

How It's Made

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Modelling experiments in CRMsci

- **S2 Sample Taking**

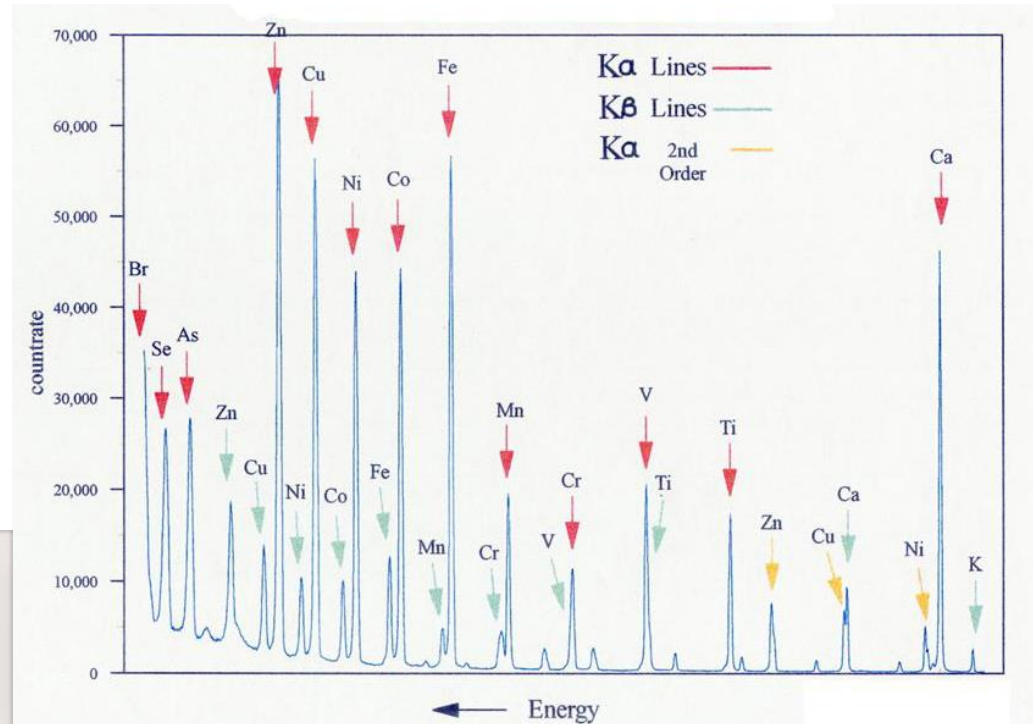
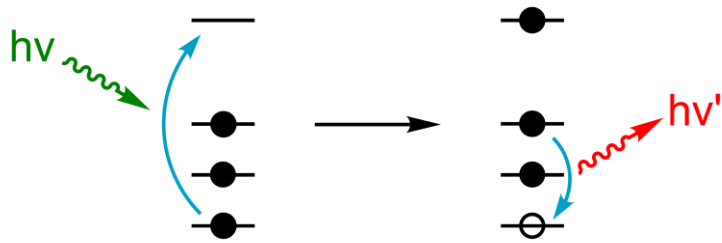
This class comprises the activity that results in taking an amount of matter as sample for further analysis from a material substantial such as a body of water, a geological formation or an archaeological object. [...]The sample is typically **removed from a physical feature** which is used as a frame of reference, the place of sampling. [...]

- **S4 Observation**

This class comprises the activity of gaining scientific knowledge about particular states of physical reality gained by empirical evidence, experiments and by measurements. [...]

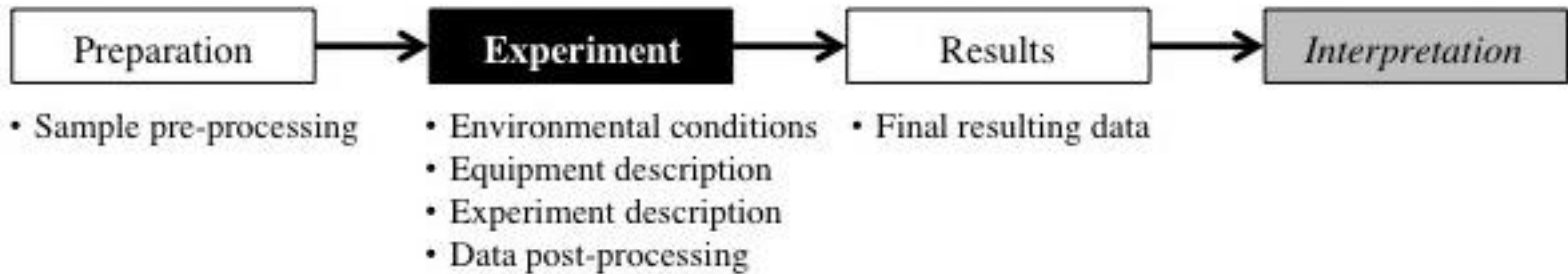
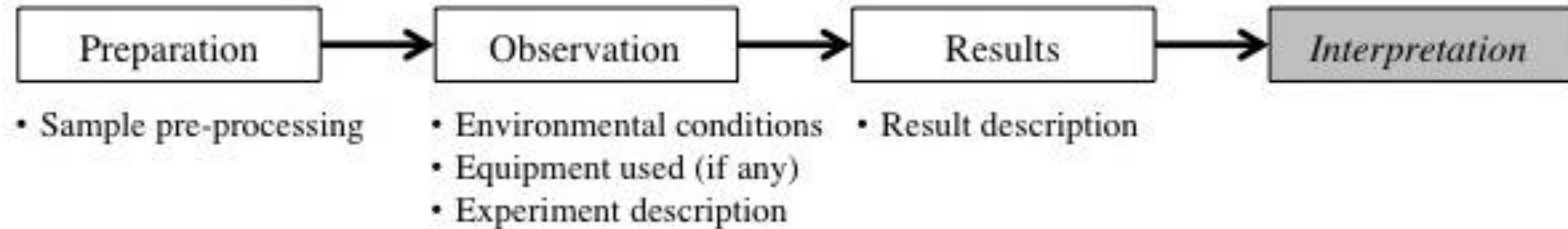
The digital component should be further detailed

Scientific experiments: XRF

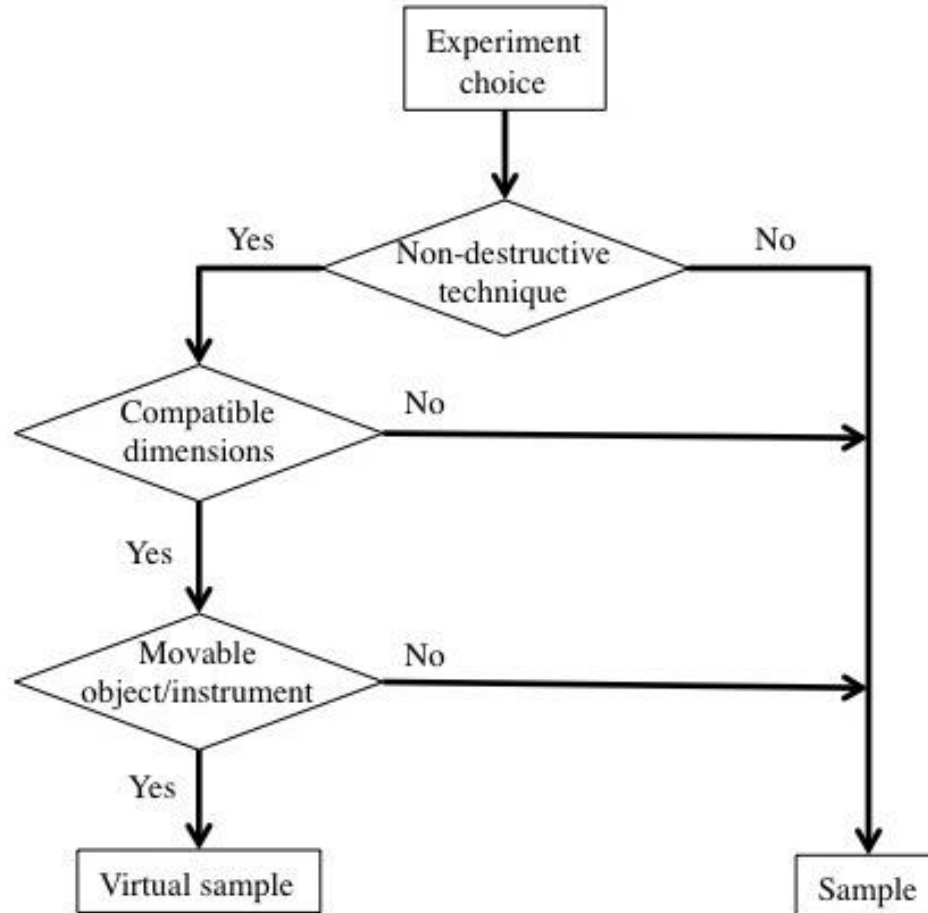


An XRF wavelength dispersion spectrum, obtained processing fluorescence data

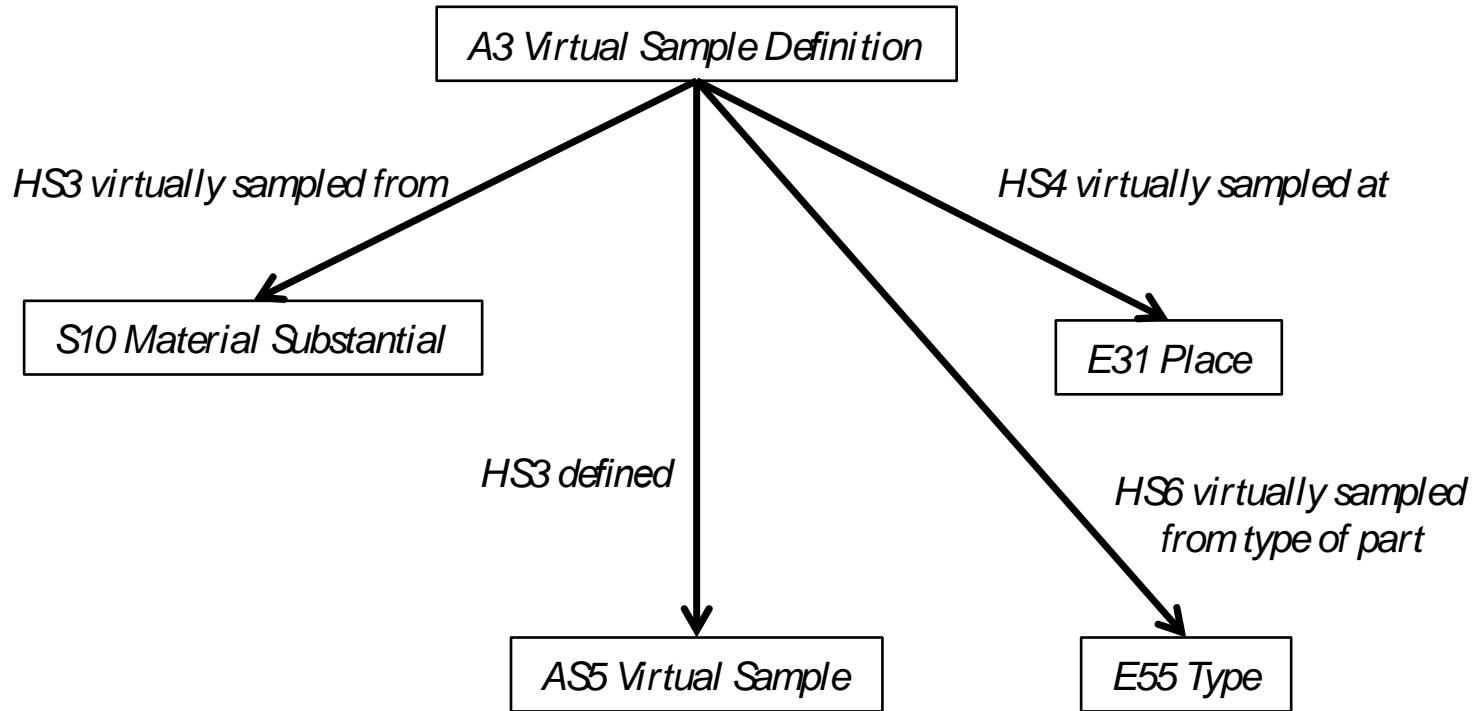
The experiment pipeline

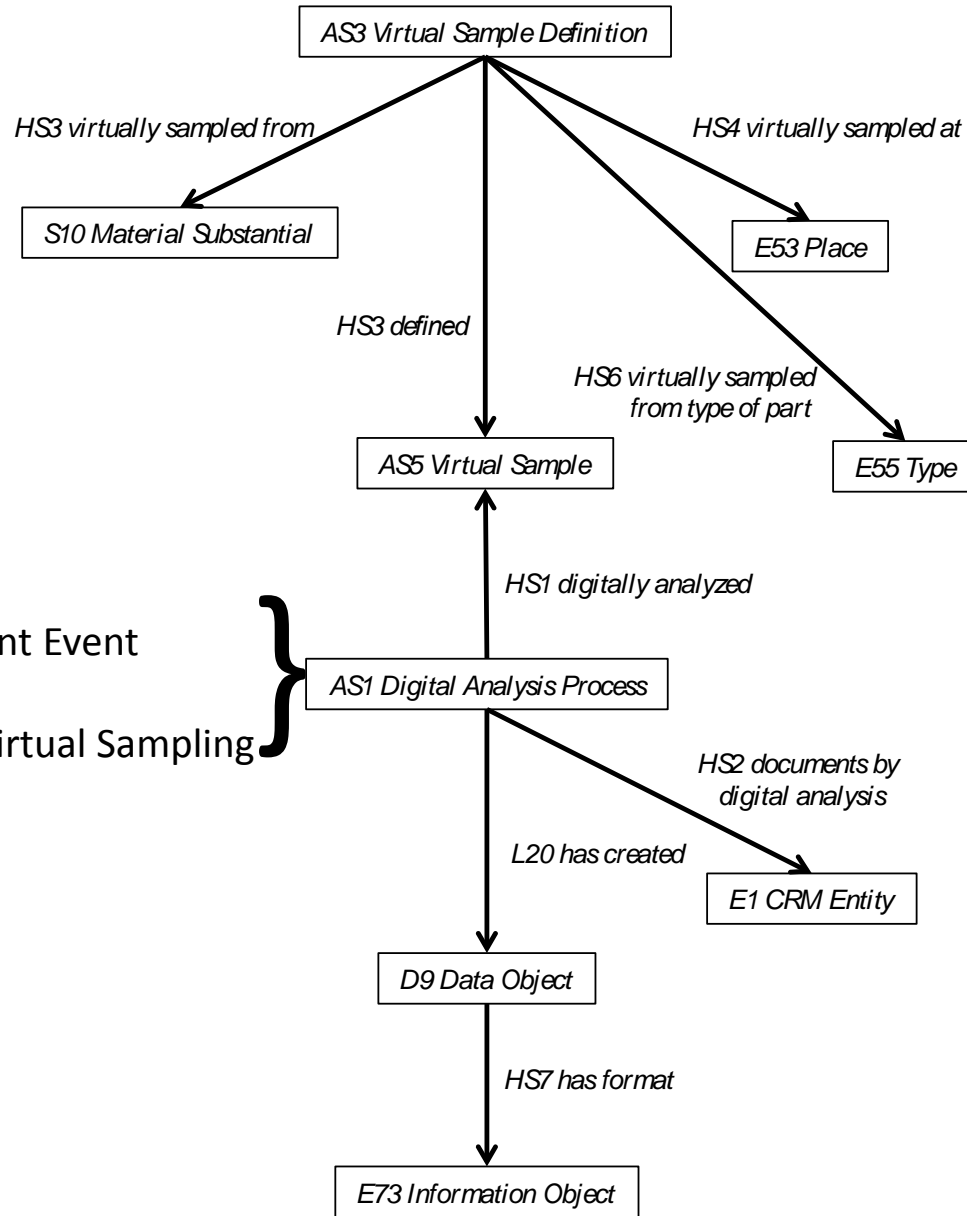


Actual vs virtual sampling



Virtual sampling





D11 Digital Measurement Event

S4 Observation

AS4 Measurement by Virtual Sampling



So what?

- Documenting the data processing validates the results
- It enables comparisons between different experiments
- It enables data re-use e.g. for virtual reference collections
- It can be extended to related disciplines (e.g. conservation)