

Approval Research for Carcinogen Humic-Like Substances (HULIS) Emitted from Residential Coal Combustion in High Lung Cancer Incidence Areas of China

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Figure S1. The correlation coefficients between NH_4^+ and SO_4^{2-} .

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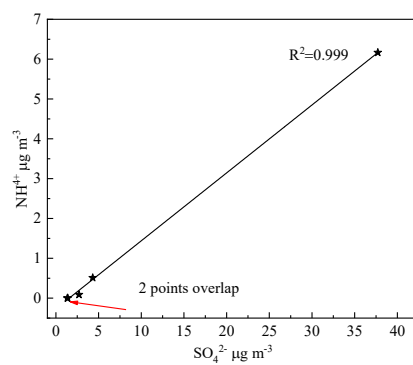


Figure S1. The correlation coefficients between NH_4^+ and SO_4^{2-} .

Table S1. The mass concentration of ion species ($\mu\text{g m}^{-3}$) and percentage of SIA/WSIIs (%)

Sample	Size (µm)	The mass concentration of ion species (µg m ⁻³) and percentage of SIA/WSIIs (%)											
		Cl ⁻	NO ₃ ⁻	NO ₂ ⁻	NO ₃ ⁻	SO ₄ ²⁻	Na ⁺	NH ₄ ⁺	K ⁺	Mg ²⁺	Ca ²⁺	Total	SIA/WSIIs
BL	<1.1	11.07	3.65	6.14	29.16	3.66	0.00	1.20	1.50	2.10	1.03	59.52	0.61
	1.1-2.0	1.60	1.40	1.15	5.94	0.00	1.03	1.03	0.13	0.20	0.00	11.47	0.71
	2.0-3.3	1.37	0.56	0.86	4.83	0.00	0.53	0.53	0.10	0.15	0.00	8.39	0.74
	3.0-7.0	0.72	0.42	0.54	1.68	0.00	0.00	0.00	0.06	0.21	0.00	3.62	0.61
	>7.0	0.94	0.06	0.60	1.87	0.00	0.00	0.00	0.08	0.31	0.09	3.96	0.62
LM	<1.1	24.59	3.50	8.71	32.62	8.68	0.00	0.00	0.68	1.58	0.05	80.41	0.51
	1.1-2.0	3.09	0.37	2.62	3.45	0.32	0.00	0.00	0.27	0.30	0.15	10.56	0.57
	2.0-3.3	1.59	0.43	0.99	2.25	0.00	0.00	0.00	0.27	0.20	0.00	5.72	0.57
	3.0-7.0	0.47	0.36	0.85	1.09	0.00	0.00	0.00	0.02	0.21	0.00	3.00	0.65
	>7.0	1.09	0.07	1.57	1.58	0.00	0.00	0.00	0.00	0.26	0.28	4.85	0.65
SF	<1.1	25.13	2.17	6.56	61.07	12.92	0.00	11.38	2.28	1.17	0.00	122.67	0.64
	1.1-2.0	3.95	0.33	1.43	5.54	0.53	0.84	0.84	0.23	0.28	0.40	13.54	0.58
	2.0-3.3	1.41	0.42	0.96	2.91	0.36	0.00	0.00	0.00	0.24	0.00	6.29	0.61
	3.0-7.0	1.52	0.25	1.16	2.56	0.68	0.00	0.00	0.27	0.38	0.44	7.26	0.51
	>7.0	1.32	0.22	1.00	1.88	0.00	0.00	0.00	0.06	0.27	0.15	4.92	0.59
LJW	<1.1	11.43	6.04	5.44	16.75	0.00	0.00	0.00	0.52	1.41	0.00	41.58	0.53
	1.1-2.0	1.59	0.87	0.92	2.32	0.77	0.00	0.00	0.17	0.20	0.00	6.84	0.47
	2.0-3.3	2.12	0.35	0.84	2.63	0.80	0.00	0.00	0.19	0.42	0.65	8.01	0.43
	3.0-7.0	0.67	0.51	0.47	0.87	0.00	0.00	0.00	0.20	0.17	0.00	2.89	0.46
	>7.0	0.69	0.27	0.46	0.86	0.00	0.00	0.00	0.07	0.25	0.49	3.10	0.43
GM	<1.1	3.91	1.52	3.65	22.92	0.00	5.42	0.51	0.66	0.73	0.00	38.81	0.69
	1.1-2.0	1.34	0.39	0.87	3.61	0.00	0.00	0.00	0.24	0.30	0.03	7.29	0.69
	2.0-3.3	0.56	0.64	0.57	1.46	0.00	0.00	0.00	0.21	0.22	0.00	3.65	0.56
	3.0-7.0	0.39	0.07	0.44	0.89	0.00	0.00	0.00	0.09	0.15	0.00	2.03	0.65
	>7.0	1.15	0.22	0.69	1.09	0.28	0.00	0.00	0.30	0.20	0.00	3.92	0.45
ZF	<1.1	15.55	2.52	7.51	63.76	8.64	19.00	2.56	1.13	1.13	1.13	121.78	0.74
	1.1-2.0	2.45	1.50	1.79	5.02	0.15	0.69	0.69	0.17	0.26	0.26	12.29	0.61
	2.0-3.3	0.78	0.33	0.67	2.18	0.00	0.00	0.00	0.11	0.24	0.24	4.54	0.63
	3.0-7.0	0.34	0.30	0.57	0.93	0.00	0.00	0.00	0.10	0.19	0.19	2.62	0.58
	>7.0	0.84	0.70	0.82	1.04	0.00	0.00	0.00	0.04	0.19	0.19	3.82	0.49
AVERAGE													0.59
SD													0.09

Table S2. Charge balance of ions.

Sample	Size (μm)	cation	Anion	Anion/cation
BL	<1.1	0.49	1.11	2.25
	1.1-2.0	0.08	0.22	2.83
	2.0-3.3	0.04	0.17	3.74
	3.0-7.0	0.02	0.07	3.80
	>7.0	0.03	0.08	2.36
LM	<1.1	0.53	1.60	3.02
	1.1-2.0	0.05	0.21	3.99
	2.0-3.3	0.02	0.12	5.05
	3.0-7.0	0.02	0.06	3.26
	>7.0	0.04	0.09	2.58
SF	<1.1	1.35	2.14	1.59
	1.1-2.0	0.12	0.26	2.17
	2.0-3.3	0.04	0.13	3.57
	3.0-7.0	0.09	0.12	1.35
	>7.0	0.03	0.10	3.10
LJW	<1.1	0.13	0.90	6.85
	1.1-2.0	0.05	0.13	2.35
	2.0-3.3	0.11	0.14	1.28
	3.0-7.0	0.02	0.06	2.96
	>7.0	0.05	0.05	1.09
GM	<1.1	0.38	0.68	1.81
	1.1-2.0	0.06	0.14	2.24
	2.0-3.3	0.02	0.07	2.96
	3.0-7.0	0.02	0.04	2.58
	>7.0	0.04	0.07	1.97
ZF	<1.1	1.65	1.95	1.18
	1.1-2.0	0.08	0.24	2.82
	2.0-3.3	0.03	0.09	2.48
	3.0-7.0	0.03	0.05	1.66
	>7.0	0.03	0.07	2.79
AVERAGE				2.72
SD				1.18

Table S3. Pearson correlation coefficients between HULIS-C and WSOC

Samples	Size (μm)	WSOC ($\mu\text{g m}^{-3}$)	HULIS-C ($\text{C } \mu\text{g m}^{-3}$)	Pearson correlation coefficients
BL	<1.1	129.93	92.02	0.99
	1.1-2.0	76.47	45.76	
	2.0-3.3	81.08	54.33	
	3.3-7.0	27.44	17.52	
LM	<1.1	224.58	136.86	1.00
	1.1-2.0	51.37	31.77	
	2.0-3.3	48.88	26.50	
	3.3-7.0	23.91	17.52	
SF	<1.1	137.40	90.78	0.98
	1.1-2.0	78.04	46.41	
	2.0-3.3	67.17	21.86	
	3.3-7.0	68.24	24.06	
LJW	<1.1	408.91	123.02	0.99
	1.1-2.0	122.76	50.99	
	2.0-3.3	70.75	28.36	
	3.3-7.0	61.18	18.04	
GM	<1.1	31.96	22.42	0.57
	1.1-2.0	58.04	16.34	
	2.0-3.3	13.74	14.58	
	3.3-7.0	7.95	3.27	
ZF	<1.1	68.07	34.94	0.99
	1.1-2.0	20.78	14.58	
	2.0-3.3	13.11	9.01	
	3.3-7.0	10.75	6.34	
			Average	0.92
			TSD	0.16

Table S4. The P value of Pearson correlation coefficients between HULIS-C and WSOC and water-soluble ions in RCC particles

The P value									
HULIS-C	Na ⁺	NH ₄ ⁺	K ⁺	Mg ²⁺	Ca ²⁺	Cl ⁻	NO ₂ ⁻	NO ₃ ⁻	SO ₄ ²⁻
BL	0.021	0.020	0.020	0.021	0.020	0.020	0.020	0.019	0.020
LM	0.070	0.061	0.062	0.063	0.061	0.062	0.061	0.061	0.061
SF	0.018	0.017	0.013	0.013	0.012	0.012	0.012	0.014	0.012
LJW	0.045	0.044	0.045	0.046	0.045	0.046	0.045	0.045	0.045
GM	0.016	0.029	0.017	0.017	0.015	0.017	0.016	0.016	0.016
ZF	0.048	0.136	0.029	0.027	0.027	0.024	0.024	0.024	0.024
WSOC	Na ⁺	NH ₄ ⁺	K ⁺	Mg ²⁺	Ca ²⁺	Cl ⁻	NO ₂ ⁻	NO ₃ ⁻	SO ₄ ²⁻
BL	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
LM	0.059	0.054	0.055	0.055	0.054	0.055	0.054	0.054	0.054
SF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LJW	0.067	0.067	0.067	0.068	0.067	0.068	0.067	0.067	0.067
GM	0.024	0.030	0.025	0.025	0.024	0.025	0.024	0.024	0.024
ZF	0.061	0.095	0.050	0.048	0.048	0.046	0.046	0.046	0.046

Table S5. Simulated combustion conditions

Samples	Date	period	Volume L/min	Pump, Volume m ³ /min	Temperature°C	Humidity%
BL	2017.8.08	9: 52- 11:52	566	50	25.7	75
LM	2017.8.15	10:10-12: 10	566	50	33	81
SF	2017.8.16	16: 36- 18: 36	566	50	36	78
LJW	2017.8.16	10:12-12:12	566	50	35	79
GM	2017.8.20	14: 10- 16:10	566	50	28	81
ZF	2017.8.20	16: 55- 18:55	566	50	38	80
Average					32.62	79.00
SD					4.39	2.08

Table S6. Non-carcinogenic health risk of WSPTMs in RCC particles

Table S6. Table Non-carcinogenic health risk of WSPTMs in RCC particles																			
Samples	Size µm	V		Cr(VI)		Co		As		Cd		Zn		Mn		Ba		HI	
		IEC	HQ	IEC	HQ	IEC	HQ	IEC	HQ	IEC	HQ	IEC	HQ	IEC	HQ	IEC	HQ		
LM	>7	8.74E-04	2.19E-03	2.62E-04	6.56E-04	7.58E-05	1.26E-02	2.20E-04	1.47E-02	2.36E-05	2.36E-03	1.12E-01	3.73E-05	4.92E-03	9.84E-03	4.88E-03	9.75E-02	1.40E-01	
	3.3-7.0	2.94E-04	7.34E-04	3.46E-04	8.64E-04	2.21E-05	3.69E-03	1.76E-04	1.17E-02	1.50E-05	1.50E-03	6.16E-02	2.05E-05	4.19E-03	8.38E-03	5.05E-03	1.01E-01	1.28E-01	
	2.0-3.3	9.26E-05	2.32E-04	2.79E-04	6.98E-04	9.52E-06	1.59E-03	2.68E-04	1.79E-02			5.31E-02	1.76E-05	5.23E-03	1.05E-02	1.44E-02	2.88E-01	3.19E-01	
	1.1-2.0	7.54E-05	1.89E-04	3.66E-04	9.14E-04	3.00E-05	5.00E-03	3.42E-04	2.28E-02			9.43E-02	3.13E-05	6.36E-03	1.27E-02	1.32E-02	2.64E-01	3.06E-01	
	<1.1	1.99E-04	4.97E-04	9.65E-05	2.41E-04	2.93E-04	4.89E-02	3.93E-03	2.62E-01	3.87E-05	3.87E-03	7.48E-01	2.48E-04	2.14E-02	4.29E-02	4.33E-01	8.66E+00	9.02E+00	
BL	>7	1.70E-04	4.24E-04	3.55E-04	8.86E-04	4.91E-05	8.19E-03	1.79E-04	1.19E-02			4.29E-02	1.43E-05	3.33E-03	6.66E-03	1.35E-02	2.69E-01	2.98E-01	
	3.3-7.0	8.45E-05	2.11E-04	5.53E-04	1.38E-03	4.00E-05	6.67E-03	2.54E-04	1.69E-02			4.31E-02	1.43E-05	1.98E-03	3.96E-03	1.31E-02	2.61E-01	2.90E-01	
	2.0-3.3	2.61E-05	6.51E-05	3.11E-04	7.77E-04	1.12E-04	1.86E-02	5.39E-04	3.59E-02	9.97E-05	9.97E-03	9.39E-02	3.12E-05	4.63E-03	9.26E-03	4.63E-03	9.26E-02	1.67E-01	
	1.1-2.0	2.74E-05	6.85E-05	3.56E-04	8.89E-04	1.12E-04	1.86E-02	6.30E-04	4.20E-02	1.30E-04	1.30E-02	1.06E-01	3.53E-05	1.48E-03	2.96E-03	4.28E-03	8.56E-02	1.63E-01	
	<1.1	1.89E-04	4.72E-04	3.01E-04	7.51E-04	3.97E-04	6.62E-02	2.85E-03	1.90E-01	3.67E-04	3.67E-02	2.91E-01	9.68E-05	1.94E-02	3.89E-02	5.91E-02	1.18E+00	1.51E+00	
SF	>7	1.16E-03	2.91E-03	2.32E-04	5.80E-04	6.97E-05	1.16E-02	1.58E-04	1.05E-02			1.06E-01	3.54E-05	2.49E-03	4.99E-03	5.20E-03	1.04E-01	1.35E-01	
	3.3-7.0	2.50E-04	6.26E-04	1.15E-04	2.88E-04	3.67E-05	6.11E-03	2.27E-04	1.51E-02	1.50E-05	1.50E-03	3.87E-02	1.29E-05	3.15E-03	6.29E-03	1.53E-03	3.06E-02	6.05E-02	
	2.0-3.3	8.74E-05	2.19E-04	1.85E-04	4.61E-04	1.20E-05	2.00E-03	1.55E-04	1.03E-02			7.12E-02	2.37E-05	4.83E-03	9.65E-03	1.15E-02	2.29E-01	2.52E-01	
	1.1-2.0	2.91E-05	7.28E-05	7.60E-05	1.90E-04	9.09E-06	1.51E-03	1.83E-04	1.22E-02	2.67E-05	2.67E-03	8.68E-02	2.89E-05	6.81E-03	1.36E-02	1.34E-02	2.67E-01	2.98E-01	
	<1.1	1.85E-04	4.64E-04	2.63E-04	6.57E-04	7.55E-05	1.26E-02	1.14E-03	7.60E-02	3.86E-05	3.86E-03	9.13E-01	3.03E-04	1.32E-02	2.64E-02	2.97E-01	5.94E+00	6.06E+00	
LJW	>7	2.48E-04	6.19E-04	2.29E-04	5.73E-04	3.04E-05	5.07E-03	1.61E-04	1.08E-02			6.16E-02	2.05E-05	3.39E-03	6.78E-03	1.67E-02	3.33E-01	3.57E-01	
	3.3-7.0	9.25E-05	2.31E-04	4.63E-04	1.16E-03	3.33E-06	5.55E-04	1.39E-04	9.26E-03			5.88E-02	1.95E-05	9.84E-04	1.97E-03	4.10E-03	8.20E-02	9.52E-02	
	2.0-3.3	6.89E-05	1.72E-04	2.42E-04	6.05E-04	9.83E-06	1.64E-03	1.58E-04	1.05E-02			5.38E-02	1.79E-05	1.41E-03	2.82E-03	1.35E-03	2.71E-02	4.29E-02	
	1.1-2.0	1.71E-06	4.28E-06	1.98E-04	4.96E-04	1.67E-05	2.78E-03	1.46E-04	9.71E-03			7.43E-02	2.47E-05	5.53E-03	1.11E-02	5.92E-03	1.18E-01	1.42E-01	
	<1.1	1.62E-04	4.06E-04	1.16E-04	2.91E-04	9.13E-05	1.52E-02	2.14E-03	1.43E-01	6.76E-05	6.76E-03	3.93E-01	1.31E-04	6.79E-03	1.36E-02	6.02E-03	1.20E-01	3.00E-01	
GM	>7	2.73E-04	6.82E-04	1.82E-04	4.55E-04	6.02E-05	1.00E-02	1.44E-04	9.62E-03			4.37E-02	1.45E-05	5.53E-03	1.11E-02	1.07E-02	2.13E-01	2.45E-01	
	3.3-7.0	1.38E-04	3.46E-04	1.86E-04	4.65E-04	4.51E-05	7.52E-03	9.83E-05	6.55E-03			4.25E-02	1.41E-05	2.62E-03	5.23E-03	8.66E-03	1.73E-01	1.93E-01	
	2.0-3.3	1.11E-04	2.78E-04	1.27E-04	3.17E-04	7.68E-06	1.28E-03	1.10E-04	7.33E-03			4.26E-02	1.42E-05	1.00E-03	2.00E-03	8.91E-03	1.78E-01	1.89E-01	
	1.1-2.0	1.26E-04	3.14E-04	2.25E-04	5.64E-04	5.88E-05	9.80E-03	3.29E-04	2.19E-02			7.98E-02	2.65E-05	3.60E-03	7.21E-03	2.25E-03	4.51E-02	8.49E-02	
	<1.1	6.59E-04	1.65E-03	3.05E-04	7.63E-04	2.48E-04	4.13E-02	1.47E-03	9.82E-02	5.02E-04	5.02E-02	3.23E-01	1.07E-04	3.20E-02	6.39E-02	1.18E-01	2.35E+00	2.61E+00	
ZF	>7	2.00E-04	5.01E-04	2.41E-04	6.02E-04	7.68E-06	1.28E-03	2.09E-04	1.40E-02			4.28E-02	1.42E-05	1.72E-03	3.44E-03	2.37E-03	4.74E-02	6.72E-02	
	3.3-7.0	1.09E-04	2.71E-04	3.08E-04	7.70E-04	2.61E-05	4.34E-03	1.97E-04	1.31E-02			4.93E-02	1.64E-05	1.48E-03	2.97E-03	1.92E-03	3.83E-02	5.98E-02	
	2.0-3.3	4.57E-05	1.14E-04	2.60E-04	6.50E-04			2.40E-04	1.60E-02			2.20E-02	7.29E-06	1.73E-03	3.47E-03	1.92E-03	3.83E-02	5.86E-02	
	1.1-2.0	6.23E-05	1.56E-04	1.47E-04	3.68E-04	7.88E-06	1.31E-03	5.73E-04	3.82E-02	3.38E-04	3.38E-02	4.71E-02	1.56E-05	3.80E-03	7.59E-03	3.97E-03	7.95E-02	1.61E-01	
	<1.1	5.43E-04	1.36E-03	2.08E-04	5.19E-04	3.69E-05	6.15E-03	3.69E-03	2.46E-01	2.30E-03	2.30E-01	1.87E-01	6.22E-05	1.62E-02	3.25E-02	1.11E-02	2.22E-01	7.39E-01	

Table S7. Carcinogenic health risk of WSPTMs in RCC particles

Table S7. Carcinogenic health risk of WSPTMs in RCC particles															
Sample	Size (µm)	V		Cr(VI)		Co		As		Cd		Pb		TCR	
		Child	Adult	Child	Adult	Child	Adult	Child	Adult	Child	Adult	Child	Adult	Child	Adult
LM	>7	6.74E-07	2.70E-06	2.92E-07	1.17E-06	6.34E-08	2.54E-08	8.77E-08	3.51E-07	3.95E-09	1.58E-08	1.51E-10	6.04E-10	1.12E-06	4.26E-06
	3.3-7.0	2.26E-07	9.05E-07	3.85E-07	1.54E-06	1.85E-08	7.39E-09	7.03E-08	2.81E-07	2.51E-09	1.00E-08	1.41E-10	5.64E-10	7.03E-07	2.75E-06
	2.0-3.3	7.14E-08	2.86E-07	3.11E-07	1.24E-06	7.95E-09	3.18E-09	1.07E-07	4.28E-07			1.14E-10	4.54E-10	4.98E-07	1.96E-06
	1.1-2.0	5.81E-08	2.32E-07	4.07E-07	1.63E-06	2.51E-08	1.00E-08	1.37E-07	5.46E-07			1.36E-10	5.44E-10	6.27E-07	2.42E-06
	<1.1	1.53E-07	6.12E-07	1.08E-07	4.30E-07	2.45E-07	9.80E-08	1.57E-06	6.27E-06	6.46E-09	2.58E-08	3.07E-09	1.23E-08	2.08E-06	7.45E-06
BL	TSP	1.18E-06	4.73E-06	1.50E-06	6.01E-06	3.60E-07	1.44E-07	1.97E-06	7.88E-06	1.29E-08	5.17E-08	3.61E-09	1.44E-08	5.03E-06	1.88E-05
	>7	1.31E-07	5.23E-07	3.95E-07	1.58E-06	4.11E-08	1.64E-08	7.13E-08	2.85E-07			3.95E-11	1.58E-10	6.38E-07	2.40E-06
	3.3-7.0	6.51E-08	2.61E-07	6.16E-07	2.46E-06	3.34E-08	1.34E-08	1.01E-07	4.06E-07			5.74E-11	2.30E-10	8.16E-07	3.14E-06
	2.0-3.3	2.01E-08	8.03E-08	3.46E-07	1.39E-06	9.34E-08	3.74E-08	2.15E-07	8.61E-07	1.67E-08	6.66E-08	1.54E-10	6.16E-10	6.92E-07	2.43E-06
	1.1-2.0	2.11E-08	8.45E-08	3.96E-07	1.58E-06	9.34E-08	3.74E-08	2.52E-07	1.01E-06	2.17E-08	8.69E-08	1.26E-10	5.02E-10	7.84E-07	2.80E-06
SF	<1.1	1.45E-07	5.82E-07	3.35E-07	1.34E-06	3.32E-07	1.33E-07	1.14E-06	4.55E-06	6.14E-08	2.45E-07	4.39E-10	1.76E-09	2.01E-06	6.85E-06
	TSP	3.83E-07	1.53E-06	2.09E-06	8.35E-06	5.93E-07	2.37E-07	1.78E-06	7.11E-06	9.97E-08	3.99E-07	8.15E-10	3.26E-09	4.94E-06	1.76E-05
	>7	8.96E-07	3.58E-06	2.58E-07	1.03E-06	5.82E-08	2.33E-08	6.31E-08	2.52E-07			4.41E-12	1.76E-11	1.28E-06	4.89E-06
	3.3-7.0	1.93E-07	7.71E-07	1.28E-07	5.14E-07	3.06E-08	1.23E-08	9.06E-08	3.63E-07	2.51E-09	1.00E-08			4.45E-07	1.67E-06
	2.0-3.3	6.74E-08	2.69E-07	2.06E-07	8.23E-07	1.00E-08	4.00E-09	6.17E-08	2.47E-07					3.45E-07	1.34E-06
LJW	1.1-2.0	2.24E-08	8.98E-08	8.47E-08	3.39E-07	7.59E-09	3.04E-09	7.30E-08	2.92E-07	4.46E-09	1.78E-08	3.07E-10	1.23E-09	1.93E-07	7.43E-07
	<1.1	1.43E-07	5.72E-07	2.93E-07	1.17E-06	6.31E-08	2.52E-08	4.55E-07	1.82E-06	6.46E-09	2.58E-08	5.55E-10	2.22E-09	9.61E-07	3.62E-06
	TSP	1.32E-06	5.28E-06	9.70E-07	3.88E-06	1.70E-07	6.78E-08	7.43E-07	2.97E-06	1.34E-08	5.37E-08	8.66E-10	3.46E-09	3.22E-06	1.23E-05
	>7	1.91E-07	7.64E-07	2.56E-07	1.02E-06	2.54E-08	1.02E-08	6.44E-08	2.58E-07					5.36E-07	2.05E-06
	3.3-7.0	7.13E-08	2.85E-07	5.16E-07	2.06E-06	2.78E-09	1.11E-09	5.55E-08	2.22E-07					6.45E-07	2.57E-06
GM	2.0-3.3	5.31E-08	2.12E-07	2.70E-07	1.08E-06	8.21E-09	3.28E-09	6.31E-08	2.52E-07					3.94E-07	1.55E-06
	1.1-2.0	1.32E-09	5.28E-09	2.21E-07	8.84E-07	1.39E-08	5.57E-09	5.82E-08	2.33E-07					2.94E-07	1.13E-06
	<1.1	1.25E-07	5.00E-07	1.30E-07	5.19E-07	7.63E-08	3.05E-08	8.55E-07	3.42E-06	1.13E-08	4.52E-08	1.73E-10	6.91E-10	1.20E-06	4.51E-06
	TSP	4.42E-07	1.77E-06	1.39E-06	5.57E-06	1.27E-07	5.07E-08	1.10E-06	4.38E-06	1.13E-08	4.52E-08	1.73E-10	6.91E-10	3.07E-06	1.18E-05
	>7	2.10E-07	8.41E-07	2.03E-07	8.11E-07	5.03E-08	2.01E-08	5.76E-08	2.30E-07					5.21E-07	1.90E-06
ZF	3.3-7.0	1.07E-07	4.26E-07	2.07E-07	8.30E-07	3.77E-08	1.51E-08	3.92E-08	1.57E-07					3.91E-07	1.43E-06
	2.0-3.3	8.57E-08	3.43E-07	1.41E-07	5.64E-07	6.41E-09	2.57E-09	4.39E-08	1.75E-07					2.77E-07	1.08E-06
	1.1-2.0	9.68E-08	3.87E-07	2.51E-07	1.00E-06	4.91E-08	1.96E-08	1.31E-07	5.25E-07			4.87E-11	1.95E-10	5.28E-07	1.94E-06
	<1.1	5.08E-07	2.03E-06	3.40E-07	1.36E-06	2.07E-07	8.28E-08	5.88E-07	2.35E-06	8.40E-08	3.36E-07	0.00E+00	0.00E+00	1.73E-06	6.16E-06
	TSP	1.01E-06	4.03E-06	1.14E-06	4.57E-06	3.50E-07	1.40E-07	8.60E-07	3.44E-06	8.40E-08	3.36E-07	4.87E-11	1.95E-10	3.44E-06	1.25E-05
ZF	>7	1.54E-07	6.17E-07	2.68E-07	1.07E-06	6.41E-09	2.57E-09	8.36E-08	3.35E-07					5.13E-07	2.03E-06
	3.3-7.0	8.36E-08	3.35E-07	3.43E-07	1.37E-06	2.18E-08	8.71E-09	7.85E-08	3.14E-07					5.27E-07	2.03E-06
	2.0-3.3	3.52E-08	1.41E-07	2.90E-07	1.16E-06			9.60E-08	3.84E-07					4.21E-07	1.68E-06
	1.1-2.0	4.80E-08	1.92E-07	1.64E-07	6.55E-07	6.58E-09	2.63E-09	2.29E-07	9.14E-07	5.65E-08	2.26E-07	1.27E-09	5.07E-09	5.05E-07	2.00E-06
	<1.1	4.19E-07	1.67E-06	2.31E-07	9.25E-07	3.08E-08	1.23E-08	1.47E-06	5.90E-06	3.84E-07	1.54E-06	2.41E-08	9.65E-08	2.56E-06	1.01E-05
	TSP	7.40E-07	2.96E-06	1.30E-06	5.19E-06	6.56E-08	2.62E-08	1.96E-06	7.84E-06	4.41E-07	1.76E-06	2.54E-08	1.02E-07	4.53E-06	1.79E-05