

## METADATA

**Dataset:** Spectral Library of European Pegmatites, Pegmatite Minerals and Pegmatite Host-Rocks – The Greenpeg Database

**Version:** 1.0

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### Summary

A reflectance spectral database of European pegmatite ores and host rocks. Samples currently comprise LCT- and NYF-type pegmatites and wall rocks from pegmatite locations in Austria, Ireland, Norway, Portugal, and Spain.

### Tags

Reflectance spectroscopy; Absorption features; Spectral Signature; Database; Pegmatite; LCT; NYF; Host rock; H2020; GREENPEG

### Description

Spectral signature, obtained through reflectance spectroscopy studies, of European pegmatites and minerals, as well of their host rocks. Samples include LCT- and NYF-type pegmatites and host rocks from pegmatite locations in Austria, Ireland, Norway, Portugal, and Spain. Sample preparation and spectral measurement were conducted in the Universidade do Porto – Faculdade de Ciências (UPORTO) laboratories. The database contains the reflectance spectra (raw and with continuum removed), sample photographs, and main absorption features automatically extracted by a Python routine. Whenever possible, spectral mineralogy was interpreted based on the continuum-removed spectra. A detailed description of the database, its content, the measuring instrument, and interoperability with GIS is found in the database report.

The database is compiled as part of the GREENPEG project: New Exploration Tools for European Pegmatite Green-Tech Resources. The project is funded by European Commission's Horizon 2020 innovation programme under grant agreement No 869274.

For more information on the project, please visit the project website: <https://www.greenpeg.eu/>

### Instructions for users

1) Select the folder(s) of interest, 2) Download the zip file, 3) extract files, and 4) when necessary follow the available tutorials.

The structure of the database is presented in next table:

Database Level	Folder Name	Content
0	Database_files	Individual spectra and image files, stored by each demonstration site.
1	Microsoft_Access_database	Complete database with sample description and attachments.
2	Geodatabase	Geodatabase files to be displayed in ArcGIS
3	Geopackage	Geopackage files to be displayed in QGIS, folders containing the attachment files to be linked to the geopackages, and related tutorial

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### Disclaimer

The database content is processed, analysed, and compiled according to the best of the author's knowledge. A guarantee for the correctness or accuracy of the data cannot be given and the use and further interpretation of the data are at the users' own risk.

### Content of the database in brief

Field	Description	Attachments files
Sample number (nr)	Sample identification following GREENPEG's nomenclature	–
Spectrum number	Spectrum number (sample number + number of analysed spot within the sample)	–
Sample description	Description of the sample (provided by the partners or taken in the field by the authors)	–
Locality	Place where the samples were collected	–
WGS84 Zone	UTM zone	–
WGS84 Easting	X-coordinate in UTM (Easting)	–
WGS84 Northing	Y-coordinate in UTM (Northing)	–
Preparation	Sample preparation (for the spectral library and other parallel studies, the latter between brackets)	–
Analysis	Analytical methods employed (complementary studies are between brackets)	–
Stored	Where the sample and respective duplicates are stored (names represent the project partners)	–
Face color	The sample color in the measured spot	–
Face type	The sample face type in the measured spot	–
Photo	The sample photograph (measured spots are highlighted)	.png
Raw spectra	The raw spectra (either in an image and universal text file)	.jpg .txt
Processed spectra	The continuum removed spectra (either in an image and universal text file)	.pdf .csv
Spectra absorptions	The automatically identified absorption features	
Spectral mineralogy	Interpreted spectral mineralogy	–