

Table 6: Specific pollutants released by facilities, amounts in kg and number of industrial facilities reporting these releases (in 2009), and estimated ORs of childhood leukemias in children living at ≤ 2.5 km from industries releasing these substances.

Pollutant	CAS No. ^a	IARC Group ^b	Chemical substance type	Air		Water		Individuals residing at ≤ 2.5 km					
				Kg	Facilities	Kg	Facilities	Controls (n)	Cases (n)	OR (95%CI) ^c	p-value ^d	p-BH ^e	p-BY ^f
1,1,1-trichloroethane	71-55-6		VOCs/Solvents	0.5	1	0	0	51	0	0 (0-inf)	0.971	0.975	1.000
1,2,3,4,5,6-hexachlorocyclohexane	608-73-1	2B	POPs	0.1	2	0.5	10	165	10	1.46 (0.75-2.86)	0.265	0.455	1.000
1,2-dichloroethane	107-06-2	2B	VOCs/Solvents	9870	3	379	23	579	32	1.34 (0.89-2.01)	0.164	0.338	1.000
Alachlor	15972-60-8		Pesticides	0	0	0.03	4	86	4	1.13 (0.41-3.12)	0.819	0.975	1.000
Aldrin	309-00-2		Pesticides/POPs	0	0	8	9	120	6	1.20 (0.52-2.80)	0.666	0.975	1.000
Anthracene	120-12-7		PACs	82	13	1	17	571	34	1.44 (0.96-2.14)	0.078	0.169	0.823
Antimony	7440-36-0		Metals	74	28	0	0	447	21	1.14 (0.70-1.85)	0.596	0.953	1.000
Arsenic and compounds	7440-38-2	1	Metals	943	136	1613	117	1833	114	1.50 (1.14-1.98)	0.004	0.030	0.146
Atrazine	1912-24-9		Pesticides	0	0	5	17	396	30	1.83 (1.20-2.80)	0.005	0.030	0.146
Benzene	71-43-2	1	VOCs/Solvents	44331	75	56	18	792	49	1.50 (1.05-2.13)	0.025	0.078	0.378
Benzo(a)pyrene	50-32-8	1	POPs/PACs	0	0	0.6	3	57	6	2.59 (1.09-6.16)	0.031	0.084	0.407
Benzo(b)fluoranthene	205-99-2		POPs/PACs	0	0	0.6	3	57	6	2.59 (1.09-6.16)	0.031	0.084	0.407
Benzo(g,h,i)perylene	191-24-2		PACs	0	0	2	13	304	22	1.76 (1.09-2.83)	0.021	0.069	0.337
Benzo(k)fluoranthene	207-08-9		POPs/PACs	0	0	0.6	3	57	6	2.59 (1.09-6.16)	0.031	0.084	0.407
Brominated diphenylethers			POPs	0	0	2	11	123	6	1.18 (0.51-2.73)	0.703	0.975	1.000
Cadmium and compounds	7440-43-9	1	Metals	637	144	301	119	1837	114	1.50 (1.14-1.98)	0.004	0.030	0.146
Chlordane	57-74-9	2B	Pesticides/POPs	0	0	0.1	7	103	4	0.94 (0.34-2.60)	0.905	0.975	1.000
Chlorfenvinphos	470-90-6		Pesticides	0	0	1	10	122	6	1.19 (0.51-2.75)	0.692	0.975	1.000
Chlorpyrifos	2921-88-2		Pesticides	0	0	0.9	9	105	4	0.92 (0.33-2.55)	0.877	0.975	1.000
Chromium and compounds	7440-47-3	1	Metals	4193	180	5077	208	2489	153	1.49 (1.15-1.93)	0.003	0.030	0.146
Cobalt and compounds	7440-48-4	2B	Metals	41	27	0	0	404	17	1.02 (0.60-1.73)	0.943	0.975	1.000
Copper and compounds	7440-50-8		Metals	5387	133	7529	207	2269	140	1.49 (1.15-1.95)	0.003	0.030	0.146
DDT	50-29-3	2B	Pesticides/POPs	0	0	0.02	5	102	4	0.95 (0.34-2.62)	0.920	0.975	1.000
Di-(2-ethyl hexyl) phthalate	117-81-7	2B	Plasticizers	759	12	6	12	433	30	1.67 (1.10-2.55)	0.017	0.061	0.296
Dichloromethane	75-09-2	2B	VOCs/Solvents	45229	17	37	9	516	35	1.65 (1.11-2.45)	0.014	0.058	0.280
Dieldrin	60-57-1		Pesticides/POPs	0	0	0.4	8	103	4	0.94 (0.34-2.60)	0.905	0.975	1.000
Diuron	330-54-1		Pesticides	0	0	173	17	468	35	1.80 (1.21-2.69)	0.004	0.030	0.146
Endosulfan	115-29-7		Pesticides/POPs	0	0	0.5	9	105	4	0.92 (0.33-2.55)	0.877	0.975	1.000
Endrin	72-20-8		Pesticides/POPs	0	0	0.4	8	103	4	0.94 (0.34-2.60)	0.905	0.975	1.000
Ethyl benzene	100-41-4	2B	VOCs/Solvents	0	0	8387	23	246	13	1.28 (0.71-2.31)	0.420	0.703	1.000
Ethylene oxide	75-21-8	1	VOCs	18159	3	0	0	52	2	0.94 (0.23-3.94)	0.936	0.975	1.000
Fluoranthene	206-44-0		PACs	0	0	10	31	468	36	1.86 (1.26-2.77)	0.002	0.030	0.146
Heptachlor	76-44-8	2B	Pesticides/POPs	0	0	0.4	7	89	4	1.09 (0.39-3.02)	0.870	0.975	1.000
Hexabromobiphenyl	36355-1-8		POPs	0	0	0.3	6	89	4	1.09 (0.39-3.02)	0.870	0.975	1.000
Hexachlorobenzene	118-74-1	2B	POPs	0.1	1	1	11	136	5	0.89 (0.36-2.22)	0.806	0.975	1.000
Hexachlorobutadiene	87-68-3		VOCs	0	0	2	11	122	6	1.19 (0.51-2.75)	0.692	0.975	1.000
Indeno(1,2,3-cd)pyrene	193-39-5	2B	PACs	0	0	0.6	3	57	6	2.59 (1.09-6.16)	0.031	0.084	0.407
Isodrin	465-73-6		Pesticides	0	0	0.01	4	100	4	0.97 (0.35-2.67)	0.949	0.975	1.000
Isoproturon	34123-59-6		Pesticides	0	0	2	4	154	10	1.57 (0.80-3.07)	0.189	0.377	1.000
Lead and compounds	7439-92-1	2A	Metals	7875	156	2622	158	2046	125	1.48 (1.13-1.94)	0.005	0.030	0.146
Lindane	58-89-9		Pesticides/POPs	0.1	1	0.5	4	156	10	1.55 (0.79-3.03)	0.202	0.382	1.000
Manganese and compounds	7439-96-5		Metals	344	34	0	0	411	20	1.18 (0.72-1.93)	0.512	0.837	1.000
Mercury and compounds	7439-97-6		Metals	889	123	86	85	1620	96	1.43 (1.07-1.91)	0.015	0.058	0.280
Mirex	2385-85-5	2B	Pesticides/POPs	0	0	0.01	4	100	4	0.97 (0.35-2.67)	0.949	0.975	1.000
Naphthalene	91-20-3	2B	VOCs	1010	20	113	19	621	38	1.48 (1.00-2.17)	0.048	0.115	0.561
Nickel and compounds	7440-02-0	1	Metals	18415	161	11279	214	2487	150	1.46 (1.12-1.89)	0.005	0.030	0.146
Non-methane volatile organic compounds			VOCs	24361743	522	0	0	2989	171	1.39 (1.07-1.79)	0.012	0.054	0.262

Nonylphenol and nonylphenol ethoxylates	25154-52-3		Non-HPCs	0	0	587	30	711	46	1.56 (1.09-2.24)	0.015	0.058	0.280
Octylphenols and octylphenol ethoxylates	1806-26-4		Non-HPCs	0	0	2028	32	660	46	1.69 (1.17-2.42)	0.005	0.030	0.146
Organotin compounds			Metals/Pesticides/POPs	0	0	198	23	397	23	1.39 (0.87-2.22)	0.164	0.338	1.000
Particulate matter (PM ₁₀)		1	Other	3135218	409	0	0	2513	138	1.33 (1.02-1.73)	0.036	0.089	0.433
PCDD + PCDF (dioxins + furans)		1	POPs	0.04	69	0.0005	11	1102	72	1.58 (1.16-2.16)	0.004	0.030	0.146
Pentachlorobenzene	608-93-5		Pesticides/POPs	0	0	1	10	118	6	1.23 (0.53-2.86)	0.629	0.975	1.000
Pentachlorophenol	87-86-5	2B	Pesticides	0	0	31	5	159	10	1.52 (0.78-2.98)	0.219	0.405	1.000
Polychlorinated biphenyls	1336-36-3	1	POPs	2	17	0.1	9	465	25	1.30 (0.83-2.04)	0.250	0.449	1.000
Polycyclic aromatic hydrocarbons		1	PACs/POPs	2506	73	777	64	1274	81	1.54 (1.14-2.08)	0.005	0.030	0.146
Simazine	122-34-9		Pesticides	0	0	8	22	423	29	1.66 (1.08-2.54)	0.020	0.069	0.337
Tetrachloroethylene	127-18-4	2A	VOCs/Solvents	419	5	54	18	587	40	1.65 (1.13-2.41)	0.010	0.047	0.229
Tetrachloromethane	56-23-5	2B	Other	2	3	43	2	218	20	2.23 (1.35-3.68)	0.002	0.030	0.146
Thallium	7440-28-0		Metals	36	13	0	0	271	12	1.07 (0.58-1.98)	0.825	0.975	1.000
Toluene	108-88-3		VOCs/Solvents	0	0	4982	30	516	33	1.55 (1.03-2.32)	0.036	0.089	0.433
Total suspended particulate matter		1	Other	4192306	153	0	0	1249	70	1.36 (0.99-1.83)	0.056	0.126	0.611
Tributyltin and compounds			Pesticides	0	0	0.6	5	98	4	0.98 (0.36-2.72)	0.975	0.975	1.000
Trichlorobenzenes	12002-48-1		VOCs/Solvents	0	0	1	11	192	9	1.13 (0.56-2.27)	0.732	0.975	1.000
Trichloroethylene	79-01-6	1	VOCs/Solvents	1489	8	4494	15	265	15	1.38 (0.79-2.41)	0.260	0.455	1.000
Trichloromethane	67-66-3	2B	VOCs/Solvents	31	6	145	28	542	25	1.11 (0.71-1.74)	0.645	0.975	1.000
Trifluralin	1582-09-8		Pesticides	0	0	0.004	3	86	4	1.13 (0.41-3.12)	0.819	0.975	1.000
Triphenyltin and compounds			Pesticides	0	0	0.03	3	86	4	1.13 (0.41-3.12)	0.819	0.975	1.000
Vanadium	7440-62-2		Metals	136	26	0	0	330	19	1.39 (0.84-2.31)	0.198	0.382	1.000
Vinyl chloride	75-01-4	1	VOCs	46065	6	907	11	194	7	0.87 (0.40-1.91)	0.736	0.975	1.000
Xylenes	1330-20-7		Solvents	0	0	71	21	422	27	1.55 (1.00-2.40)	0.050	0.117	0.569
Zinc and compounds	7440-66-6		Metals	94594	137	41684	302	2629	156	1.44 (1.11-1.86)	0.006	0.032	0.157

^aChemical Abstracts Service registry number. When the pollutant is a group of substances, the CAS is not specified.

^bIARC carcinogenic classification.

^cORs were estimated from a mixed multiple logistic regression model that included year of birth, sex, and autonomous region of residence (as a random effect).

^dORs were estimated from various mixed multiple logistic regression models (an independent model for each of the pollutants), that included year of birth, sex, and autonomous region of residence (as a random effect).

^ep-value associated with hypothesis test for the mixed multiple logistic regression model.

^fp-value adjusted by Benjamini & Hochberg's method.

^gp-value adjusted by Benjamini & Yekutieli's method.