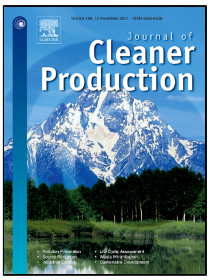
Accepted Manuscript



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

Zhengqing Zhang, Fang He, Yanling Zhang, Rujun Yu, Yaqi Li, Zhilei Zheng, Zhenqiang Gao

PII:	S0959-6526(17)32148-0
DOI:	10.1016/j.jclepro.2017.09.150
Reference:	JCLP 10655
To appear in:	*Journal of Cleaner Production*
Received Date:	12 July 2017
Revised Date:	11 September 2017
Accepted Date:	15 September 2017

Please cite this article as: Zhengqing Zhang, Fang He, Yanling Zhang, Rujun Yu, Yaqi Li, Zhilei Zheng, Zhenqiang Gao, Experiments and modelling of potassium release behavior from tablet biomass ash for better recycling of ash as eco-friendly fertilizer, *Journal of Cleaner Production* (2017), doi: 10.1016/j.jclepro.2017.09.150

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 (Φ210 mm × 70 mm) are necessary for producing slow release fertilizer.