

1. Measurement

All spectra from the sampled soil in the study area, recorded using standardized procedures and guidelines

2. Modelling

Check for spectral outliers

E.g. Kennard-Stone

Training set

Organic C analysis
of soil in training set

Training
spectra

Spectral pre-processing,
pre-treatments

Outlier analysis

Spectroscopic modelling

Optimize & assess the model

Model diagnosis

Optimized model

Estimate validation set

Assess accuracy

E.g. random sampling

Validation set

Validation
spectra

Spectral pre-processing,
pre-treatments

Organic C analysis
of soil in validation set

3. Prediction

Prediction set
[Field spectra – (training + validation sets)]

Spectral pre-processing,
pre-treatments

Estimation of organic C
and uncertainty on the
prediction set