

**SAM-THE-020**

## Sample Preparation Part II. Lyophilisation, hydrolysis

---

### • Context

In the context of residues and contaminants analysis, many different kinds of matrices are concerned, from biological materials (blood, urine, faeces, tissues, ...) to raw (grass, soil, ...) or processed materials (food or feed). All these materials share the same complexity facing their analysis as to the presence of some chemicals at trace level.

The first step of any analytical method is aimed at turning the matrix into a sample ready to be extracted and exhibiting increased storage capabilities.

### • General objective(s)

The objective of this lecture is to focus on this very first step occurring in any analytical protocol and to demonstrate its importance with regard to the quality of the final analytical results. Two main sample preparation protocols will be fully described and illustrated: freeze-drying and phase-II metabolites hydrolysis.

### • Main items

Freeze-drying / Hydrolysis

### • Pedagogical objectives

- ✓ To show the key role of sample preparation
- ✓ To cite basic principles and applications of freeze-drying
- ✓ To cite basic principles and applications of phase II metabolites hydrolysis

### • Pedagogical tools

- ✓ Slide show

### • Duration

40 minutes

### • Pre-requisite

- ✓ Knowledge of the chemistry of residues and contaminants of interest (REG-THE-010)
- ✓ Knowledge of a global strategy to apply when facing a target compound to extract and purify from a particular matrix (SAM-THE-010)