Pollutant formation and emissions from cement kiln stack using a solid recovered fuel from municipal solid waste

Juan A. Conesa*, Lorena Rey, Silvia Egea, Maria D. Rey

Chemical Engineering Department. University of Alicante. P.O. Box 99, 03080 Alicante (Spain). Phone: +(34) 96 590 38 67 Fax: +(34) 96 590 38 26

Author email address: ja.conesa@ua.es

SUPPORTING INFORMATION

Number of pages: 2

Number of Tables: 1

Number of Figures: 2

Table S1. Dioxins and furans in the horizontal laboratory reactor in pg/g CDR (not I-TEQ).

pg I-TEQ/g CDR	λ = 0.29	λ = 0.51	λ = 1.02	λ = 1,48
2,3,7,8-TCDF	0,00	0,00	0,00	0,00
1,2,3,7,8-PeCDF	140,12	304,35	1251,61	793,18
2,3,4,7,8-PeCDF	148,43	450,49	3936,02	1128,80
1,2,3,4,7,8-HxCDF	68,23	129,41	1988,92	272,34
1,2,3,6,7,8-HpCDF	64,22	122,84	1795,21	288,95
2,3,4,6,7,8-HxCDF	49,58	100,49	1662,51	497,32
1,2,3,7,8,9-HxCDF	32,89	48,07	990,49	302,13
1,2,3,4,6,7,8-HpCDF	114,27	198,62	4328,52	1176,29
1,2,3,4,7,8,9-HpCDF	12,11	23,92	404,78	115,94
OCDF	0,00	0,19	1,95	0,00
2,3,7,8-TCDD	-	3,06	12,98	0,78
1,2,3,7,8-PeCDD	10,02	11,52	58,48	17,54
1,2,3,4,7,8-HxCDD	23,95	10,81	124,51	21,50
1,2,3,6,7,8-HxCDD	37,78	65,39	87,12	80,03
1,2,3,7,8,9-HxCDD	6,97	6,55	27,79	13,26
1,2,3,4,6,7,8-HpCDD	82,98	74,38	441,88	288,53
OCDD	237,29	179,78	374,00	305,29

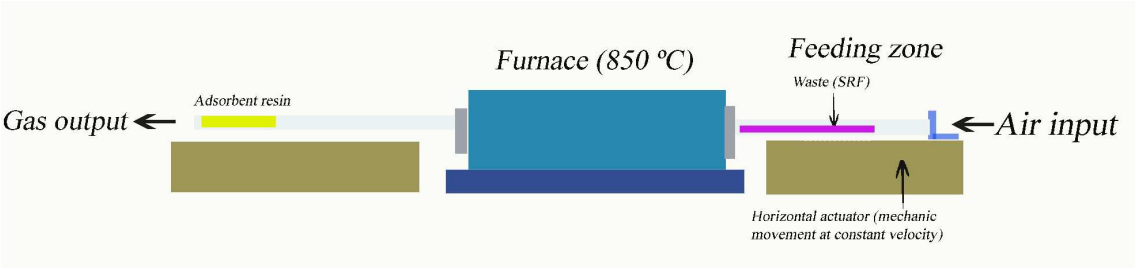

Figure S1. Scheme of the laboratory horizontal furnace used.

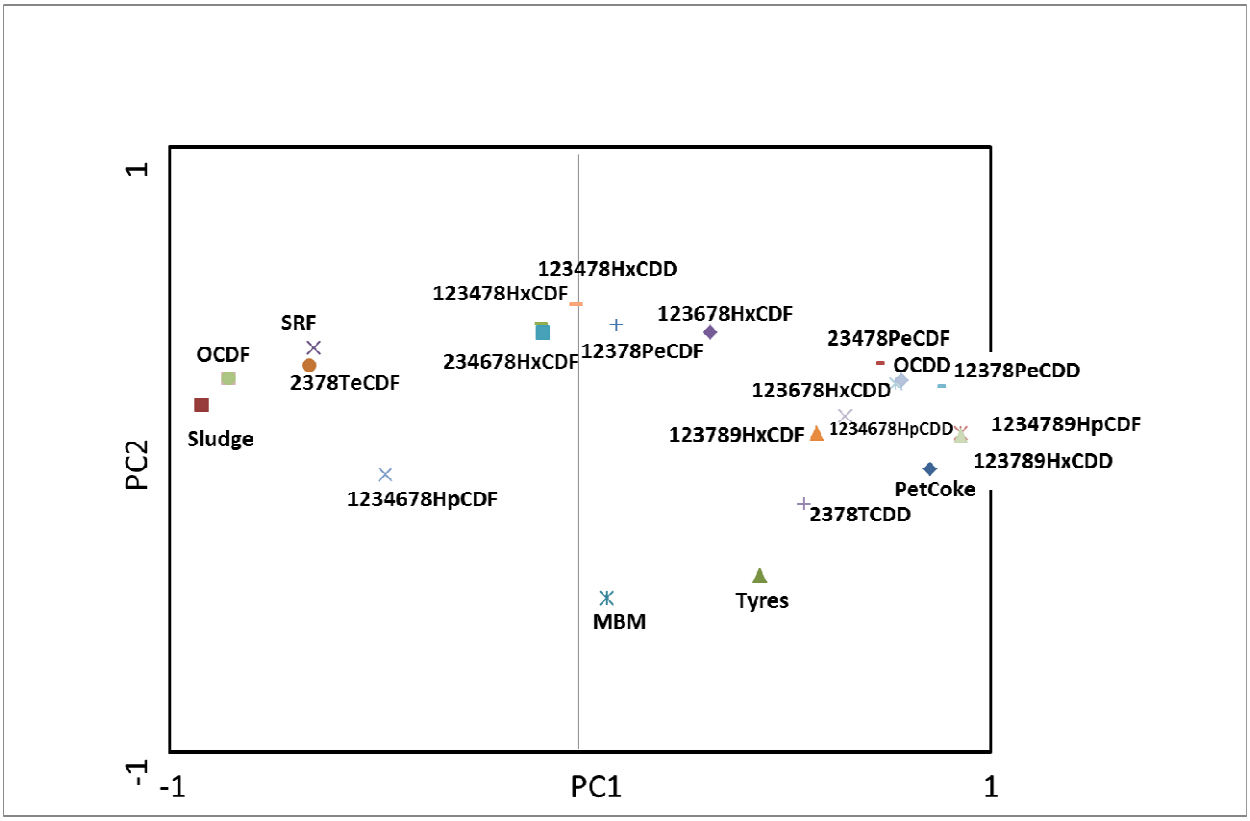

Figure S2. Principal component analysis of the PCDD/Fs emission correlated with the amounts of different fuels used in the cement kiln.