

Integrated Treatment at Laboratory Scale of a Mature Landfill Leachate via Active Filtration and Anaerobic Digestion: Preliminary Results

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Supplementary information

Table S1. Coefficient of uniformity, mean grain size and particle density of materials

Parameter	ZVI	Lapillus	GAC
U	2.0	3.3	1.45
d ₅₀ [mm]	0.5	0.4	0.6
ρ [g/cm ³]	7.87	2.2	< 1.0

Table S2. Inoculum and substrate characterisation

	Total Solids TS (%)	Volatile Solids VS (%TS)	pH	COD [mg/g]
Inoculum	6.1%	76.4%	7.65	-
Cellulose	94.9%	100.0%	-	1185*

*estimated from stoichiometry

Table S3. pH values in MLL samples withdrawn from column tests

Day	ZVI/lapillus			ZV/GAC		
	5 cm	28 cm	50 cm	5 cm	28 cm	50 cm
3	8.13	8.32	8.26	8.33	7.52	6.10
7	8.00	7.92	7.96	8.15	8.40	8.39

Table S1. TS content in weekly collected digestates

Week	TS (%)			
	A	B	C	D
I	3.6%	3.6%	3.6%	3.7%
II	2.5%	2.4%	2.5%	2.5%
III	1.2%	1.5%	1.4%	1.1%
IV	1.6%	1.3%	1.2%	1.2%
V	1.4%	1.0%	1.1%	1.0%
VI	0.8%	0.6%	0.6%	0.6%

Table S2. VS content in weekly collected digestates

Week	VS (%TS)			
	A	B	C	D
I	71.0%	74.7%	74.5%	74.8%
II	73.2%	76.0%	77.2%	77.4%
III	75.0%	81.5%	75.9%	73.4%
IV	59.3%	60.8%	55.3%	59.2%
V	45.0%	47.1%	38.0%	43.9%
VI	45.2%	52.5%	30.6%	49.6%

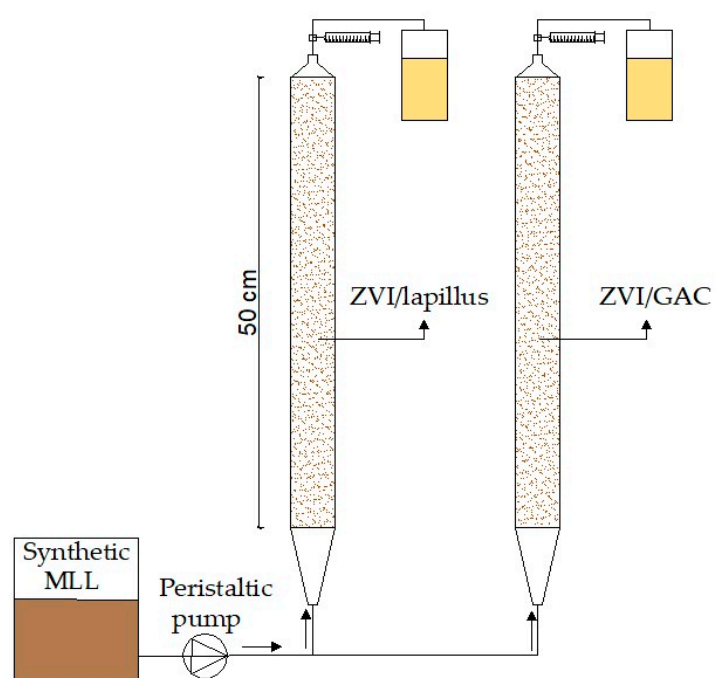


Figure S1: experimental apparatus for leachate pre-treatment



Figure S2. Semi-continuous anaerobic reactor