

SUPPLEMENTARY INFORMATION

Table S1 Physical and chemical properties, and toxicity equivalency factors (TEF) of 27 PAHs investigated

	Compound	Abbreviation	Molecular weight (Da)	Boiling point (°C)	Melting point (°C)	Vapor pressure (mmHg)	TEF
16 PAHs issued by the U.S. EPA	Naphthalene	Nap	128.19	218	81	7.80×10^{-2}	0.001
	Acenaphthylene	AcPy	152.21	270	93	6.70×10^{-3}	0.001
	Acenaphthene	Acp	154.21	279	96	2.15×10^{-3}	0.001
	Flourene	Flu	166.23	293	117	6.00×10^{-4}	0.001
	Phenanthrene	PA	178.24	338.4	101	1.20×10^{-4}	0.001
	Anthracene	Ant	178.24	340	216	6.00×10^{-6}	0.01
	Fluoranthene	FL	202.00	383.5	111	9.20×10^{-6}	0.001
	Pyrene	Pyr	202.26	393.5	202	4.50×10^{-7}	0.001
	Benzo[a]anthracene	BaA	228.30	437.5	162	2.10×10^{-7}	0.1
	Chrysene	CHR	228.30	441	256	6.40×10^{-9}	0.01
	Benzo[b]fluoranthene	BbF	252.32	481.2	168	5.0×10^{-7}	0.1
	Benzo[k]fluoranthene	BkF	252.32	481.2	217	3.91×10^{-9}	0.1
	Benzo[a]pyrene	BaP	252.32	495.5	177	5.60×10^{-9}	1.0
	Dibenzo[a,h]anthracene	DBA	278.36	534	163	1.04×10^{-10}	1.0
	Benzo[g,h,i]perylene	BghiP	276.34	535	270	1.01×10^{-11}	0.01
	Indeno[1,2,3-cd]pyrene	IND	276	542	278	9.78×10^{-11}	0.1
11 additional measured in this study	Benzo[c]fluorene	BcFE	216.28	398	126	3.43×10^{-6}	20
	5-Methylchrysene	5-MC	242.32	413	161	4.65×10^{-6}	1.0
	Benzo[j]fluoranthene	BjF	252.31	480	165	1.66×10^{-7}	0.3
	Cyclopenta[c,d]pyrene	CYC	226.27	493	170	5.66×10^{-6}	0.01
	Dibenzo[a,e]pyrene	DBP	302.37	501	225	4.33×10^{-8}	1.0
	Dibenzo[a,h]pyrene	DBahP	302.37	507	233	1.53×10^{-8}	10
	Dibenzo[a,i]pyrene	DBaiP	302.37	507	233	1.53×10^{-8}	10
	Dibenzo[a,l]pyrene	DBalP	302.37	501	225	4.33×10^{-8}	10
	2-Methylnaphthalene	2-MN	142.20	241	34.6	6.8×10^{-2}	0.001
	Benzo[e]pyrene	BeP	252.32	492	178	5.7×10^{-9}	0.01
	Perylene	PER	252.32	500	273	5.31×10^{-9}	0.001

Reference: (Andersson and Achten, 2015; EPA, 2010; Nisbet and Lagoy, 1992)

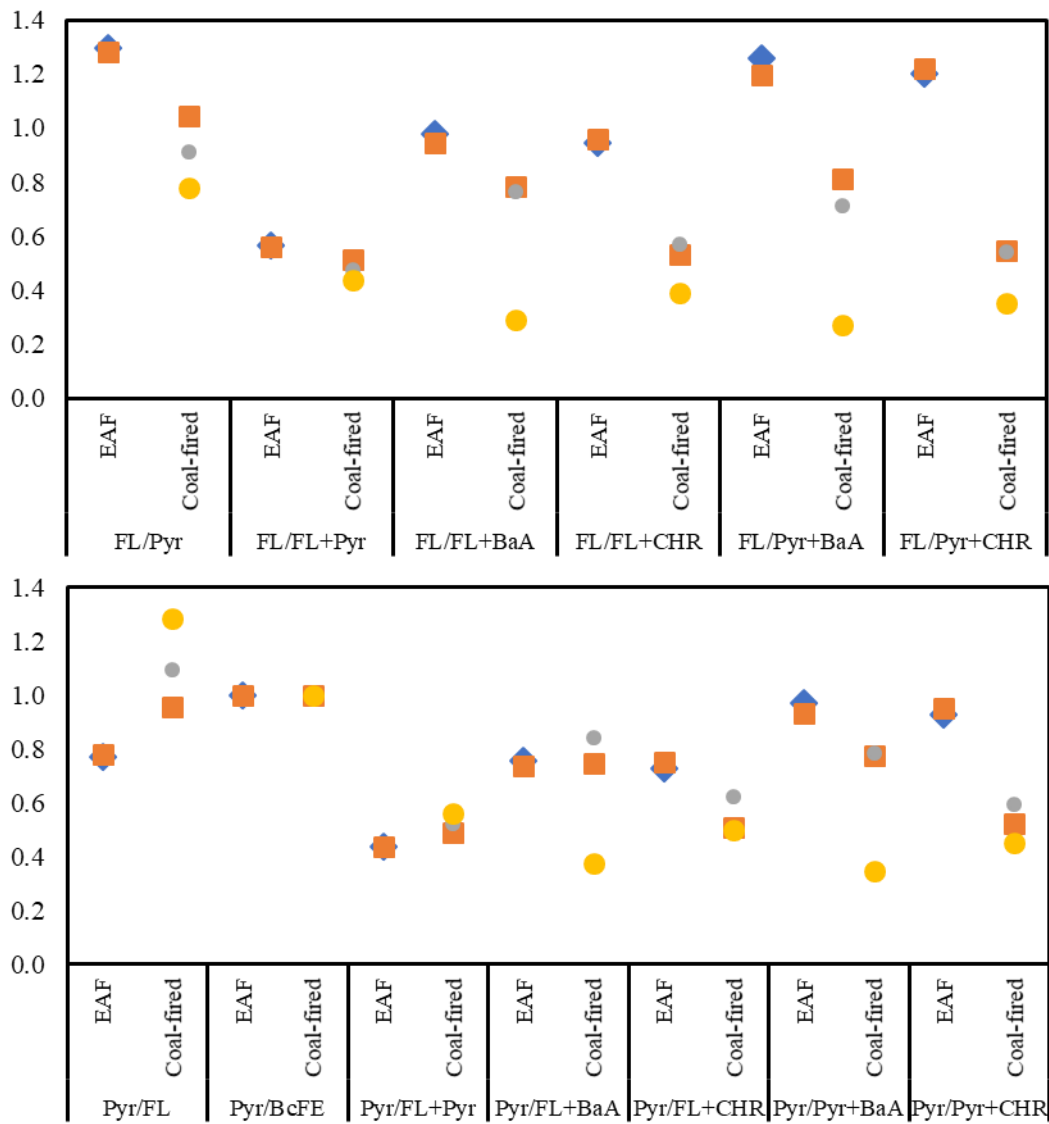


Fig S1 Congener ratios of PAHs congeners from EAF and different studies coal-fired boiler emission sources.