

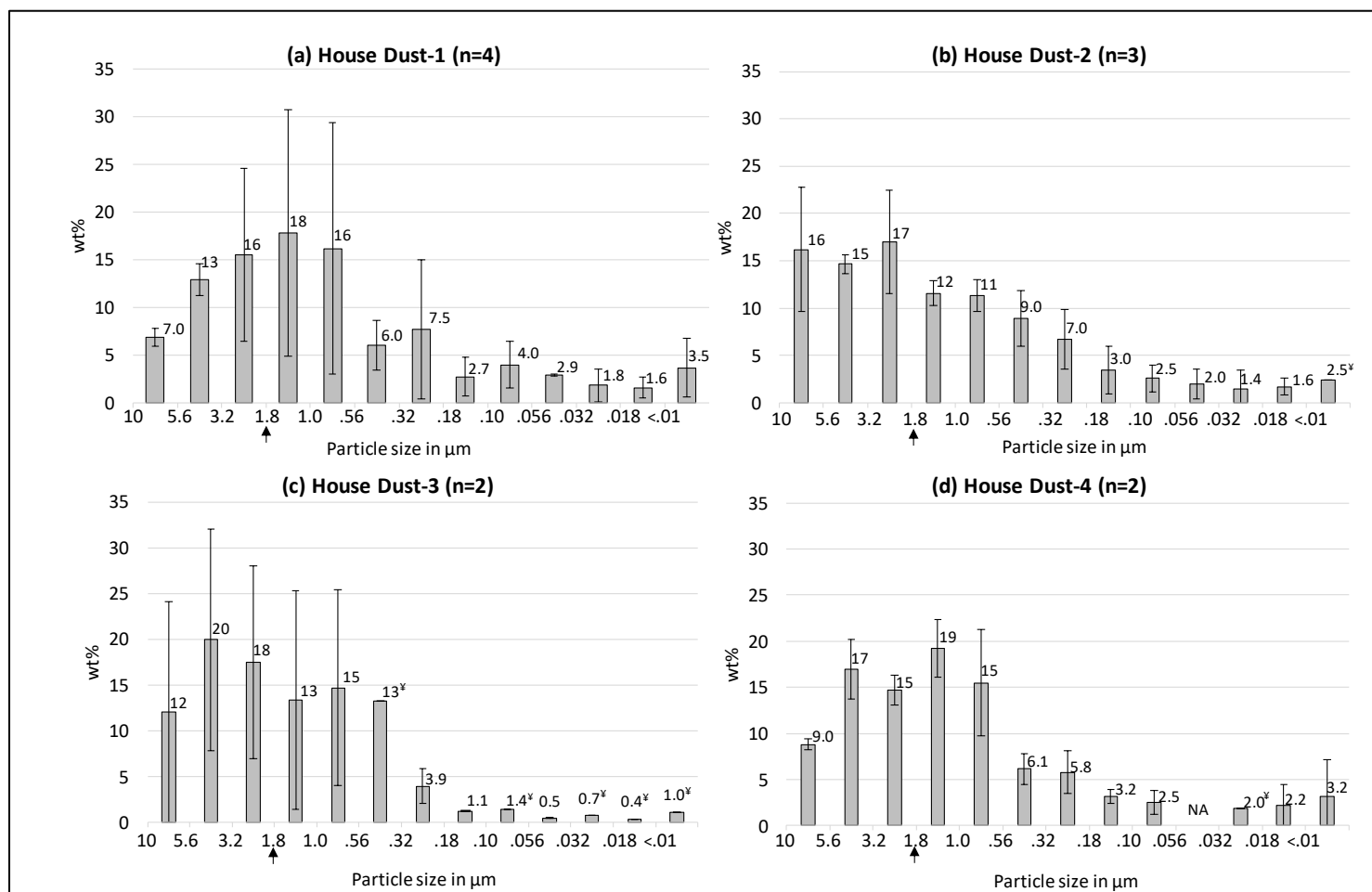


Figure S1. PM mass distribution profiles of four individual homes from the Canadian House Dust Study reported as an average of replicate runs (from $n = 2$ to $n = 4$) of the same sample. Weight of each fraction was divided by total weight of all fractions, expressed as % by weight (= wt%). Error bars = standard deviation of replicate filters of the corresponding particle size; fine particles defined as $<1.8 \mu\text{m}$ in this study (indicated by the vertical arrow). (NA = no filters passed QC-QC criteria, ¥ = only one filter passed).

Table S1. Fine and coarse metal concentration ($\mu\text{g/g}$) in individual samples of road dust showing the difference between PM_{fine} ($<1800\text{ nm}$ – 10 nm) and $\text{PM}_{\text{coarse}}$ ($>1800\text{ nm}$ – $10\text{ }\mu\text{m}$); p -values were obtained using a student- t test. Shaded values indicate the PM fraction that is showing the highest metal concentration.

		Al	B	Ba	Co	Cr	Fe	La	Mn	Mo	Sb	Sr	Ti	V	Zn
Arterial Rd	PM_{fine} (n=9)	37397	35.6	853	31.4	571	59222	23.3	1363	18.3	46.2	428	1693	119*	3589**
	sd_{fine}	5418	24.5	163	8.4	603	9169	4.7	188	11.5	8.1	83	228	15	396
	$\text{PM}_{\text{coarse}}$ (n=3)	37757	55.3	827	28.7	310	56307	25.3	1278	15.8	41.4	530*	1714	105	2829
	$\text{sd}_{\text{coarse}}$	8206	14.7	291	7.5	150	15201	8.0	294	5.5	15.7	115	483	28	907
Express way	PM_{fine} (n=8)	33490	30.3	548	34.1	1076	45766	20.8	1077	30.5	24.6	473	1793	70.8	5008
	sd_{fine}	4732	20.5	80	8.4	951	7227	3.7	247	70.4	6.1	53	343	13.3	783
	$\text{PM}_{\text{coarse}}$ (n=2)	36936	31.2	570	28.8	505	40754	20.4	986	17.0	20.9	498	1935	66.5	3422
	$\text{sd}_{\text{coarse}}$	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Local Rd 1	PM_{fine} (n=9)	35369	49.6	561	21.0	313	40635	20.0	1398	12.9	30.5	324	1492	75.4	1452
	sd_{fine}	9815	15.8	170	6.4	107	12106	6.3	421	3.4	8.9	97	423	21.4	374
	$\text{PM}_{\text{coarse}}$ (n=3)	28603	36.8	390	18.0	265	30319	17.4	1257	9.82	19.2	289	1240	56.5	1047
	$\text{sd}_{\text{coarse}}$	3721	6.3	136	2.9	115	10383	5.1	214	4.32	12.2	44	235	9.9	339
Local Rd 2	PM_{fine} (n=7)	35802	57.6**	616**	29.0	346	46435**	25.1*	1447**	13.2*	32.8**	274	1650*	118**	1729**
	sd_{fine}	5725	14.9	77	10.8	403	6131	3.4	233	4.7	3.0	34	495	28	228
	$\text{PM}_{\text{coarse}}$ (n=4)	30885	36.7	509	21.8	276	36178	20.6	1114	8.90	20.9	261	1232	67.7	1050
	$\text{sd}_{\text{coarse}}$	6392	5.2	49	3.0	43	5274	2.1	53	1.09	5.2	38	111	9.1	111
Road type average	PM_{fine}	35514	43.3	645	28.9	576.4	48014	22.3	1321	18.7	33.5	374.9	1656.8	95.9	2945
	sd_{fine}	1607	13	142	6	352	7908	2	167	8	9	92	125	26	1671
	$\text{PM}_{\text{coarse}}$ (n=4)	33545	40.0	574	24.3	339.1	40889	20.9	1159	12.9	25.6	394.5	1530.3	73.9	2087
	$\text{sd}_{\text{coarse}}$	4499	11	184	5	113	11131	3	136	4	11	139	352	21	1223

*significantly different at 95th confidence interval; ** significantly different at 99th confidence interval

Table S2. Fine and coarse metal concentration ($\mu\text{g/g}$) in individual samples of house dust showing the difference between PM_{fine} ($<1800 \text{ nm} - 10 \text{ nm}$) and $\text{PM}_{\text{coarse}}$ ($>1800 \text{ nm} - 10 \mu\text{m}$); p -values were obtained using a student- t test. Shaded values indicate the PM fraction that is showing the highest metal concentration.

		Al	B	Ba	Co	Cr	Fe	Mn	Mo	Sb	Sr	Ti	V	Zn
House dust 1	PM_{fine}	20963	74.1	289	40.0	743	13159	329	20.5	12.7	160	1259	18.0	1564
	sd_{fine}	4405	15.5	85.9	--	209	5557	194	9.4	5.4	82.8	611	10.7	523
	$\text{PM}_{\text{coarse}}$	19477	80.3	375	75.3	1312	15285	328	16.7	7.9	160	1296	23.9	2065
	$\text{sd}_{\text{coarse}}$	4261	7.8	29.4	--	248	2853	44.9	6.5	2.9	15.9	32.4	2.4	808
House dust 2	PM_{fine}	14589	119	125	<LOD	535	7357	242	9.92	9.28	101	979	17.3	3647
	sd_{fine}	7292	55.6	45.7	--	84.1	5391	189	9.8	9.0	63.9	726	9.5	4721
	$\text{PM}_{\text{coarse}}$	20878	173	184	<LOD	625	13513	503*	26.8	12.9	167	1638	25.5	16238*
	$\text{sd}_{\text{coarse}}$	1734	4.6	25.3	--	181	1840	61.3	6.4	2.18	16.1	242	2.2	4110
House dust 3	PM_{fine}	22815	113**	338	<LOD	1398	19030	345	17.0	29.1	219	937	37.9	6566
	sd_{fine}	9892	7.1	156	--	1977	7977	133	9.1	6.2	103	326	16.4	5127
	$\text{PM}_{\text{coarse}}$	17460	86.8	331	<LOD	419	18460	296	20.4	24.7	218	835	29.4	11535
	$\text{sd}_{\text{coarse}}$	2988	6.3	42.1	--	--	2278	37.8	4.4	3.5	36.7	106	3.4	2045
House Dust 4	PM_{fine}	10385	149.1	158	<LOD	253	9638	175	8.27	3.66	180.9	493	18.2	4438
	sd_{fine}	6219	72.7	11.2	--	118	3791	86.7	4.0	--	105	144	5.1	3249
	$\text{PM}_{\text{coarse}}$	13302	209.1	186	<LOD	356	13852*	247	17.1*	3.39	253.6	677*	22.1	13661**
	$\text{sd}_{\text{coarse}}$	1635	16.6	28.7	--	15.7	1239	26.6	1.8	1.73	49.8	31.3	2.5	1750
House dust 5	PM_{fine}	1904	20.3	207	<LOD	2208	5048	107	21.9	<LOD	48.7	150	5.0	4217
	sd_{fine}	-	--	169	--	878	4915	81.8	23.8	--	--	--	5.0	1695
	$\text{PM}_{\text{coarse}}$	8467	58.4	396	<LOD	1402	18024**	330**	44.6	<LOD	93.1	613	15.6*	19886*
	$\text{sd}_{\text{coarse}}$	2850	--	200	--	--	1094	28.8	19.9	---	--	472	3.3	10101
Average (n= 5)	PM_{fine}	14131	95.0	223	<LOD	1027	10847	239	15.5	13.7	142	764	19.3	4086
	sd_{fine}	8453	49.6	88.7	--	783	5468	101	6.2	10.9	67.4	439	11.8	1792
	$\text{PM}_{\text{coarse}}$	15917	121	295	<LOD	823	15827	341	25.1	12.2	178	1012	23.3	12677**
	$\text{sd}_{\text{coarse}}$	5050	65.5	103	--	499	2308	96.8	11.6	9.2	61.1	440	5.1	6700

*significantly different at 95th confidence interval; ** significantly different at 99th confidence interval