

Supplementary Information

Phosphorus Recovery and Recycling – Closing the Loop

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Table S1: Solubility products of relevant phosphate salts

Material speciation	pK _{so}
Ca ₅ (PO ₄) ₃ OH	55.9 ¹
Fe ₃ (PO ₄) ₂	29.0 ²
Ca ₃ (PO ₄) ₂	24.0 ¹
FePO ₄	21.9 ¹
AlPO ₄	21.0 ¹
MgNH ₄ PO ₄	13.3 ³
CaHPO ₄	6.66 ¹
Ca(H ₂ PO ₄) ₂	1.14 ¹

Table S2: Temperature ranges and oxygen profiles for thermochemical sewage sludge treatments^{4,5}

Method	Temperature range (°C)	Oxygen profile
Hydrothermal	180–300	Ambient
Pyrolysis	300–700	Anoxic - low
Gasification	600–900	20–40% ambient O ₂

References

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