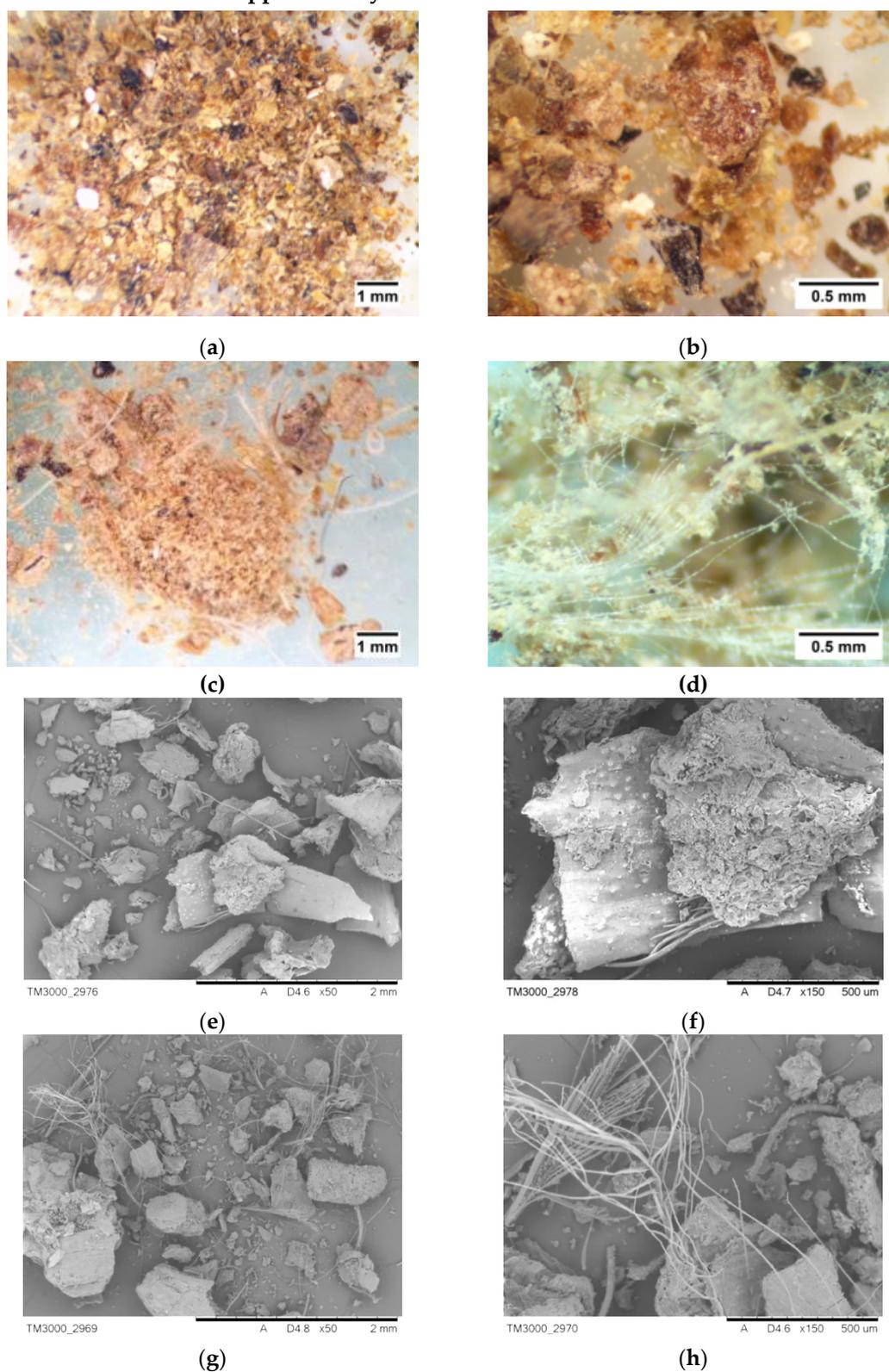


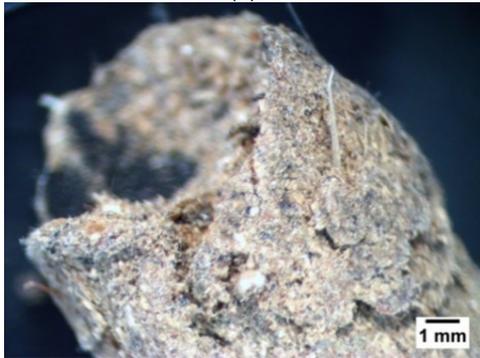
### Supplementary Materials



**Figure S1.** Images of the grain morphology of poultry manure samples taken and prepared for the combustion process (after grinding): (a), (b)—images from the binocular of sample R1; (c), (d)—images from the binocular of sample R2; (e),(f)—SEM images of sample R1; (g),( h)—SEM images of sample R2.



(a)

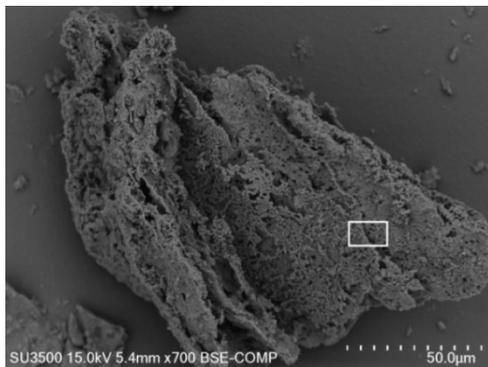


(b)

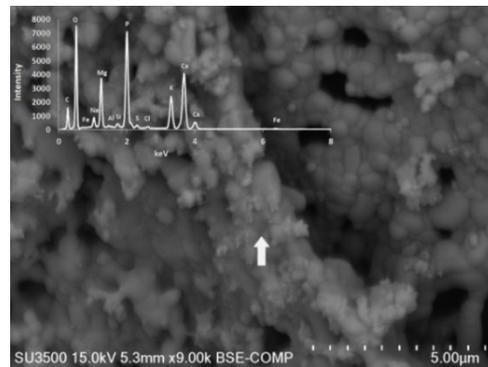


(c)

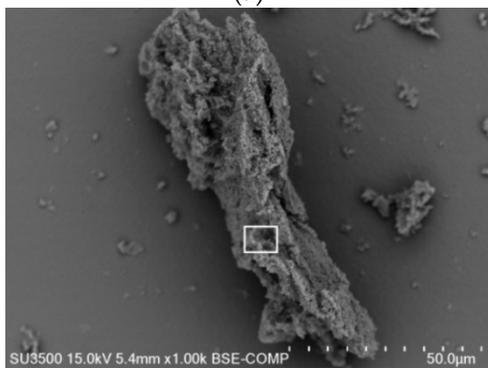
**Figure S2.** Images of poultry manure sample R2: a) general view of freshly collected sample before grinding, b-c) general view of pellets.



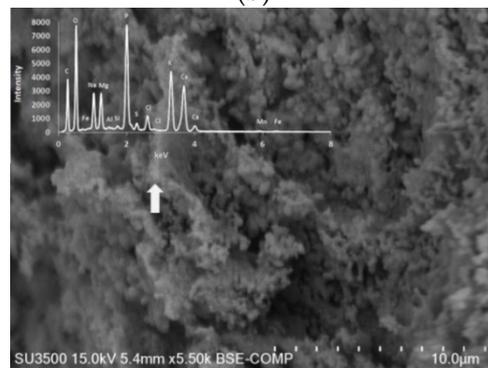
(a)



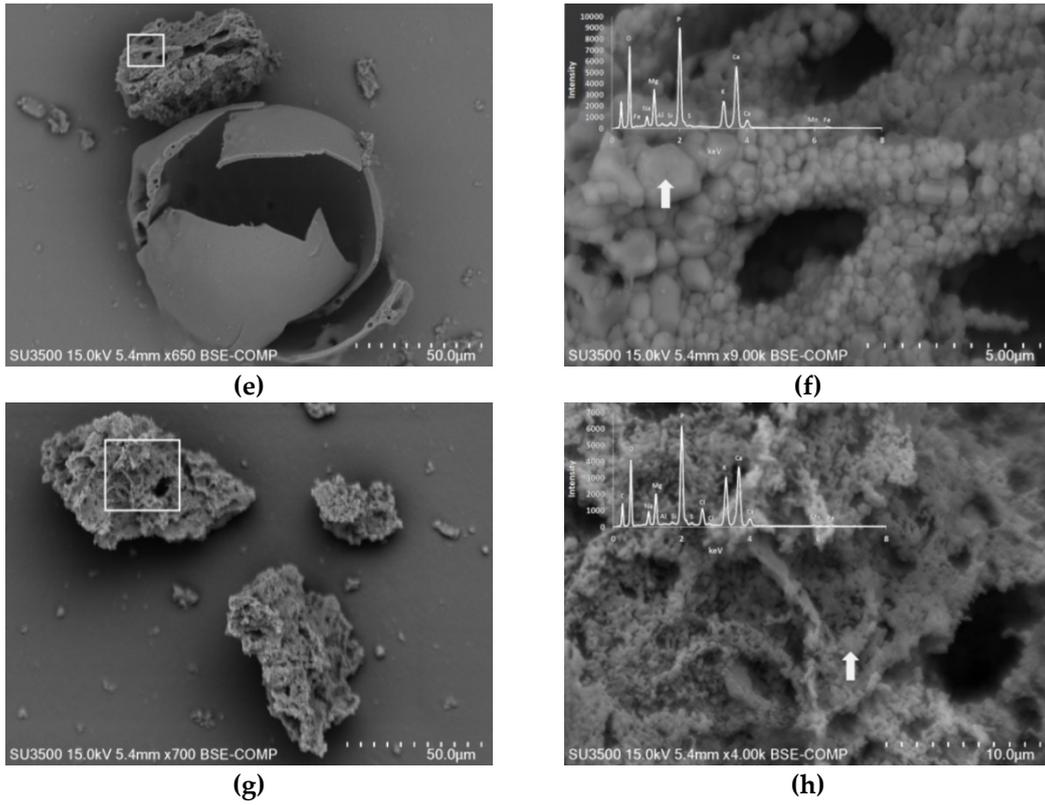
(b)



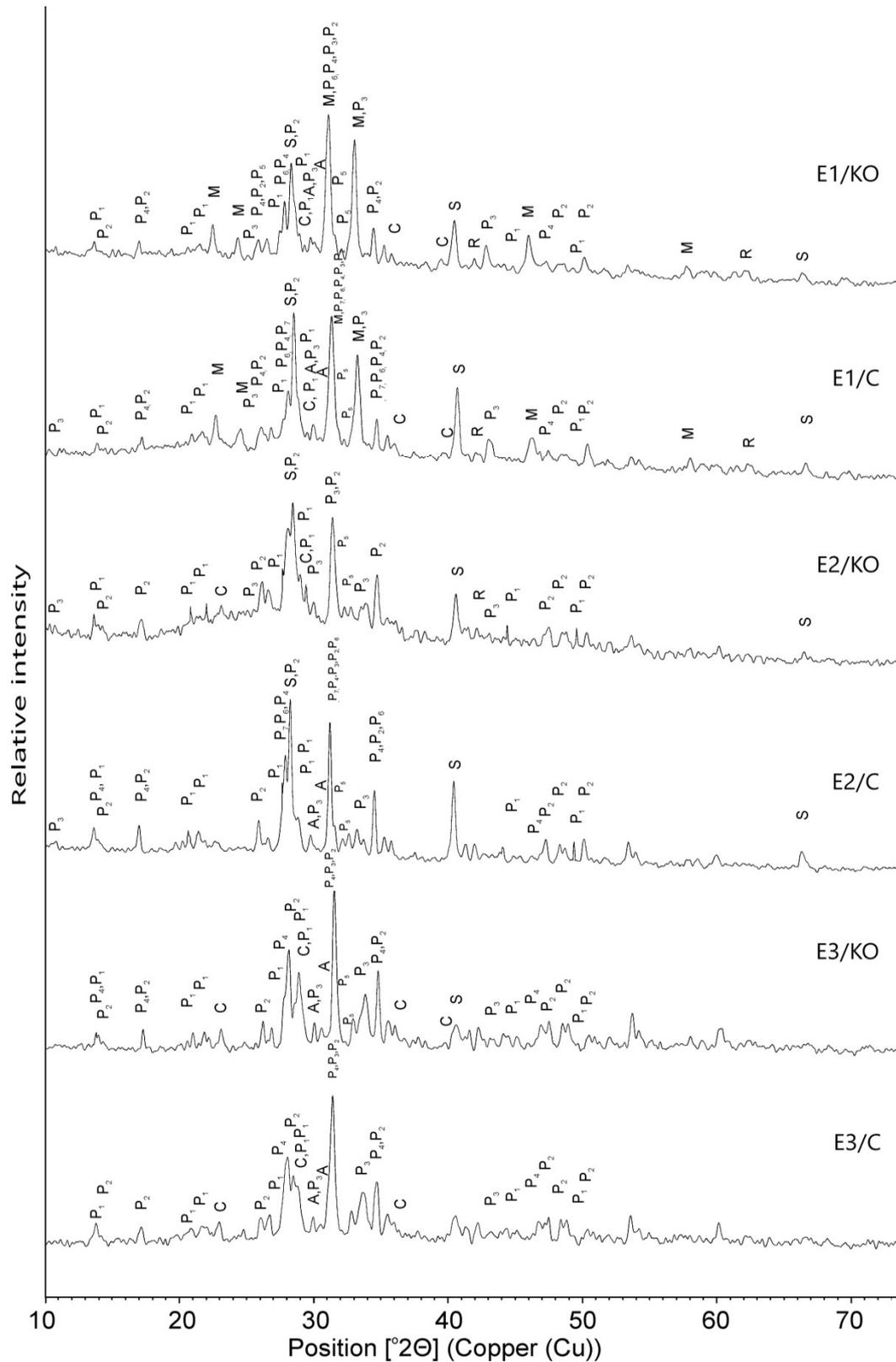
(c)



(d)



**Figure S3.** SEM images of selected grains (a, b, e, g) and EDS spectra of selected micro-areas of grains (b, d, f, h) of ash obtained in E3 experiment.



**Figure S4.** Diffractograms of the tested poultry manure ashes incinerated in a fluidised bed reactor. Annotations: P1–potassium magnesium phosphate (V), P2–nonacalcium magnesium sodium heptakis (phosphate (V)), P3–nagelschmidite, P4–wopmayite, P5–apatite, P6–whitlockite, P7–calcium iron magnesium hydrogen phosphate, A–arcanite, C–calcite, M–metathenardite, R–periclase, S–sylvine.