

SUPPORTING INFORMATION

Hexachlorocyclohexanes in Tree Bark across Chinese Agricultural

Regions: Spatial Distribution and Enantiomeric Signatures

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Table S1. Concentrations of individual and total HCHs in tree bark from other studies (min-max, mean, ng/g dry weight)

Sampling Site	α -HCH	β -HCH	γ -HCH	δ -HCH	Σ HCHs	Reference
Southeast Tibetan Plateau	BDL ^a -5.41 (1.5)	0.09-1.10 (0.46)	0.09-1.09 (0.5)	0.04-0.61 (0.19)	0.34-7.64 (2.65)	1
European countries (Germany, Norway, Poland and Russia)	8-120	-	-	-	-	2
Spain	< 0.1-3.5	< 0.1-0.6	< 0.1-2.6	-	-	3
Moldavia Province, Romania	2.0-20.3 (9.5)	3.9-90.5 (39.6)	5.7-25.7 (15.4)	0.7-29.3 (11.9)	12.4-131 (79.2)	4
Upper Yellow River (Inner Mongolia, Ningxia, Gansu, Qinghai)	0.12-1.2 (0.4)	0.21-3.8 (1.2)	0.13-1.2 (0.46)	0.07-0.47 (0.19)	0.55-4.5 (2.3)	5
Whole China	BDL ^a -16.6 (1.16)	0.274-73.2 (2.51)	BDL ^a -20.2 (1.67)	BDL ^a -17.3 (0.368)	1.38-127 (5.71)	This study

^aBDL, below detection limit.

Table S2. Concentration and Relative Abundance of HCHs in Tree Bark from Four Geographic Regions of China.

	Concentration (ng/g)					Relative Abundance (%)			
	α -HCH	β -HCH	γ -HCH	δ -HCH	Σ HCHs	α -HCH	β -HCH	γ -HCH	δ -HCH
East (n=42)	1.43	3.76	2.02	0.687	7.90	18.1	47.6	25.5	8.70
Central (n=31)	1.03	2.15	1.42	0.206	4.81	21.5	44.7	29.5	4.29
West (n=39)	0.994	1.49	1.52	0.231	4.24	23.5	35.2	35.9	5.45
Northeast (n=9)	1.08	2.35	1.51	BDL ^a	4.94	21.8	47.6	30.5	0

^aBDL, below detection limit.

Table S3. Correlation of Total and Individual HCH Concentrations in Tree Bark across China

	α -HCH	β -HCH	γ -HCH	δ -HCH
α -HCH	1			
β -HCH	0.585**	1		
γ -HCH	0.414**	0.557**	1	
δ -HCH	0.152	0.518**	0.349**	1
Σ HCHs	0.698**	0.904**	0.775**	0.510**

** . Correlation is significant at the 0.01 level (2-tailed).

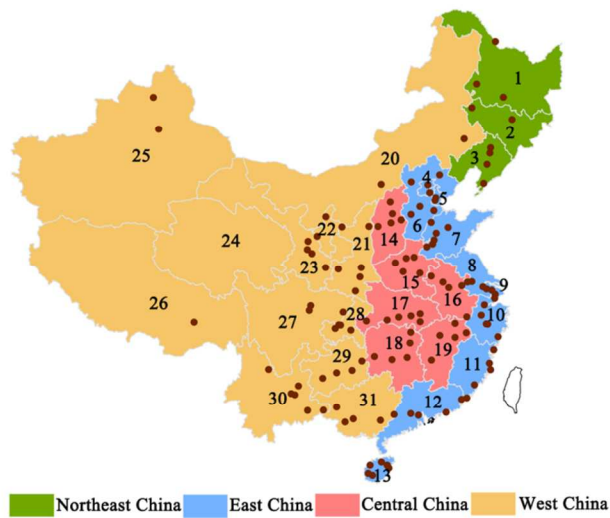
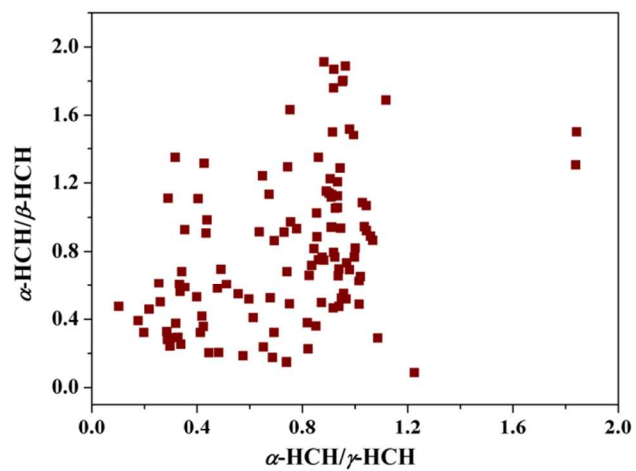
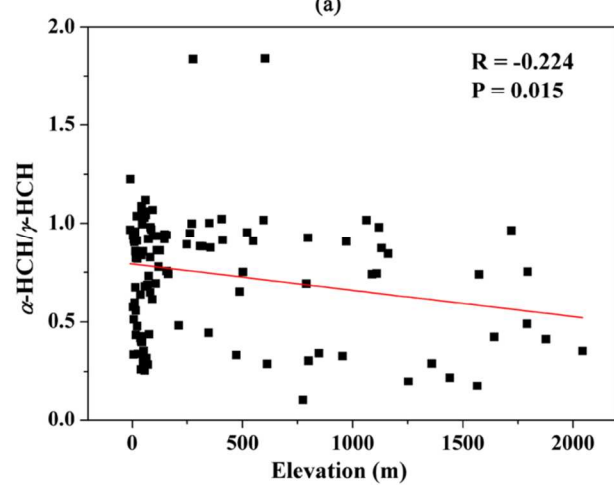


Figure S1. Locations of tree bark sampling sites in China ($n = 121$). The numbers 1-31 denote Heilongjiang, Jilin, Liaoning, Beijing, Tianjin, Hebei, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong, Hainan, Shanxi, Henan, Anhui, Hubei, Hunan, Jiangxi, Inner Mongolia, Shaanxi, Ningxia, Gansu, Qinghai, Xinjiang, Tibet, Sichuan, Chongqing, Guizhou, Yunnan, Guangxi Province, respectively.



(a)



(b)

Figure S2. (a) The ratios of HCH isomers in tree bark and (b) their correlations with sampling elevation.

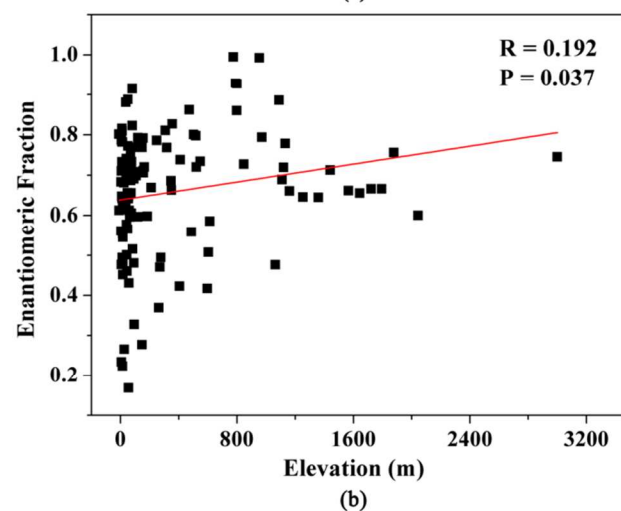
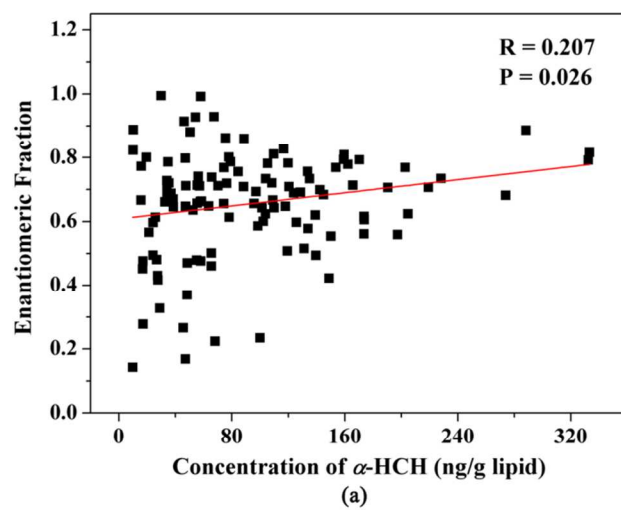


Figure S3. Correlations of the enantiomeric fraction of α -HCH with (a) its concentration and (b) sampling elevation.

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