

Sensor specifications	<p>Manufacturer and model number.</p> <p>Spectral range.</p> <p>Source of radiation.</p> <p>Type of detector.</p> <p>Instrument calibration procedures.</p> <p>Materials of calibration standards.</p>
Sensor measurements	<p>Condition of the soil: air-dry/oven-dry/wet/ground, sieved/intact core.</p> <p>Total number of spectra recorded from the study area.</p> <p>Number of spectral outliers and outlier method used.</p> <p>Number of training and number of validation spectra and methods used for selection.</p> <p>Experimental values for x, μ_s, μ_w, θ; see Eq.(2).</p> <p>Sensor outliers and method used to identify them.</p>
Laboratory analysis	<p>Laboratory method used laboratory code and accreditation.</p> <p>Number of blind duplicates and the measured standard error of the laboratory (SEL).</p> <p>Mean, standard deviation, minimum, median, maximum values of the measured data.</p> <p>Analytical outliers and method used to identify them.</p>
Transformations pre-processing, pre-treatments	<p>Type of transformations used on the laboratory and sensor data.</p> <p>Pre-processing methods used on the sensor data.</p> <p>Pre-treatment methods used on the sensor data.</p> <p>Method used for correcting the effects of water on the sensor data.</p>
Spectroscopic modelling: training	<p>Number of data in the spectral library.</p> <p>The algorithm used for modelling.</p> <p>The cross-validation method used.</p> <p>The optimized setting of the model and the model RMSE and R^2.</p> <p>The model diagnostics and residuals plot.</p>
Spectroscopic modelling: validation	<p>If appropriate, method for back-transformation of the response variable.</p> <p>The validation RMSE, ME, SDE, and concordance correlation.</p> <p>Plot of the observed vs. predicted validation data.</p>
Spectroscopic modelling: prediction of “unknowns”	<p>Mean, standard deviation, minimum, median, maximum values of the predicted data.</p>
Data sets	<p>All sensor data collected from the study area.</p> <p>The training and validation data.</p> <p>The analytical data used for calibrating sensors.</p> <p>Sample identification numbers.</p> <p>Geographic locations (WGS84) and depth layers where measurements were taken.</p> <p>Date and time of measurements.</p>