

Supplementary materials for the paper:

Effect of land reclamation on soil properties, mineralogy and trace element distribution and availability: the example of Technosols developed on mine tailing disposal site of the abandoned Zn and Pb mine

Magdalena Tarnawczyk, Łukasz Uzarowicz, Katarzyna Perkowska-Pióro, Artur Pędziwiatr and Wojciech Kwasowski

Table S1. AAS operating conditions used for Thermo Fisher iCE 3000 apparatus.

Parameter [†]	As	Pb	Cd	Zn
Wavelength (nm)	193.7	217	228.8	213.9
Background correction	Zeeman	Deuterium	Deuterium	Deuterium
Lamp current (mA)	12	15	10	10
Slit width (nm)	0.2 or 0.5	0.2 or 0.5	0.2 or 0.5	0.2 or 0.5

[†]Sample flow rate is 4 mL/min. The following parameters were adjusted and optimized each time for different chemical matrices: fuel flow; signal mode; signal type; height of gas burner; matrix modifier; temperature and time of mineralization and atomization; injection volume.

Table S2. Determination results of the certified reference material SS-2 Contaminated Soil by means of the AAS.

	As	Cd	Pb	Zn
Certified value (mg·kg ⁻¹)	75	2.0	126	467
Confidence Interval (mg·kg ⁻¹)	65–85	nd	116–136	444–490
Analysed value (mg·kg ⁻¹)	78	2.2	136	450
Confidence Interval (mg·kg ⁻¹)	68–88	2.0–2.5	130–146	440–470

nd – not determined.

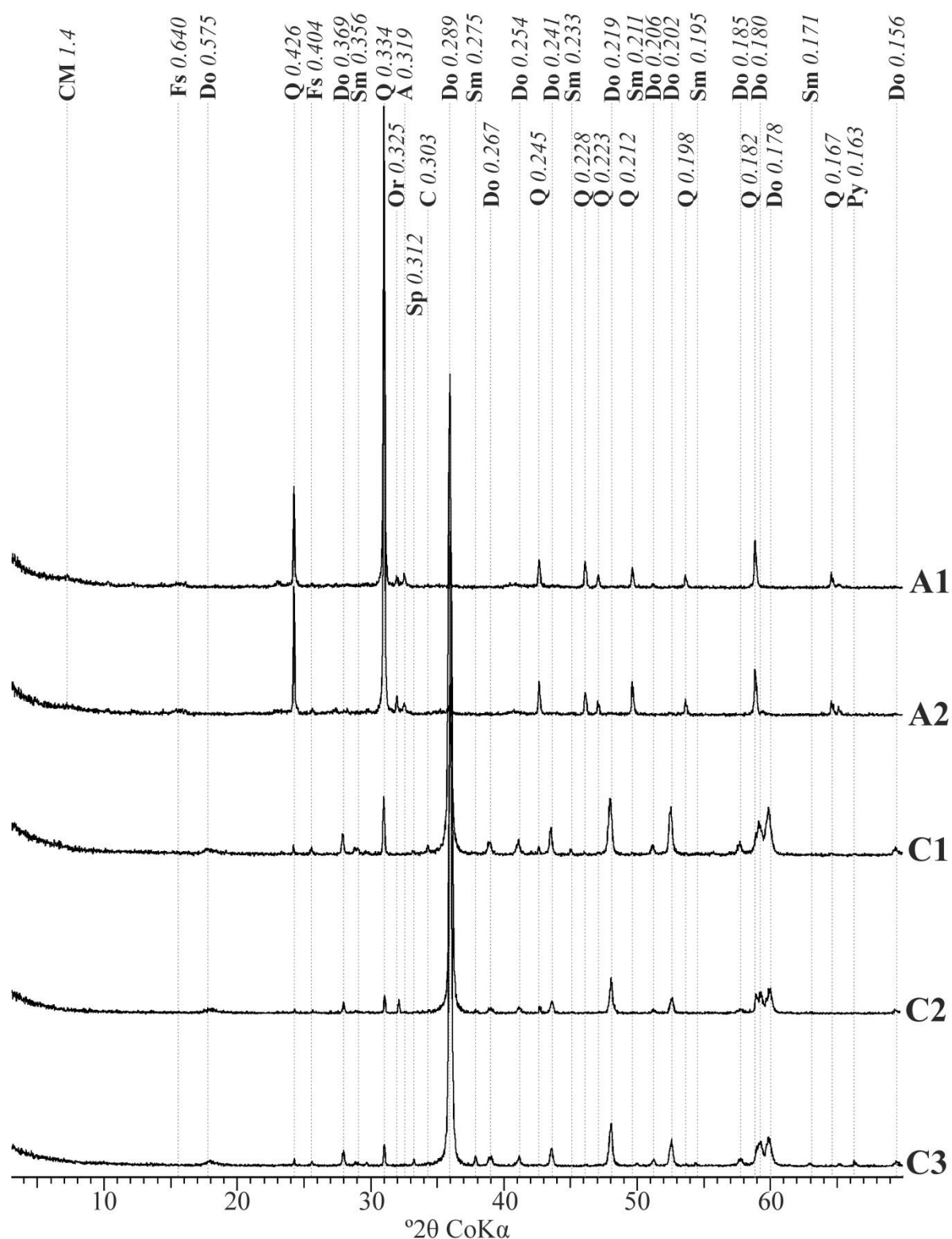


Figure S1. Mineral composition of profile TR1. The d values (in italics) are in nm. Mineral symbols: A – albite, C – calcite, CM – clay minerals, Do – dolomite, Fs – feldspars (undivided), Or – orthoclase, Py – pyrite, Q – quartz, m – smithsonite, Sp – sphalerite.

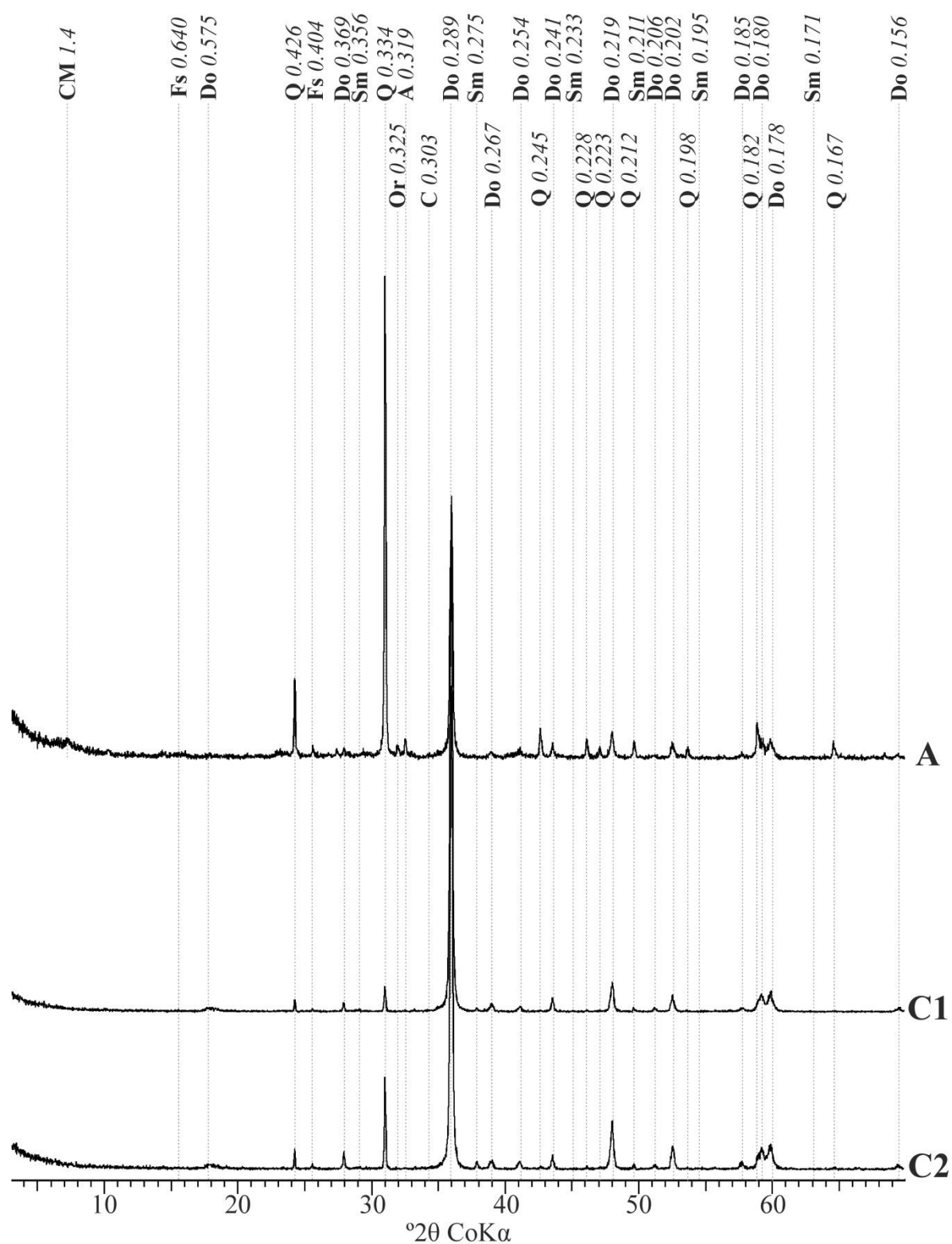


Figure S2. Mineral composition of profile TR2. The *d* values (in *italics*) are in nm. Mineral symbols: A – albite, C – calcite, CM – clay minerals, Do – dolomite, Fs – feldspars (undivided), Or – orthoclase, Q – quartz, Sm – smithsonite.

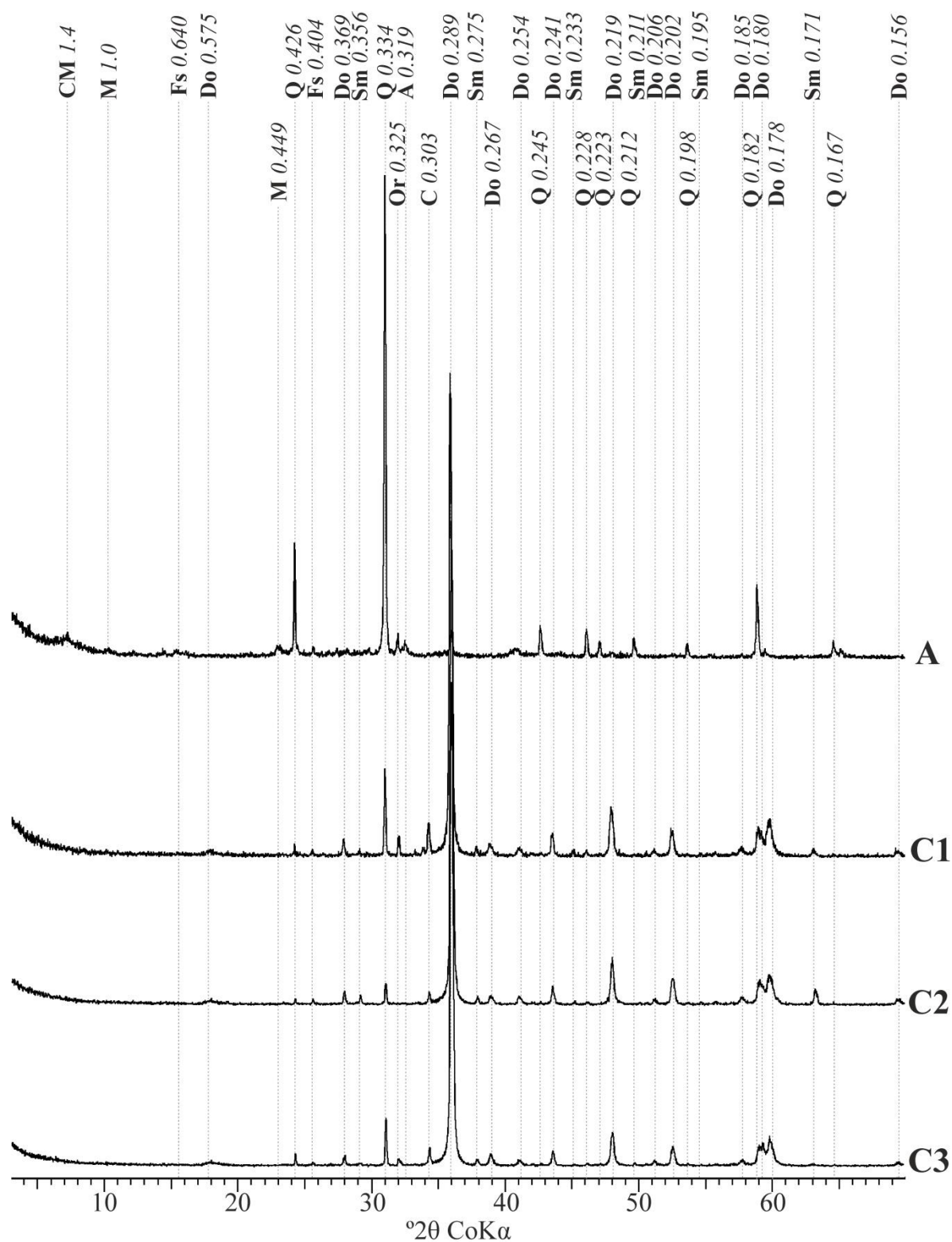


Figure S3. Mineral composition of profile TR3. The *d* values (in *italics*) are in nm. Mineral symbols: A – albite, C – calcite, CM – clay minerals, Do – dolomite, Fs – feldspars (undivided), M – mica, Or – orthoclase, Q – quartz, Sm – smithsonite.