

Supporting material for

Simultaneous amorphous silica and phosphorus recovery from rice husk poultry litter ash

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Figure S.1 Scheme of UV-Vis chemical method for phosphorus quantification.

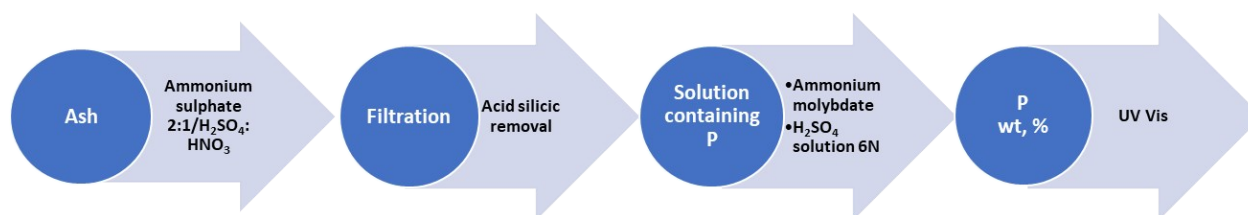


Table S.2 Contaminants limit values in fertilizers and soil improvers [61].

Contaminant	Concentration (mg/kg) dry matter				
	Fertilizer			Soil improver	
	Organic	Organo-mineral	Inorganic macronutrient	Organic	Inorganic
		3 **	3 **		
Cadmium (Cd)	1,5	60 mg/kg phosphorus pentoxide (P ₂ O ₅) ***	60 mg/kg phosphorus pentoxide (P ₂ O ₅) ***	2	1,5
Hexavalent chromium (Cr VI)	2	2	2	2	2
Mercury (Hg)	1	1	1	1	1
Nickel (Ni)	50	50	100	50	100
Lead (Pb)	120	120	120	120	120
Inorganic arsenic (As)	40	40	40	40	40
Copper (Cu)	300	600*	600*	300	300
Zinc (Zn)	800	1500*	1500*	800	800

* These limit values shall not apply where copper (Cu) or zinc (Zn) has been intentionally added to an organo-mineral fertilizer or an inorganic macronutrient fertilizer for the purpose of correcting a soil micronutrient deficiency and is declared in accordance with Annex III.

**Where an organo-mineral fertilizer or an inorganic macronutrient fertilizer has a total phosphorus (P) content of less than 5 % phosphorus pentoxide (P₂O₅)-equivalent by mass.

*** Where an organo-mineral fertilizer or an inorganic macronutrient fertilizer has a total phosphorus (P) content of 5 % phosphorus pentoxide (P₂O₅)-equivalent or more by mass ('phosphate fertilizer').

Table S.3 TXRF results for acid leachate with HCl 1 mol L⁻¹ for the three RHPLA under examination.

Element	BA		ECO		MCYC	
	Average (mg/kg)	Uncertainty	Average (mg/kg)	Uncertainty	Average (mg/kg)	Uncertainty
P	57 448	± 2 470	75 486	± 2 892	73 188	± 10 309
S	12 429	± 1 297	19 980	± 917	15 474	± 1 547
Cl	109 233	± 6 930	162 913	± 10 345	156 533	± 37 957
K	74 442	± 1 859	161 834	± 11 686	112 126	± 23 772
Ca	53 775	± 2 223	42 653	± 1 897	52 394	± 7 315
Ti	58	± 2	nd		13	± 3
V	19	± 4	10	± 8	nd	
Cr	46	± 8	20	± 9	10	± 2
Mn	1 507	± 47	2 280	± 74	2 507	± 378
Fe	2 528	± 117	1 530	± 76	19	± 6
Ni	18	± 2	26	± 2	44	± 9
Cu	112	± 6	80	± 5	15.0	± 0.3
Zn	721	± 29	2 455	± 87	1 946	± 360
Br	11	± 9	45	± 1	67	± 14
Rb	42	± 5	133	± 10	104	± 17
Sr	95	± 7	124	± 14	193	± 28
Ce	nd		nd		19	± 4
Pb	5.1	± 1.5	1.9	± 0.6	0.9	± 1.6

nd: not detected, below LOD (limit of detection).