

CHEMICAL TANKERS KNOWLEDGEBASE

CARGO SAMPLING - GENERAL

Why bother?

Cargo samples provide evidence of the cargo condition during the various phases of loading, carriage and discharge of the cargo. Samples additionally provide a first level of defence against cargo claims.

Legality in a cargo claim?

Cargo samples should be taken by a Cargo Surveyor or by an independent, authorised person and properly sealed and labelled with the Surveyor's signature. Samples taken by vessels personnel may have limited value in a cargo claim, unless provenance can be demonstrated via a well-documented log and associated documentation.

Safety?

Sampling is a high risk operation, because liquid, including spray or droplets and vapours may be released, possibly under high pressure. Proper PPE, in accordance with the product involved, must be worn. Earthing/bonding and static dissipation requirements must be followed. The products SDS, Company SMS, ISGOTT and the Chemical Tanker Safety Guide should be consulted.

Requirements?

At the Load Port:

For all products, it is advisable to draw a manifold sample with the main manifold valve closed and, at a minimum, visually examine the same for colour, clarity, particulates etc, before allowing the product to enter the vessel

This ensures that, at least visually, an on-spec product is being loaded.

For most 'easy' chemicals such as Toluene, Xylenes etc, a minimum of manifold, 1st foot and final tank samples must be taken by the Surveyor with a set of each provided to the vessel. Should any one of these samples not be obtained, then the reason for this should be recorded in the Cargo Operations Agreement.

For 'high quality' chemicals such as Glycols, Methyl Alcohol etc, the sampling process becomes complicated and may include the following stages:

- 1/ Manifold: Loading should cease and the sample analysed to ensure that the terminal tank and equipment is satisfactory to the ship's rail.
- 2/ Tank valve: Taken with the tank valve closed and again analysed to ensure that the ship's lines are satisfactory prior to loading a '1st foot'. (this step is now often bypassed, however it is recommended)
- 3/ 1st Foot: Cease loading and await analysis. This ensures that the vessel's pump, loading line and tank bottom is satisfactory.
- 4/ After loading: Resume loading to completion and obtain a 'Final' sample and await analysis if possible prior to departure from the port.

Repeat this procedure for each tank loaded. Multiple tanks loaded with the same product should have each 'link' in their loading chain sampled and analysed, however often tank composites are prepared/analysed but individual tanks sample should be sampled/preserved.

Again, a full set of each sample obtained must be provided to the vessel (albeit often not offered).

At the Discharge Port:

- 1/ Tank sample(s)
- 2/ Manifold sample(s)

Sample records?

Each sample should be labelled with:

- 1/ Vessels name and voyage number
- 2/ Port
- 3/ Product (an acronym such as the products CHRIS Code is acceptable)
- 4/ Sample origin/type (Manifold, line, Tank, 1st foot, final (zone, spot or running))
- 5/ Sampling device used (Identification)
- 6/ Date and time
- 7/ Signature (Preferably witnessed and signed by both Ship and Surveyor)

A Sample Log should be accurately and comprehensively maintained so that the provenance of every sample-can be traced.

Sample retention?

Samples should be retained for a minimum of three months (or per the Owner's procedural requirements if longer), unless there is a cargo claim, in which case those samples should be isolated and kept securely until instructed otherwise by Owners.

Storage?

Samples should never be brought into the accommodation. Samples should be stored in a dedicated suitable locker fitted with storage units, normally cell-divided, constructed of suitable resistant materials. Samples of incompatible products should be stored apart.

Disposal?

Samples should be disposed of in accordance with Marpol requirements and recorded accordingly. Receipts should be obtained for samples disposed of ashore.

Release to a Third Party?

Samples should only be released to a Third Party under specific instructions by Owners, and a receipt obtained. This especially applies to samples involved in a cargo claim.