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Experiments and modelling of potassium release behavior from tablet biomass ash for better recycling of ash as eco-friendly fertilizer

Cleaner Production

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## Highlights

Ash tablets with different sizes were pressed at pressure of 400 MPa.

Potassium release behavior from ash tablets were measured using ion electrode pair.

Shell discretization was used to model the potassium release process.

Potassium release rate of tablet ash was one order of magnitude smaller than that of powder ash.

Big ash tablet ( $\Phi$ 210 mm × 70 mm) are necessary for producing slow release fertilizer.

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