

SAMPLING & SHIPMENT PROCEDURE

This document defines the precautions that must be taken by the customers in term of quality and safety for the preparation and shipment of samples to be sure that they will be tested without delay upon receipt of the NQAC.

1. Instructions for sampling

The sampling is under the responsibility of the customers, because it is performed by them. The customers need to ensure that the sampling is representative of batches. If the sample seems inhomogeneous, more sample material must be sent. Entire samples will be divided into subsamples after their registration and dispatched to different parts of the NQAC.

If the sample is for chemical or microbiological analysis, it must be sent in separate containers.

For microbiology, where possible, unopened samples must be sent for analysis. If the product is bulky or in a container too large for submission to the laboratory, a portion must be transferred aseptically to a sterile sample container.

For chemistry, special care must be taken during sampling and preparation operations to avoid sample contaminations (dust, dirty tools, metal abrasion...). The packaging used to contain the sample must be free of contaminants and must not interfere with the analysis requested (e.g. no tape or markers used on the packaging material for flavor samples; use non transparent / amber packaging material for the analysis of light sensitive parameters as vitamin).

In case of sampling for mineral oil analysis the samples need to be prepared according to advices below:

Kind of sample	Amount/size needed	Suitable packaging for shipment
Food e.g. solid, liquid, powder	Min. 50g	- Glass jar/ PET cup with plastic lid and aluminium foil under the lid <i>Please note: Make sure that the lids are tightly closed and avoid using adhesive tape for closing</i> - Aluminium foil or polyamide bag
Packaged food	Min. 50g	Aluminium foil
Packaging material e.g. paper, cardboard, plastic foil, jute bag, big bag	Min. 50g Minimum size for migration test: 8.3 inch x 11.7 inch 210 mm x 297 mm (5 sheets)	Aluminium foil

Note: Plastic materials, jute, cardboard/paper are not suitable as packaging material.

In case of sampling for PAH analysis plastic containers shall be avoided if possible as they could alter the PAH content of the sample. Inert, PAH-free glass containers, adequately protecting the sample from light, shall be used wherever possible. Where this is practically impossible, at least direct contact of the sample with plastics shall be avoided, e.g. in case of solid samples by wrapping the sample in aluminium foil before placing it in the sampling container.

To know which precautions must be taken in function of the analysis requested, the customer must refer to the instructions on the intranet site of the NQAC.

All customers need also to ensure that a sufficient amount of samples has been sent in order to perform the analysis. The amount required for each analysis can be found also on the intranet site of the NQAC.

It is necessary to dispatch the sample as soon as possible after sampling to the NQAC to avoid its alteration. If the sample needs to be stored on site before expedition, the customer must ensure that the storage conditions of the sample will not compromise its quality (e.g. dehydrated samples must be stored under conditions that prevent moisture absorption).

2. Primary packaging of samples

Samples must be packed in such a manner that the transportation will not have an impact on the physical, chemical or microbiological nature of the sample.

It must be protected against contamination from outside, sources such as surrounding air, sample container, sampling devices and improper handling. It should be packed in such a way that breakage or spillage is avoided.

The customers need to ensure that the sample is sealed to avoid the risk of cross-contamination.

If the sample is for chemical or microbiological analysis, it must be sent in separate containers.

Samples of raw materials or semi-finished products must be preferably sent in plastic (polyethylene) jars with screw caps rather than in plastic bags difficult to handle and increasing the risks for cross-contaminations.

Samples of finished products must preferably be sent in their final package. If the net content of the packed unit is lower than the quantity necessary for analysis, the number of samples so as to obtain the required minimum quantity of product must be increased. Finished product must be sent unopened.

The microbiological samples must be packed in a way that will avoid any contaminations of the product and even the package with micro-organisms, or that might modify the number of micro-organisms present in the sample. For that purpose, microbiological samples must be sent in closed plastic vials with screw caps, grouped in plastic bags subunits before to be put in the cardboard package.

The environmental samples should be placed in a plastic bag and must be separate from the other samples to avoid any cross-contamination.

The chemical and / or chemical sample must be packed according to the risk identified in the Master Safety Data Sheet of the component (minimum in a double pack and watertight).

Samples of fats and oils should be over packed with a plastic bag tightly closed and identified on both jar and bag.

Note: If plastic bags are the only way to send samples, metal clips must be avoided as they can break the packaging resulting in sample spreading.

3. Sample labelling

The customers need to ensure that the sample is properly labeled in an unambiguously way to prevent any confusion. The sample information must be recorded either in SAP-LIMS or by using the request form of the NQAC (template on the NQAC intranet site).

Samples must be labeled adequately to ensure that the link between the request form and the sample is clear.

The labeling of chemical and / or chemical sample must be done according to the data written in the Material Safety Data Sheet in the section 14 (Transport information) of this material where you can find the identification number (UN number), the shipping name, the hazard class and if there is any additional subsidiary risks.

Example for glacial acetic acid: UN 2789; shipping name: acetic acid, glacial; Hazard class: 8 (corrosive) and Subsidiary risk: 3 (flammable).

The bottle containing this material must be labeled with the name of the material and the hazard pictogram(s).

4. Secondary packaging of samples

The customers need to pack the sample in a secondary packaging to avoid its damage during the shipment. The integrity of this parcel must be ensured to protect the sample against any degradation.

The samples containing chemicals and / or micro-organisms must be double packed to avoid any spillages.

The samples packed in glass or hard plastic containers must be blocked in the cardboard to prevent them for clash / collision.

If heavy samples are put in a cardboard, they must be distributed inside the cardboard to prevent the weight to be on the same side and therefore it will be easy to handle. The underside of this cardboard must be reinforced by adding some adhesive trips, this will reduce the probability of opening when handling.

To protect, the NQAC staff at the reception of the samples, it is important that the staff is aware of the potential or proven risk(s) inside the cardboard before opening it. It is why it is requested that the customers highlight the risks on the cardboard.

3 types of risks have been identified:

- Chemical (C) risk : due to the samples by themselves (if the sample is a chemical or on chemical base)
- Microbiological (M) risk: if the sample is contaminated or potentially contaminated by pathogens.
- Physical risk: if the sample is packed in glass container.

The type of risk is highlighted on the cardboard with either one letter: "C" or "M" based on the identified risk or with the word "FRAGILE" if it contains glass flasks.

It means that if the customers send a glass flask containing an aroma on alcohol base, the cardboard will be identified with the mention "FRAGILE" and the letter "C", and if environmental samples containing potentially *Salmonella* are sent in a plastic jar, the cardboard will be identified with the letter "M" only.

Only risky package must be identified.

If in a package there is only chocolate products wrapped in film or cereals in cardboard there will be no need to identify the cardboard with a letter, because there is no risk.

If the customer has a doubt on the type of risks (unexpected samples), the NQAC must be contacted to get some guidances.

5. Documentation

Samples have to be accompanied by the corresponding analysis request form (which can be found on the intranet site of the NQAC), in which can be included, if relevant, the necessary ICOforms information (company name, code, contact person).

Only information found on the request sheet will be contained in the report.

In case of shipment of chemical and / or chemical sample, the Material Safety data Sheet of this material must be sent by e-mail to the NQAC.

Hard copy of the analysis request form & of the MSDS if required must be placed in the parcel along with the samples.

All samples must be sent to the NQAC at the address which can be found on their intranet site.

6. Transportation

The customers need to ensure that the transportation mean is well-adapted to the turnaround time needed for the sample.

They need also to ensure that sample integrity will not be compromised during the transportation.

The method of shipment of samples to the NQAC shall ensure that they kept under conditions which will minimize any alteration (e.g. Microbiological samples must be securely closed so inadvertent contamination does not occur), and protect the sample against any degradation.

The samples must be sent as soon as possible to the NQAC and marked on the sample if chilling is required.

Samples that do not have to be frozen or chilled can be packed in packaging material which avoids damages during shipment.

The requester will also have to ensure that the temperature during the transportation of the sample complies with the requirements for the storage of each product type. In case there are no specific norms, the following temperatures for transportation are recommended:

- Stable products : ambient temperature or room temperature
- Fresh and refrigerated samples : between 0 and +4°C (refrigerated parcel transportation and storage or cold accumulation for a short sending = ice pack or other)
- Frozen and deep-frozen samples : below -15°C, preferable below -18°C
- Other unstable products at room temperature : between 0 and +4°C

Loose ice must not be used as this may cause contamination if the container breaks or leaks. Ice block must be preferably used.

Edible ices and chilled products must be kept in the freezer until they are dispatched to NQAC. The samples may be transported in rigid insulated containers with appropriate refrigerants (e.g. dry-ice or gel packs). Samples must remain frozen until arrival at NQAC.

For frozen and deep-frozen product, use carbon dioxide solid, dry ice. If it's not possible, the samples must be sent with ice pack and make sure that the transport will not last more than 24h.

Dehydrated samples may be transported and stored under ambient conditions (that prevent moisture absorption), it is necessary to pack them into suitable strong cartons to provide sufficient protection during transport.

For the shipment of chemicals and / or chemical samples, the local regulation must be checked for the transportation of this material but also the regulation of the country where is located the NQAC (e.g. for Europe: ADR / RID for land transport; IATA for air transport and IMDG for sea transport): for the quantity which can be send, for the labeling of the cardboard and for the transportation conditions.

7. Reception

At the reception, the NQAC staff will check:

- the integrity of the parcel (e.g. damaged parcel or water on surface or absorbed by the parcel would favor contaminations and increase the risks of cross contaminations),
- the conditions of the samples and more particularly their temperature (if necessary)
- the correlation between the sample and the analysis request form.

Samples received in good conditions are registered.

If samples requiring clarification, they are put on hold until clarification has been obtained from the customer. TAT timing will not begin until information has been clarified.

If the sample integrity is in doubt (damaged package, incorrect temperature or receipt, insufficient amount of sample, or samples too old for testing), the customer will be notified and in this case, it will be decided with him if a sample is suitable to be analyzed or not.

If the analysis can be performed, abnormalities in the conditions of the sample will be indicated on the analysis report form. If the analysis cannot be done, the customer will be asked to send a new sample.

Note: In case of unusual / unexpected sample and / or any special request, the customer must always contact the NQAC to inform them of the potential risk before sending the sample.