Readme file for the spectral data of Local Reference Material in LUCAS 2015

(16/11/2020)

The CSV file (*LUCAS2015_Soil_Multispectral_Results_Local_Reference_Material*) contains the spectral data of the Local Reference Material used for quality control in LUCAS 2015 Soil survey. Diffuse reflectance spectra were collected for **174 local reference samples** in the visible (400 to 780 nm) and the near infrared (780 to 2500 nm) regions with 0.5 nm spectral resolution. Measurements were carried out following the protocol of the Soil Spectroscopy Group ([1]) with a FOSS Rapid Content Analyzer ([2]). Two spectra were collected per sample, rotating the sample container each time so that each measurement spots a different area of the soil sample. Overall, the file contains 348 spectra (2 spectra per sample) identified by its Sample ID. Each row contains a spectrum. **The data are absorbance**.

Description of the fields in the CSV file:

Field	Description	Units/ Values
Source	General identifier of the sample in the laboratory. It identifies the year in which the spectra were collected.	LU_BT_2017.txt LU_BT_2018.txt
SampleID	Unique identifier of the two spectra collected per sample	2017_$$_$$_1 2018_$$_$$_1
Spectrum between 400 – 2500 nm	Absorbance data in the vis-NIR regions (400 to 2500 nm) with 0.5 nm resolution	Absorbance

Please note that the number of LUCAS 2015 SOIL sample points that are covered by spectra (21,782) is slightly lower from the number of LUCAS 2015 SOIL topsoil data points (21,859). The reasons for this are: limited amount of soil mass in some samples, unrecognizable Ids or duplication of Ids.

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[1] http://groups.google.com/group/soil-spectroscopy

[2] XDSTM Rapid Content Analyzer User Manual, FOSS 2010