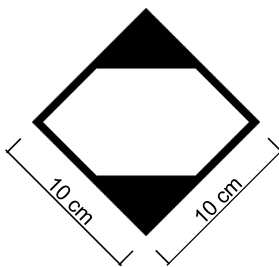
Close the bottle by screwing the self-locking cap tightly by hand. The cap can then no longer be removed without breaking the seal. Now label the sample bottle clearly to ensure that the sample can be properly allocated.

Then ensure that the bottle is tightly closed and dispatch it to FRAGOL, together with the completed sample information form.

If dispatch documents are required, describe the sample with the brand name and type of liquid and declare the parcel as a sample without commercial value.

6. Shipping of Dangerous Goods

Please review the Safety Data Sheet to determine if the heat transfer fluid is classified as a dangerous goods. Samples of dangerous goods are permitted to be transported through a parcel service only in small quantities (Limited Quantity [LQ]). Therefore, the outer packaging must be labelled as Limited Quantity according to the European Agreement concerning the International Carriage of *Dangerous Goods* by Road (ADR). The LQ-label as well as the alignment arrows need to be attached on opposite sides of the outer packaging.



The gross weight of the packet must not be above 30 kg. The net filling quantity of the dangerous goods depends on the respective UN-number. If there are further questions regarding the topic of dangerous goods, e.g. net filling quantity or shipment and air transportation, a dangerous goods safety advisor needs to be contacted.

7. Results of analysis

The sample report together with the results of the analysis as well as an assessment with respective recommendations will be sent by e-mail to the person named in the sample information form.