

Article

CH₄ and CO₂ Emissions from the Decomposition of Microplastics in the Bottom Sediment—Preliminary Studies

Małgorzata Kida *, Sabina Ziembowicz * and Piotr Koszelnik

Department of Environmental and Chemistry Engineering, Faculty of Civil and Environmental Engineering and Architecture, Rzeszow University of Technology AVE Powstańców Warszawy 6, 35-959 Rzeszów, Poland

* Correspondence: mkida@prz.edu.pl (M.K.); s.ksiazek@prz.edu.pl (S.Z.)

Table S1. Average concentrations of methane and carbon dioxide.

GHG	lp	CH ₄ [ppm]			CO ₂ [ppm]		
Time [d]		30	180	360	30	180	360
blank sample	1	148.78	19.998	44.56	5195.95	4211.87	25366.45
	2	155.25	20.75	44.89	5190.24	4341.36	26986.15
	3	146.109	21.592	41.062	5176.94	4301.44	27070
	mean	150.046	20.78	43.504	5186.709	4284.89	26474.213
	SD	3.84	0.65	1.73	7.96	54.14	784.05
	CV	2.56	3.13	3.98	0.15	1.26	2.96
PVC low of plasti-cizers	1	225.09	3825.44	83.15	6094.12	13005.6	60169.2
	2	207.89	3800.56	79.89	6187.5	12255.4	59780.7
	3	212.695	3808.8	75.583	6808.79	12223.4	56232.3
	mean	215.225	3811.599	79.541	6363.468	12494.819	58727.401
	SD	7.25	10.35	3.10	317.19	361.43	1771.42
	CV	3.37	0.27	3.90	4.98	2.89	3.02
PP	1	200.95	1380.11	76.9	7744.98	19587.6	64147.6
	2	211.7	1455.3	79.45	7599.5	21008.6	62988.5
	3	200.244	1414.72	86.104	7241.35	20483.5	69850.8
	mean	204.298	1416.71	80.818	7528.61	20359.9	65662.3
	SD	5.24	30.73	3.88	211.63	586.67	2999.28
	CV	2.57	2.17	4.80	2.81	2.88	4.57
PVC high of plasti-cizers	1	1213.25	24950.63	198.52	14295.36	15010.36	59588.9
	2	1254.6	25136.8	205.13	15011.27	15877.55	62101
	3	1231.87	25671	207.366	15373.83	15000.39	63549.3
	mean	1233.24	25252.81	203.672	14893.48667	15296.1	61746.4
	SD	16.91	305.32	3.76	448.09	411.17	1636.15
	CV	1.37	1.21	1.84	3.01	2.69	2.65
Rubber 3000-8000	1	341.25	51.1	71.154	6125.4	14005.97	41520.9
	2	337.21	57.6	71.45	6478.6	15014.6	39548.21
	3	313.772	56.32	67.969	6338.87	14144.48	39806.89
	mean	330.744	55.01	70.191	6314.29	14388.35	40292
	SD	12.11	2.81	1.58	145.24	446.42	875.36
	CV	3.66	5.11	2.25	2.30	3.10	2.17
Rubber 1000-3000	1	456.48	160.47	125.9	7644.12	18698.3	46890.6
	2	449.65	172.69	116.84	7719.55	20154.59	48950.41
	3	411.773	171.719	119.969	8582.336	19427.3	45324.02
	mean	439.301	168.293	120.903	7982.002	19426.73	47055.01
	SD	19.66	5.55	3.76	425.62	594.53	1485.03
	CV	4.48	3.30	3.11	5.33	3.06	3.16

Rubber 1000	1	358.47	18966.78	5296.45	10256.4	19567.41	48259.6
	2	349.12	17963.2	5197.32	11012.45	20456.45	50146.87
	3	326.012	19302.53	4982.645	10747.27	20036.74	51107.23
	mean	344.534	18744.17	5158.805	10672.04	20020.2	49837.9
	SD	13.64	568.99	130.97	313.21	363.14	1182.89
	CV	3.96	3.04	2.54	2.93	1.81	2.37
Rubber 600	1	594.65	22199.45	5910.23	21148.66	23878.69	56104.58
	2	617.89	22104.68	6114.31	20962.11	22744.15	57002.16
	3	608.988	23743.22	6078.825	19282.51	22574.98	53998.63
	mean	607.176	22682.45	6034.455	20464.42667	23065.94	55701.79
	SD	9.57	751.07	89.03	839.20	578.84	1258.83
	CV	1.58	3.31	1.48	4.10	2.51	2.26

SD - standard deviation, CV - coefficient of variation



Figure S1. a. Prepared experimental samples.

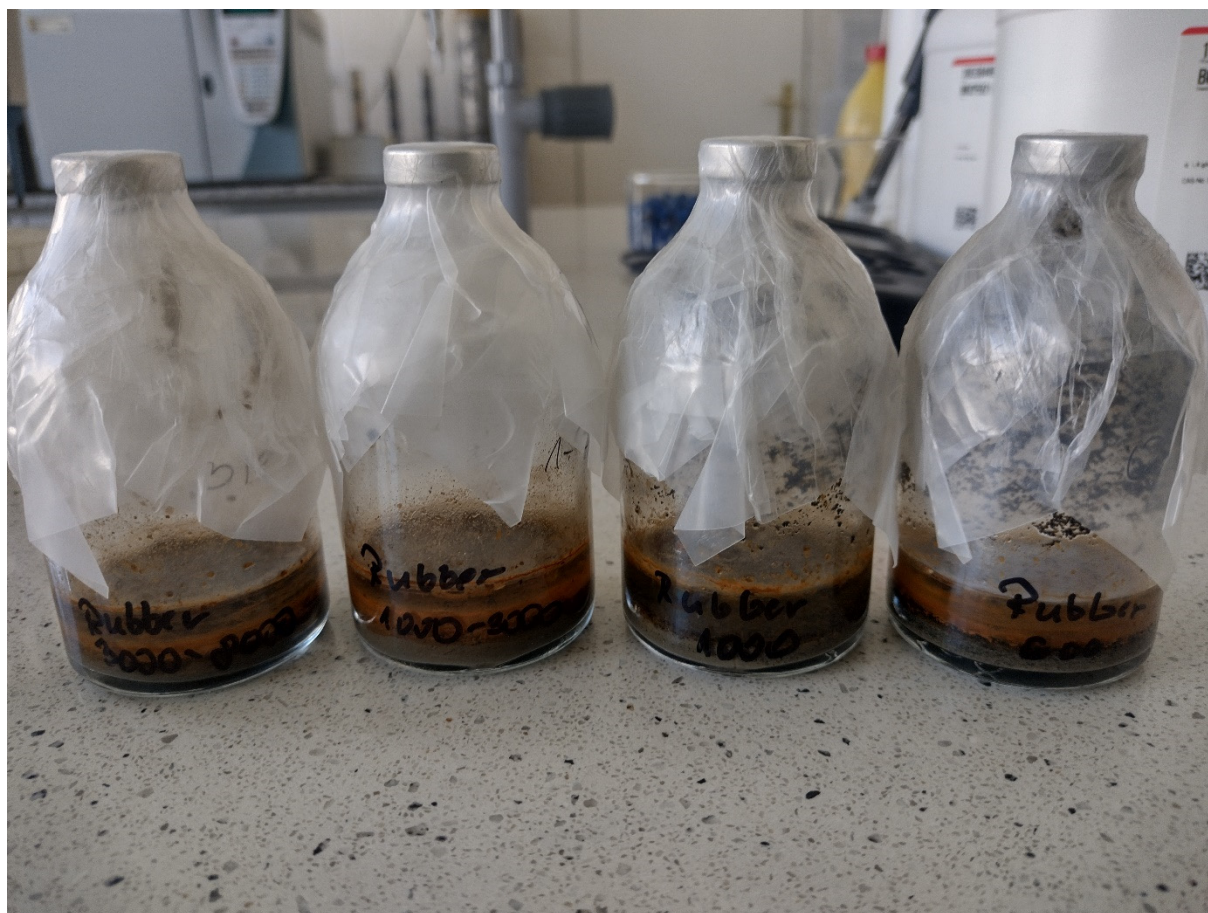


Figure S1. b. Prepared experimental samples.