

# Preparing XRD measurements

## Sample preparations

NB: These films are just examples on how it is possible to prepare the samples, and not necessarily the best method for your sample!

Short instruction videos for how to use different sample holders

- Using the standard sample holders: [Normal sample holders](#)
- Using the Si cavity holders: [Preparation cavity holders](#)
- Using the flat Si holders: [Preparation Si holders](#)
  - Method nr 1, [suspension in ethanol](#) (most common)
  - Method nr 2, [glass rod](#)
- Using the Back loaders: [Preparation Back loader holders](#)
- Using Kapton tape: [Preparation Kapton holders](#)
  - Used for materials and chemicals with special risks such as carcinogenic and mutagenic chemicals, and nanomaterials. For more information, read [Safe handling of chemicals in the XRD-lab](#)
- Using the deep sample holders and clay: [Deep sample holders](#)
  - Used for solid samples

## Measurement parameters guide

- Which angles to scan (coming!)
- Which step size to use (coming!)
- How long time to measure (coming!)
- Which divergence slits to use:
  - Opening degree: (coming!)
  - Fixed vs. variable slit:
    - Do NOT use variable slit for cobalt (due to fluorescence)!
    - Video showing quick scan of a fluorescent screen, first using fixed slit, then variable slit (V6). [Fixed vs variable \(6 mm\) divergence slit](#)

## General for the lab

Washing tips

- Normal sample holders (with cavity for powder)
- Deep sample holders: [Deep holders](#)
- Flat Si-wafer holders
- Glass slides: [glass slides](#)

## Analysis and software

EVA

- Getting started with EVA (coming!)

Topas

- Example: Pawley fit of TiO<sub>2</sub> (anatase and rutile) from Topas Workshop Hands-on tutorial no. 2: [Topas Hands-on 2](#)