



A water sample is taken and analysed to provide information about the sample state at the time the sample was taken.



Standard (UNE-EN 25667-2:1993):

- **Geographic location of the sampling place**
- **Detailed information about sampling point**
- **Sampling date**
- **Sampling method**
- **Sampling duration**
- **Name of operator performing the sampling**
- **Meteorological conditions**
- **Nature of the preliminary treatment**
- **Preservation or stabilization agents used**
- **Field data.**



Quality by which properties measured in a sample can be extrapolated to the total hydrosystem from which it proceeds.

- **INSTANTANEOUS, PUNCTUAL O FORTUITOUS** : a discrete sample randomly taken in a point at a given time of the system
- **COMPOSITE SAMPLE**: is formed by a set of two or more subsamples, obtained at several time or space intervals
 - **constant sample**: that composite sample in which the aliquot volume is kept constant along the sampling.
 - **proportional sample**: that composite sample in which the aliquot volume is proportional to the flow at the time or location of the sampling.



Frequency or time elapsed between two samplings within the same sampling program.

- **LOCALIZED SAMPLE :** instantaneous or composite sample taken in a given moment
- **PERIODIC SAMPLE:** discontinuous sample taken at regular time intervals
- **CONTINUOUS SAMPLE:** obtained from a flow extracted in a continuous way from a system



PRESERVATION CONDITIONS OF SAMPLES OF THE MOST COMMON CONTROL PARAMETERS

Determination	Type of container	Cautions	Storage	Legislation
Oil and grease	V (washed with solvents)	2-5° C	24 h	UNE 717037:1983 UNE 77038:1983
Color	P or V (preferably)	2-5° C, darkness	24 h	UNE-EN ISO 7887:1995
Conductivity	P	2-5° C	24 h	UNE-EN 27888:1994
BOD	P or V (preferably)	2-5° C, darkness	24 h	UNE 77003:1989
COD	P or V (preferably)	H ₂ SO ₄ pH<2, darkness, 2-5° C	5 days	UNE 77004:1989
Hardness	P or V	----- pH<2	24 h 1 month	UNE 77040:1983
Metals	P or VB	Filter, HNO ₃ (pH <2)	1 month	UNE 77056:1983
Nitrates	P or V	pH<2, 2-5° C	24 h	UNE 77027:1982 UNE-EN ISO 13395:1997
DO	-	in situ	-	UNE-EN 25813:1994 UNE-EN 25814:1994
pH	-	"in situ" analysis	-	UNE 77035:19883
SS	P or V	"in situ" analysis preferably	24 h	UNE 77031:1982
Temperature	-	"in situ" analysis	-	A.A.W. 2550:1988
Faecal coliform MF	P or VB	pH<7 Na thiosulfate darkness, 2-5° C	24 h	UNE 77.063:1990
Faecal streptococos MF	P or VB	pH<7 Na thiosulfate darkness, 2-5° C	24 h	UNE 77.076:1991/2
Suphite-reductor coliform MF	P or VB	pH<7 Na thiosulfate darkness, 2-5° C	24 h	UNE-EN 26461:1995/2
Total bacteria	P or VB	pH<7 Na thiosulfate darkness, 2-5° C	24 h	R.D. 1138/1990

MF=membrane filtration; P= plastic; V= glass; VB=borosilicate glass



- Preliminary studies
- Definition of the quality parameters to be determined
- Sampling frequency and sample volume
- Selection of the sampling points and the technique to be used
- Selection of the sample type as a function of the representativity
- Selection of the sample type as a function of the frequency
- Selection of the preparation, transport and storage system
- Selection of the analytical techniques to use
 - Concentration levels
 - Detection limits
 - Interferences
 - Quality of results
 - Reliability guaranty
 - Number of analysis to be performed
 - Maximum time for the analysis
 - Price of the analysis
 - Available instrumentation
- Previous treatments