

1 Supplementary Material

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3 Two-dimensional FTIR correlation spectroscopy reveals chemical
4 changes in dissolved organic matter during the biodrying process of raw
5 sludge and anaerobically digested sludge

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20 The Number of Figures: 2

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23 **Materials and methods**

24 **Organic elemental analysis of the matrices**

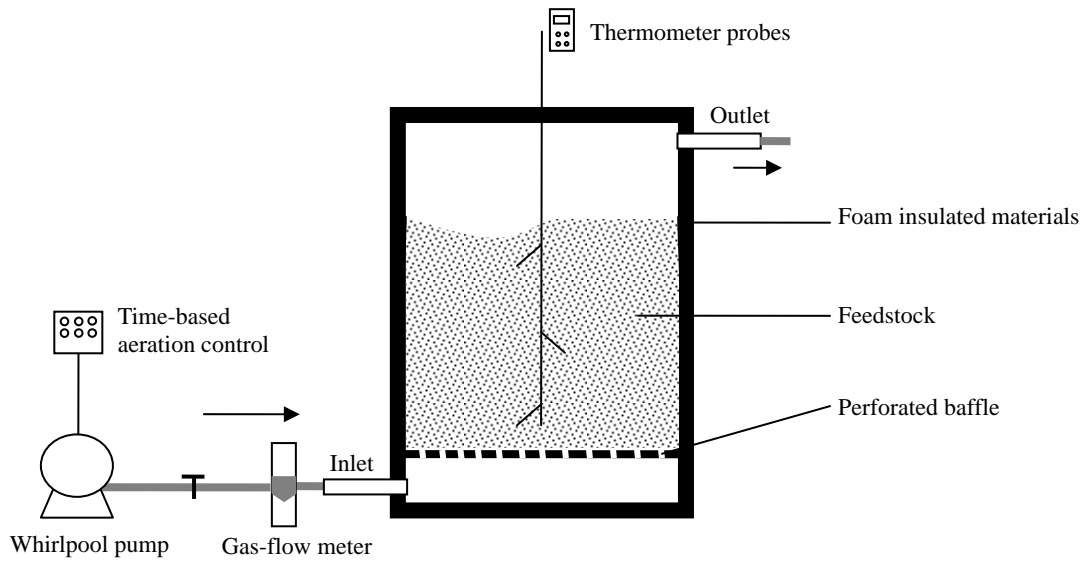
25 C, N and H contents of the freeze-dried samples were measured by an element
26 analyzer (Vario EL III, Elementar, Germany).

27 **Volatile fatty acid (VFA) contents of DOMs**

28 Volatile fatty acid (VFA) contents were analyzed according to the method ¹.

29 Table S1 the characteristics of the raw materials

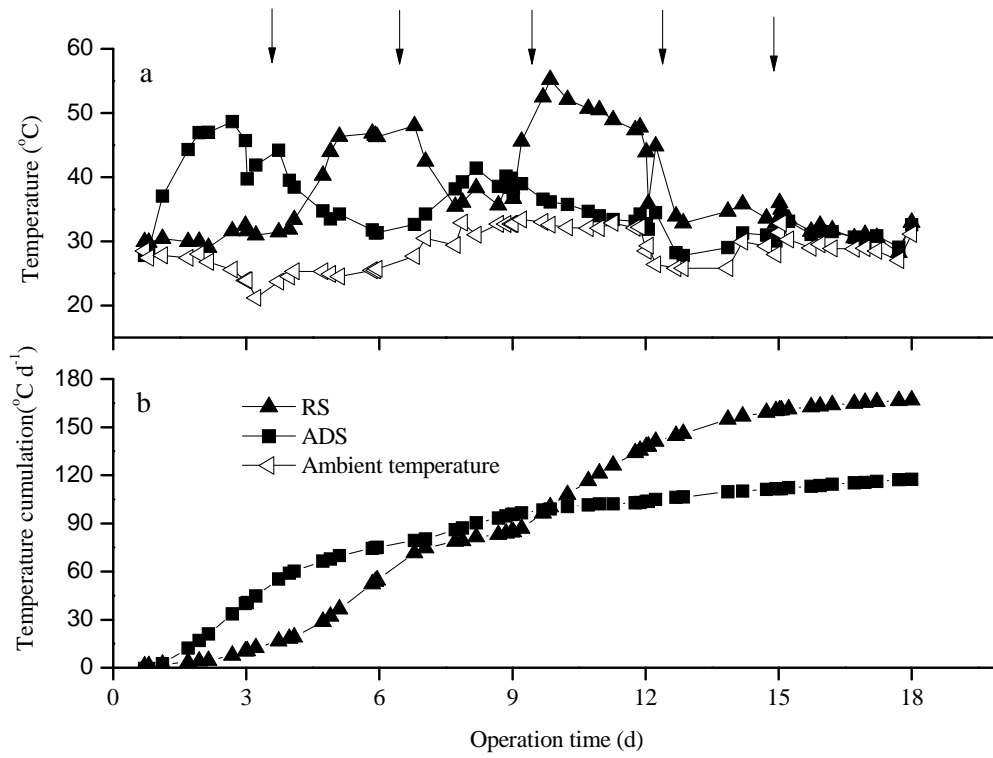
Parameters	Raw sludge (RS)	Anaerobically digested sludge (ADS)	Wheat residues (WR)
Water content (Wet basis, %)	77.45±0.34	78.23±0.43	11.60±0.27
VS content (dry basis, %)	56.51±0.28	38.97±0.15	93.28±0.42
C content (dry basis, %)	32.97±0.25	19.85±0.18	42.19±0.19
N content (dry basis, %)	4.25±0.09	2.58±0.12	3.50±0.14
H content (dry basis, %)	5.57±0.15	3.95±0.13	6.97±0.17
C/N ratio	10.34	10.26	16.07
Calorific value (MJ Kg ⁻¹ VS)	26.63±0.05	22.37±0.08	17.69±0.11



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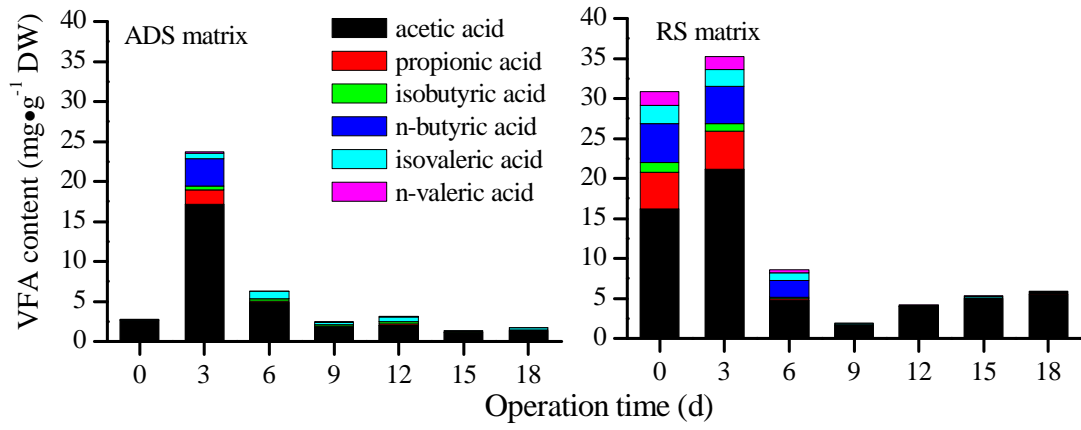
32 Fig. S1 the schematic diagram of the bio-drying system



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34 Figure S2 Temporal evolutions of average temperature (a) and temperature cumulation (b) in the

35 matrixes during bio-drying process



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37 Fig. S3 Contents of volatile fatty acids in the DOMs during the bio-drying process of ADS and

38 RS matrices

39 **References**

- 40 1. X. Li, X. Dai, J. Takahashi, N. Li, J. Jin, L. Dai and B. Dong, *Bioresour. Technol.*, 2014, **159**,
41 412-420.

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