atmosphere

Supplementary Materials:

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Chemical compounds identified in the literature

To describe the potential risk for panelists, this study focuses on non-carcinogenic effects related to exposure to landfill samples. However, to supply additional information, the presence of compounds considered carcinogenic and suspected carcinogenic, according to the definition supplied in Part 3 of Annex VI to EU Regulation (EC) No 1272/2008, is highlighted in the following tables. In particular, based on the above-mentioned regulation, the compounds were defined as:

Carcinogenic if the compound is classified as a carcinogen of category 1A or 1B.

Suspected to have carcinogenic potential for humans if the compound is classified as a carcinogen of category 2.

The compounds not belonging to the categories established by the EU Regulation have been left blank. The compounds not available in the EU Regulation are reported in the table as not available.

Table S1. Chemical compounds identified from biogas emissions reported in scientific literature. In the table, the maximum concentration observed, the TLV and HQ values, and the carcinogenic definition are reported, according to EU Regulation (EC) No 1272/2008. The HQ values reported are used to establish the HI value for the odor source considered.

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.83E - 01	1000	1250	7.83E - 04	Not available
1,1,2-Trichloroethane	79-00-5	3.30E + 00	10		3.30E - 01	
1,1,3,3-Tetramethylcyclopentane	50876-33-0	6.00E - 05				Not available
1,1,3-Trimethylcyclohexane	3073-66-3	1.15E + 00				Not available
1,1-Dichloroethane	75-34-3	1.09E + 02	100		1.09E + 00	
1,1-Dimethylcyclopropane	1630-94-0	2.38E - 01				Not available
1,2,3-Trimethylbenzene	526-73-8	5.00E - 04	25		2.00E - 05	Not available
1,2,4-Trimethylbenzene	95-63-6	2.40E - 04	25		9.60E - 06	
1,2,4-Trimethylcyclohexane	2234-75-5	6.51E - 01				Not available
1,2,4-Trimethylcyclopentane	4850-28-6	3.07E - 01				Not available
1,2-Dichloro-1,1,2-trifluoroethane	354-23-4	8.67E - 02				Not available
1,2-Dichlorobenzene	95-50-1	9.84E - 01	25	50	3.94E - 02	
1,2-Dichloroethane	107-06-2	2.52E - 02	10		2.52E - 03	Carc. 1B
1,2-Dichloroethene	540-59-0	4.59E + 01	200		2.29E - 01	

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
1,2-Dichloropropane	78-87-5	1.30E - 02	10		1.30E - 03	Carc. 1B
1,2-Dimethyl-3-(1-methylethyl), cyclopentane	489-20-3	1.15E + 00				Not available
1,2-Dimethylcyclohexane	583-57-3	2.90E - 01				Not available
1,2-Dimethylcyclopentane	2452-99-5	2.32E - 01				Not available
1,2-Dimethylcyclopropane	2511-95-7	1.27E - 01				Not available
1,3,5-Trimethyl benzene	108-67-8	1.08E + 01	25		4.31E - 01	
1,3,5-Trimethylcyclohexane	1839-63-0	1.13E + 00				Not available
1,3-Dichlorobenzene	541-73-1	2.00E - 04				
1,3-Diethylbenzene	141-93-5	3.01E - 05				Not available
1,3-Dimethylcyclohexane	591-21-9	4.54E - 01				Not available
1,3-Dimethylcyclopentane	2453-00-1	5.55E - 01				Not available
1,3-Pentadiene	504-60-9	6.46E - 03				Not available
1,4-Dimethylcyclohexane	589-90-2	1.58E + 00				
1-Butene	106-98-9	5.52E - 01	250		2.21E - 03	
1-Chloro-1,1-difluoroethane	75-68-3	7.54E + 00				Not available
1-Chloro-1-fluoroethane	1615-75-4	5.15E - 01				Not available
1-Ethyl-2-methylbenzene	611-14-3	2.16E + 00				Not available
1-Ethyl-2-methylcyclohexane	3728-54-9	4.04E + 00				Not available
1-Ethyl-2-methylcyclopentane	930-90-5	5.81E - 01				Not available
1-Ethyl-3-methylcyclohexane	3728-55-0	2.59E + 00				Not available
1-Ethyl-3-methylcyclopentane	3726-47-4	5.19E - 01				Not available
1-Ethyl-4-methylcyclohexane	3728-56-1	1.24E + 00				Not available
1-Heptene	592-76-7	7.12E - 01	400	500	1.78E - 03	Not available
1-Hexene	592-41-6	5.64E - 01	50		1.13E - 02	Not available
1-Methyl-2-propylbenzene	1074-17-5	6.88E - 01				Not available
1-Methyl-2-propylcyclopentane	932-44-5	6.47E - 01				Not available
1-Methyl-3-propyl benzene	1074-43-7	5.38E - 01				Not available

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
1-Methyl-4-(1-methylethyl)-cyclohexane	99-82-1	1.13E + 00				Not available
1-Pentene	109-67-1	4.53E - 01	1000		4.53E - 04	Not available
1-Propanol	71-23-8	2.23E + 00	100		2.23E - 02	
1-Propene	115-07-1	6.39E - 03	500		1.28E - 05	
2,2-Dimethylheptane	1071-26-7	5.34E - 02	200		2.67E - 04	Not available
2,2-Dimethylpentane	590-35-2	1.71E - 02	400	500	4.27E - 05	
2,3,4-trimethylpentane	565-75-3	4.86E - 01	300		1.62E - 03	
2,3,6-Trimethyloctane	62016-33-5	1.90E - 04				Not available
2,3-Dimethylbutane	79-29-8	9.36E - 03	500	1000	1.87E - 05	
2,3-Dimethylheptane	3074-71-3	2.21E + 00	200		1.11E - 02	Not available
2,3-Dimethylhexane	584-94-1	4.00E - 01	300		1.33E - 03	
2,3-Dimethyloctane	7146-60-3	9.45E - 01				Not available
2,4,4-trimethylpentane	540-84-1	4.05E - 01	300		1.35E - 03	
2,4,6-trimethylheptane	2613-61-8	1.14E + 00				Not available
2,4-Dimethylheptane	2213-23-2	6.33E - 01	200		3.17E + 00	Not available
2,4-Dimethylhexane	589-43-5	5.22E - 01	300		1.74E - 03	
2,4-Dimethylpentane	108-08-7	6.59E - 03	400	500	1.65E - 05	
2,5-Dimethylfuran	625-86-5	1.19E + 00				Not available
2,5-Dimethylhexane	592-13-2	8.97E - 02	300		2.99E - 04	
2,6,10-Trimethyldodecane	3891-98-3	9.00E - 05				Not available
2,6-Dimethylbenzaldehyde	1123-56-4	7.00E - 05				Not available
2,6-Dimethylheptane	1072-05-5	1.86E + 00	200		9.30E - 03	Not available
2,6-Dimethylnonane	17302-28-2	1.25E + 00				Not available
2,6-Dimethyloctane	2051-30-1	1.04E + 01				Not available
2-Butanol	78-92-2	1.08E + 01	100		1.08E - 01	
2-Butanone	78-93-3	1.68E + 01	200	300	8.38E - 02	
2-Butene	107-01-7	3.34E - 01	250		1.34E - 03	
2-Ethyl furan	3208-16-0	1.00E - 05				Not available
2-Ethyl-1,3-dimethylbenzene	2870-04-4	1.64E + 01				Not available
2-Ethylcycloheptanone	3183-41-3	8.75E - 01				Not available
2-Hexanone	591-78-6	5.89E - 01	5	10	1.18E - 01	

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
2-Hexene	4050-45-7	2.76E - 01				Not available
2-Methyl-1,3-butadiene	78-79-5	1.00E + 00				Carc. 1A
2-Methyl-1,3-dioxolane	497-26-7	6.46E - 03				Not available
2-Methyl-1-butene	563-46-2	7.70E - 02				Not available
2-Methyl-1-pentene	763-29-1	1.04E + 00				Not available
2-Methyl-1-propene	115-11-7	1.22E + 00	250		4.87E - 03	
2-Methyl-5-(1-methylethyl)-cyclohexanone	59471-80-6	6.00E - 05				Not available
2-Methylbutane	78-78-4	6.98E + 00	600		1.16E - 02	
2-Methyldecane	6975-98-0	4.36E - 01				Not available
2-Methylheptane	592-27-8	1.23E + 00	300		4.10E - 03	
2-Methylhexane	591-76-4	7.23E - 01	400	500	1.81E - 03	
2-Methylnonane	871-83-0	2.47E + 00				Not available
2-Methylpentane	107-83-5	1.93E - 01	500	1000	3.86E - 04	
2-Methylpropyl-benzene	538-93-2	5.10E - 01				Not available
2-Pentene	109-68-2	4.85E - 01				Not available
2-Propanol	67-63-0	4.44E + 00	200	400	2.22E - 02	
2-Propylthiophene	1551-27-5	2.50E + 00				Not available
3,5-Dimethyloctane	15869-93-9	4.29E - 01				Not available
3-Ethylhexane	619-99-8	1.22E - 01	300		4.07E - 04	
3-Ethylpentane	617-78-7	4.41E - 01	400	500	1.10E - 03	
3-Methyldecane	13151-34-3	8.16E - 01				Not available
3-Methylheptane	589-81-1	1.47E + 00	300		4.90E - 03	
3-Methylhexane	589-34-4	8.03E - 01	400	500	2.01E - 03	
3-Methylnonane	5911-04-6	4.04E + 00				Not available
3-Methyloctane	2216-33-3	5.30E + 00	200		2.65E - 02	Not available
3-Methylpentane	96-14-0	1.41E + 00	500	1000	2.82E - 03	
3-Pentanone	96-22-0	4.03E - 02	200	300	2.01E - 04	
4,5-Dipropyloctane	20905-05-09	1.09E - 04				Not available
4,7-Dimethylundecane	17301-32-5	3.70E - 04				Not available
4-Methyl-2-pentanone	108-10-1	2.42E + 00	20	75	1.21E - 01	
4-Methylcyclohexanone	589-92-4	3.70E - 04				Not available

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
4-Methyldecane	2847-72-5	1.84E + 00				Not available
4-Methylnonane	17301-94-9	7.47E + 00				Not available
4-Methyloctane	2216-34-4	1.18E - 01	200		5.92E - 04	Not available
5-Methyldecane	13151-35-4	1.83E - 01				Not available
6-Pentadecen-1-ol	64437-42-9	1.90E - 04				Not available
7-Methyl-3,4-octadiene	37050-05-8	7.20E - 04				Not available
Acetaldehyde	75-07-0	6.99E - 02		25	2.80E - 03	Carc. 1B
Acetic acid	64-19-7	7.12E - 01	10	15	7.12E - 02	
Acrolein	107-02-8	4.38E - 02		0.1	4.38E - 01	
Ammonia	7664-41-7	1.80E + 00	25	35	7.20E - 02	
Aniline	62-53-3	5.00E - 03	2		2.50E - 03	Carc. 2
Benzaldehyde	100-52-7	3.00E - 03				
Benzene	71-43-2	3.72E + 00	0.5	2.5	7.43E + 00	Carc. 1A
Benzyl chloride	100-44-7	5.00E - 03	1		5.00E - 03	Carc. 1B
Butanoic acid	107-92-6	1.73E - 02				
Butanol	71-36-3	4.94E + 00	20		2.47E - 01	
Butyl acetate	123-86-4	8.21E - 03	150	200	5.47E - 05	
Camphene	79-92-5	7.60E + 01				Not available
Carbon disulphide	75-15-0	5.35E + 00	1		5.35E + 00	
Chlorodifluoromethane	75-45-6	1.58E + 02	1000		1.58E - 01	Not available
Chloroethane	75-00-3	3.03E + 00	100		3.03E - 02	Carc. 2
Chloroethene	75-01-4	3.40E + 01	1		3.40E + 01	Carc. 1A
Chlorofluoromethane	593-70-4	3.43E + 01				Not available
Cinnamaldehyde	14371-10-9	6.00E - 05				Not available
Cis-1,3-Dimethylcyclohexane	638-04-0	4.54E - 01				Not available
Cyclobutane	287-23-0	2.12E - 01	1000		2.12E - 04	Not available
Cycloheptane	287-92-3	1.50E + 00				
Cyclohexane	110-82-7	9.01E + 00	100		9.01E - 02	
Cyclopentene	142-29-0	1.08E - 03				Not available
Decahydro-2-methylnaphthalene	2958-76-1	2.20E - 02				Not available
Decahydronaphthalene	91-17-8	1.85E - 01				Not available
Decamethylcyclopentasiloxane	541-02-6	7.19E - 02	10		7.19E - 03	Not available

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Decamethyltetrasiloxane	141-62-8	7.87E - 04				Not available
Delta-3-Carene	13466-78-9	3.66E + 00	20		1.83E - 01	Not available
Dichlorodifluoromethane	75-71-8	4.67E + 01	1000		4.67E - 02	Not available
Dichloromethane	75-09-2	2.45E + 01	50		4.89E - 01	Carc. 2
Diethyl benzene	25340-17-4	2.63E - 01				Not available
Diethyl ether	60-29-7	7.59E - 01	400	500	1.90E - 03	
Diethyl phthalate	84-66-2	7.00E - 05	0.55		1.27E - 04	Not available
Dimethoxymethane	109-87-5	1.30E - 04	1000		1.30E - 07	Not available
Dimethyl disulphide	624-92-0	2.77E - 01	0.5		5.54E - 01	Not available
Dimethyl ether	115-10-6	2.18E - 01				
Dimethyl pentene	762-62-9	1.77E - 01				Not available
Dimethyl sulphide	75-18-3	2.26E + 01	10		2.26E + 00	Not available
Dimethyl trisulfide	3658-80-8	4.00E - 04				Not available
Dodecane	112-40-3	2.58E - 01				Not available
Ethanol	64-17-5	6.86E - 01		1000	6.86E - 04	
Ethyl acetate	141-78-6	1.54E - 01	400		3.86E - 04	
Ethyl cyclohexane	1678-91-7	4.43E + 00				Not available
Ethyl cyclopentane	1640-89-7	5.20E - 01				Not available
Ethyl cyclopropane	1191-96-4	4.02E + 00				Not available
Ethyl disulphide	110-81-6	1.68E - 01				Not available
Ethyl toluene	622-96-8	5.13E - 01				Not available
Ethylbenzene	100-41-4	1.37E + 01	20		6.83E - 01	
Eucalyptol	470-82-6	3.00E - 05				Not available
Formaldehyde	50-00-0	4.89E - 02	0.1	0.3	4.89E - 01	Carc. 1B
Furan	110-00-9	2.16E + 00				Carc. 1B
Furfuryl alcohol	98-00-0	2.27E - 03	0.2		1.14E - 02	Carc. 2
Hexachlorobutadiene	87-68-3	1.00E - 03	0.02		5.00E - 02	Not available
Hexadecane	544-76-3	1.08E - 02				Not available
Hexaldehyde	66-25-1	1.12E - 02				Not available

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Hexamethylcyclotrisiloxane	541-05-9	4.95E - 02	0.3		1.50E - 01	Not available
Hexamethyldisiloxane	107-46-0	1.97E - 01				Not available
Hydrogen sulphide	7783-06-4	5.14E + 03	1	5	5.14E + 03	Not available
Isobutane	75-28-5	1.49E + 00		1000	1.49E - 03	
Isopropyl benzene	98-82-8	4.11E - 01	50		8.21E - 03	
Isovaleraldehyde	590-86-3	2.30E - 03				Not available
Isovaleric acid	503-74-2	6.90E - 03				Not available
d-Limonene	5989-27-5	9.49E + 00				
Longifolene	475-20-7	1.32E - 03				Not available
Methanethiol	74-93-1	7.12E + 00	0.5		1.42E + 01	
Methanol	67-56-1	4.32E - 02	200	250	2.16E - 04	
Methyl butyrate	623-42-7	1.41E - 01				Not available
Methyl cycloheptane	4126-78-7	2.24E - 01				Not available
Methyl cyclopentane	96-37-7	5.03E - 01	500	1000	1.01E - 03	Not available
Methyl Furan	534-22-5	1.13E - 01				Not available
Methyl styrene	98-83-9	2.07E - 01	10		2.07E - 02	
Methylamine	74-89-5	7.66E - 02	5	15	1.53E - 02	
Methylcyclobutane	598-61-8	3.97E - 02				Not available
Methylcyclohexane	108-87-2	2.33E + 00	400		5.82E - 03	
Methylcyclopropene	3100-04-07	3.69E + 01				Not available
Methyl-ethyl cyclohexane	696-29-7	8.91E - 03				Not available
Methyl-propyl cyclohexane	4258-93-9	1.86E + 00				Not available
m-Xylene	108-38-3	5.10E + 00	100	150	5.10E - 02	
Naphthalene	91-20-3	7.82E - 03	10		7.82E - 04	Carc. 2
n-Butane	106-97-8	7.69E + 00	1000		7.69E - 03	
n-Butyraldehyde	123-72-8	8.86E - 02				
n-Decane	124-18-5	1.27E + 01				Not available
n-Heptane	142-82-5	5.18E + 00	400	500	1.30E - 02	
n-Hexane	110-54-3	7.94E + 00	50		1.59E - 01	
n-Nonane	111-84-2	1.81E + 01	200		9.05E - 02	Not available
n-Octane	111-65-9	5.86E + 00	300		1.95E - 02	
n-Pentane	109-66-0	1.12E + 01	600	750	1.87E - 02	

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Octamethylcyclotetrasiloxane	556-67-2	2.32E + 00	10	15	2.32E - 01	
Octamethyltrisiloxane	107-51-7	5.17E - 03				Not available
o-Xylene	95-47-6	9.83E + 01	100	150	9.83E - 01	
p-Cymene	99-87-6	3.11E + 01				Not available
Pentanol	71-41-0	9.51E - 02				
Phellandrene	99-83-2	2.25E - 01				Not available
Propanal	123-38-6	6.99E - 04	20		3.49E - 05	
Propane	74-98-6	2.11E - 02	1000		2.11E - 05	
Propanone	67-64-1	2.47E - 02	250	500	1.23E - 04	
Propionic acid	79-09-4	5.64E - 02	10		5.64E - 03	
Propyl acetate	109-60-4	4.79E - 03	100	150	4.79E - 05	
Propyl benzene	103-65-1	2.59E + 00				
Propyl cyclohexane	1678-92-8	4.88E + 00				Not available
Propyl thiophene	1518-75-8	3.49E + 00				Not available
p-Tolualdehyde	104-87-0	5.10E - 03				Not available
p-Xylene	106-42-3	9.18E + 01	100	150	9.18E - 01	
Sabinyl acetate	3536-54-7	1.36E - 01				Not available
Styrene	100-42-5	2.28E + 01	10	20	1.14E + 00	
Tert-Butylbenzene	98-06-6	7.29E - 03				Not available
Tetrachloroethene	127-18-4	3.67E + 01	25	100	1.47E + 00	Carc. 2
Tetrachloromethane	56-23-5	3.34E + 00	5	10	6.68E - 01	Carc. 2
Tetrahydrofuran	109-99-9	9.53E - 01	50	100	1.91E - 02	Carc. 2
Thiophene	110-02-1	4.36E - 02				Not available
Toluene	108-88-3	2.53E + 02	20		1.27E + 01	
trans-1,3-Dimethylcyclohexane	2207-03-6	2.33E - 01				Not available
trans-1,3-Dimethylcyclopentane	1759-58-6	9.89E - 01				Not available
Trichloroethene	79-01-6	2.83E + 01	10	25	2.83E + 00	Carc. 1B
Trichlorofluoromethane	75-69-4	1.32E + 01		1000	1.32E - 02	Not available
Trimethyl hexane	921-47-1	1.96E - 01				Not available
Trimethylamine	75-50-3	2.38E - 02	5	15	4.76E - 03	
Trimethylbenzene	25551-13-7	3.80E + 01	25		1.52E + 00	Not available
Trimethylsilanol	1066-40-6	2.01E + 00				Not available
Undecane	1120-21-4	2.53E + 00				Not available

Biogas						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Undecene	821-95-4	4.00E - 05				Not available
Valeric acid	109-52-4	1.16E - 02				
Xylene (mix)	1330-20-7	5.34E + 00	100	150	5.34E - 02	
α- Pinene	80-56-8	1.59E + 01	20		7.93E - 01	Not available
α-Thujone	546-80-5	2.37E - 01				Not available
β- Pinene	127-91-3	2.07E + 00	20		1.04E - 01	Not available
β-Thujone	471-15-8	2.25E - 01				Not available
ϒ-Terpinene	99-85-4	6.97E + 00				Not available

Table S2. Chemical compounds identified from leachate emissions reported in scientific literature. In the table, the maximum concentration observed, the TLV and HQ values, and the carcinogenic definition are reported, according to EU Regulation (EC) No 1272/2008. The HQ values reported are used to establish the HI value for the odor source considered.

Landfill leachate						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
1 Octene	111-66-0	1.01E - 03				Not available
1,1,2,2-Tetrachloroethane	79-34-5	1.17E - 05	1		1.17E - 05	
1,1,2-Trichloroethane	79-00-5	4.40E - 05	10		4.40E - 06	Carc. 2
1,2,3,5-Tetramethylbenzene	527-53-7	1.00E - 04				Not available
1,2,3-Trichloropropane	96-18-4	6.63E - 06	10		6.63E - 07	Carc. 1B
1,2,3-Trimethylbenzene	526-73-8	7.30E - 04	25		2.92E - 05	Not available
1,2,4-Tribromobenzene	615-54-3	7.77E - 06				Not available
1,2,4-Trichlorobenzene	120-82-1	5.39E - 06		5	1.08E - 06	
1,2,4-Trimethylbenzene	95-63-6	1.83E - 01	25		7.32E - 03	
1,2-Dichlorobenzene	95-50-1	3.33E - 06	25	50	1.33E - 07	
1,2-Dichloroethane	107-06-2	7.06E - 05	10		7.06E - 06	Carc. 1B
1,2-Dichloropropane	78-87-5	1.27E - 03	10		1.27E - 04	Carc. 1B
1,3 Dichlorobenzene	541-73-1	6.65E - 06				
1,3,5-Trimethyl benzene	108-67-8	1.90E - 04	25		7.60E - 06	
1,4-Dichlorobenzene	106-46-7	1.33E - 05	10		1.33E - 06	Carc. 2
1-Ethyl-2-methylbenzene	611-14-3	4.30E - 04				Not available
1-Ethyl-2-methylcyclopropane	19781-69-2	1.20E - 04				Not available
1-Ethyl-3-methyl benzene	620-14-4	1.11E - 04				Not available
1-Methyl-2-pentyl cyclohexane	54411-01-7	3.00E - 05				Not available
1-Methyl-3-propyl benzene	1074-43-7	1.99E - 04				Not available
1-Nitrobutane	627-05-4	1.90E - 05				Not available

Landfill leachate						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
2,4,6-Trichloroaniline	634-93-5	1.24E - 05				Not available
2,4-Dimethylhexane	589-43-5	3.00E - 05	300		1.00E - 07	
2,6,10-Trimethyldodecane	3891-98-3	3.00E - 05				Not available
2-Butoxyethanol	111-76-2	1.00E - 04	20		5.00E - 06	
2-Methyl-1,3-dioxolane	497-26-7	5.47E - 03				Not available
3,4-Dihydropyran	110-87-2	5.00E - 05				Not available
3,5-Dimethylbenzaldehyde	5779-95-3	1.00E - 04				Not available
3-Pentanone	96-22-0	3.30E - 03	200	300	1.65E - 05	
4,7-Dimethylundecane	17301-32-5	8.00E - 04				Not available
4-Methyl-2-pentanone	108-10-1	5.37E - 05	20	75	2.69E - 06	
5-Methyl-2-(1-methylethyl)-cyclohexanone	10458-14-7	1.00E - 04				Not available
5-Methyl-3-(1-methylethyl)-cyclohexanone	89-80-5	3.20E - 04				Not available
6-Pentadecen-1-ol	64437-42-9	4.10E - 04				Not available
7-Methyl-3,4-octadiene	37050-05-8	3.60E - 04				Not available
Acenaphthylene	208-96-8	3.05E - 06				Not available
Acetaldehyde	75-07-0	1.36E - 02		25	5.44E - 04	Carc. 1B
Acetic acid	64-19-7	1.13E + 00	10	15	1.13E - 01	
Acrolein	107-02-8	6.30E - 03		0.1	6.30E - 02	
Acrylonitrile	107-13-1	1.75E - 04	2		8.76E - 05	Carc. 1B
Ammonia	7664-41-7	5.77E + 00	25	35	2.31E - 01	
Aniline	62-53-3	9.80E - 03	2		4.90E - 03	Carc. 2
Benzene	71-43-2	5.63E - 02	0.5	2.5	1.13E - 01	Carc. 1A
Bromoform	75-25-2	2.13E - 05	0.5		4.26E - 05	
Butane	106-97-8	1.00E - 04	1000		1.00E - 07	
Butanoic acid	107-92-6	2.20E - 02				
Butyl acetate	123-86-4	2.95E - 05	150	200	1.96E - 07	
Butyl formate	592-84-7	4.79E - 06				
Camphene	79-92-5	7.72E - 01				Not available
Camphor	76-22-2	3.31E - 03	2	3	1.66E - 03	Not available
Caproic acid	142-62-1	7.16E - 05				
Carbon disulphide	75-15-0	3.20E - 03	1		3.20E - 03	
Chlorobenzene	108-90-7	9.56E - 05	10		9.56E - 06	
Cinnamaldehyde	14371-10-9	8.00E - 05				Not available
Cis-1,4-Dichloro-2-butene	1476-11-5	1.97E - 05				Not available
Cyclohexanone	108-94-1	2.00E - 05	20	50	1.00E - 06	
Cyclopropane, 1-butyl-2-pentyl-, cis-	74663-88-0	4.00E - 05				Not available
Decamethylcyclopentasiloxane	541-02-6	6.36E - 01	10		6.36E - 02	Not available
Decamethyltetrasiloxane	141-62-8	1.18E - 02				Not available
Decanal	112-31-2	1.57E - 05				Not available
Decane	124-18-5	9.28E - 01				Not available
Dichloroethylene	540-59-0	1.11E - 02	200		5.54E - 05	
Dichloromethane	75-09-2	7.00E - 05	50		1.40E - 06	Carc. 2
Diethyl phthalate	84-66-2	1.00E - 05	0.55		1.82E - 05	Not available

Landfill leachate						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Dimethyl disulphide	624-92-0	7.70E - 02	0.5		1.54E - 01	Not available
Dimethyl sulphide	75-18-3	6.26E - 03	10		6.26E - 04	Not available
Dimethyl trisulfide	3658-80-8	9.20E - 03				Not available
Dimethylamine	124-40-3	3.26E - 02	5	15	6.52E - 03	
Dodecane	112-40-3	5.31E - 01				Not available
Ethanol	64-17-5	1.83E - 01		1000	1.83E - 04	
Ethyl mercaptan	75-08-1	8.66E - 05	0.5		1.73E - 04	
Ethylbenzene	100-41-4	1.45E + 00	20		7.25E - 02	
Eucalyptol	470-82-6	3.05E - 03				Not available
Formaldehyde	50-00-0	1.09E - 02	0.1	0.3	1.09E - 01	Carc. 1B
Formic acid	64-18-6	1.30E - 03	5	10	2.59E - 04	
Heptanal	111-71-7	2.14E - 05				Not available
Heptane	142-82-5	1.15E - 03	400	500	2.87E - 06	
Heptanoic acid	111-14-8	1.13E - 05				
Hexadecane	544-76-3	1.23E + 00				Not available
Hexamethylcyclotrisiloxane	541-05-9	2.20E - 02	0.3		6.66E - 02	Not available
Hexamethyldisiloxane	107-46-0	7.53E - 03				Not available
Hexane	110-54-3	1.70E - 05	50		3.40E - 07	
Hydrogen sulphide	7783-06-4	3.50E - 01	1	5	3.50E - 01	
Isobutyric acid	79-31-2	7.21E - 05				
Isopropyl benzene	98-82-8	4.19E - 04	50		8.38E - 06	
Isopropyl toluene	99-87-6	2.96E + 00				Not available
Isovaleric acid	503-74-2	2.02E - 02				Not available
Limonene	5989-27-5	2.42E + 00				
Methanethiol	74-93-1	1.25E - 03	0.5		2.50E - 03	
Methanol	67-56-1	2.47E - 02	200	250	1.24E - 04	
Methyl propionate	554-12-1	1.11E - 05				
Methylamine	74-89-5	5.50E - 03	5	15	1.10E - 03	
Methylcyclohexane	108-87-2	2.99E - 03	400		7.47E - 06	
Naphthalene	91-20-3	3.82E - 06	10		3.82E - 07	Carc. 2
n-Butanone	78-93-3	4.70E - 03	200	300	2.35E - 05	
n-Butyraldehyde	123-72-8	2.71E - 02				
Nonanal	124-19-6	8.25E - 05				
Nonane	111-84-2	2.48E - 01	200		1.24E - 03	Not available
Octamethylcyclotetrasiloxane	556-67-2	5.75E - 01	10	15	5.75E - 02	
Octamethyltrisiloxane	107-51-7	3.10E - 03				Not available
Octane	111-65-9	3.00E - 01	300		9.99E - 04	
o-Xylene	95-47-6	1.84E - 01	100	150	1.84E - 03	
Pentanol	71-41-0	4.72E - 03				
Phthalic anhydride	85-44-9	6.00E - 05	1		6.00E - 05	
Propanal	123-38-6	1.94E - 04	20		9.68E - 06	
Propanone	67-64-1	1.76E - 02	250	500	8.80E - 05	
Propionic acid	79-09-4	2.21E - 02	10		2.21E - 03	
Propyl benzene	103-65-1	5.00E - 05				
Pyridine	110-86-1	4.95E - 05	1		4.95E - 05	
Styrene	100-42-5	6.58E - 02	10	20	6.58E - 03	
Tetrachloroethene	127-18-4	1.23E - 03	25	100	4.91E - 05	Carc. 2

Landfill leachate						
Compound	**CAS Number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Toluene	108-88-3	6.90E - 01	20		3.45E - 02	
Trans-1,4-Dichloro-2-butene	110-57-6	7.82E - 06				Not available
Trichloroethene	79-01-6	6.48E - 04	10	25	6.48E - 05	Carc. 1B
Trimethylamine	75-50-3	3.80E - 03	5	15	7.60E - 04	
Trimethylsilanol	1066-40-6	4.07E - 02				Not available
Undecane	1120-21-4	8.92E - 01				Not available
Valeric acid	109-52-4	2.04E - 02				
Vinyl acetate	108-05-4	6.25E - 05	10	15	6.25E - 06	Carc. 2.
α- Pinene	80-56-8	7.90E - 01	20		3.95E - 02	Not available
α-Terpinene	99-85-4	2.69E - 01				Not available
α-Terpinolene	586-62-9	2.90E - 04				Not available
β- Pinene	127-91-3	7.54E - 03	20		3.77E - 04	Not available

Table S3. Chemical compounds identified from fresh waste landfill surface emissions sampled with flux chamber reported in scientific literature. In the table, the maximum concentration observed and the TLV values are reported.

Fresh waste landfill surface—flux chamber				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
1,2-Dichlorobenzene	95-50-1	1.46E - 04	25	50
1,2-Dichloroethane	107-06-2	2.99E - 04	10	
1,3-Dichlorobenzene	541-73-1	1.48E - 04		
2-Butanone	78-93-3	6.75E - 03	200	300
2-Hexanone	591-78-6	5.59E - 04	5	10
Ammonia	7664-41-7	4.31E - 01	25	35
Anisole	100-66-3	2.51E - 04	5	10
Benzaldehyde	100-52-7	2.07E - 04		
Benzene	71-43-2	4.72E - 03	0.5	2.5
Butanal	123-72-8	8.53E - 03		
Butanol	71-36-3	5.39E - 03	20	
Crotonaldehyde	4170-30-3	1.16E - 03		0.3
Cyclohexanone	108-94-1	1.16E - 03	20	50
Decane	124-18-5	5.03E - 03		
Styrene	100-42-5	6.29E - 04	10	20
Ethyl acetate	141-78-6	6.46E - 03	400	
Ethyl propionate	105-37-3	1.78E - 03		
Ethylbenzene	100-41-4	4.05E - 04	20	
Furfural	98-01-1	4.89E - 04	0.2	
Hydrogen sulphide	7783-06-4	5.74E - 01	1	5
Limonene	5989-27-5	8.08E - 05		
n-Hexanol	111-27-3	5.31E - 04		
Nonanal	124-19-6	1.79E - 03		
n-Pentanol	71-41-0	1.57E - 03		
Octane	111-65-9	1.85E - 03	300	
Phenol	108-95-2	2.28E - 03	5	
Propanone	67-64-1	4.32E - 02	250	500
Tetrachloromethane	56-23-5	1.70E - 03	5	10

Fresh waste landfill surface—flux chamber				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
Tetrahydrofuran	109-99-9	2.04E - 03	50	100
Toluene	108-88-3	2.14E - 02	20	
Trichloroethene	79-01-6	8.37E - 05	10	25
Trichloromethane	67-66-3	1.80E - 03	10	
m-xylene	108-38-3	3.18E - 04	100	150
p-xylene	106-42-3	8.96E - 04	100	150
α- Pinene	80-56-8	1.69E - 04	20	

Table S4. Chemical compounds identified from fresh waste landfill surface emissions sampled in ambient air reported in scientific literature. In the table, the maximum concentration observed and the TLV values are reported.

Fresh waste landfill surface—ambient air				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
1,1,2,2-Tetrachloroethane	79-34-5	1.34E - 04	1	
1,1,2-Trichloroethane	79-00-5	9.13E - 04	10	
1,1,3-Trimethylcyclohexane	3073-66-3	3.00E - 05		
1,2,3,5-Tetramethylbenzene	527-53-7	1.80E - 04		
1,2,3-Trichloropropane	96-18-4	6.63E - 06	10	
1,2,3-Trimethylbenzene	526-73-8	3.60E - 04	25	
1,2,4-Tribromobenzene	615-54-3	4.71E - 06		
1,2,4-Trichlorobenzene	120-82-1	1.00E - 03	5	
1,2,4-Trimethylbenzene	95-63-6	2.67E - 02	25	
1,2-Dibromoethane	106-93-4	2.00E - 04		
1,2-Dichlorobenzene	95-50-1	2.23E - 02	25	50
1,2-Dichloroethane	107-06-2	7.17E - 03	10	
1,2-Dichloropropane	78-87-5	3.01E - 03	10	
1,3,5-Trimethyl benzene	108-67-8	1.81E - 01	25	
1,4-Dichlorobenzene	106-46-7	2.36E - 02	10	
1-Ethyl-2-methylbenzene	611-14-3	4.00E - 05		
1-Ethyl-2-methylcyclopropane	19781-69-2	1.80E - 04		
1-Methyl-2-pentyl cyclohexane	215231-33-7	4.00E - 05		
1-Methyl-4-(1-methylethyl)-cyclohexane	99-82-1	2.00E - 05		
1-Nitrobutane	627-05-4	4.74E - 06		
2,3-Dimethylnonane	359554	1.70E - 04		
2,4,6-Trichloroaniline	634-93-5	3.76E - 06		
2,4-Dimethylhexane	589-43-5	2.90E - 04		
2,6,10-Trimethyldodecane	3891-98-3	4.20E - 04		
2-Methyl-1,3-dioxolane	497-26-7	6.16E - 03		
3-Pentanone	96-22-0	5.39E - 02	200	300
4,7-Dimethylundecane	17301-32-5	1.98E - 03		
4-Methyl-2-pentanone	108-10-1	5.37E - 05	20	75
6-Pentadecen-1-ol	64437-42-9	4.60E - 04		
7-Methyl-3,4-octadiene	37050-05-8	7.50E - 04		
Acenaphthylene	208-96-8	6.10E - 06		
Acetaldehyde	75-07-0	2.84E - 02	25	
Acetic acid	64-19-7	2.09E + 00	10	15
Acrolein	107-02-8	9.70E - 03	0.1	
Acrylonitrile	107-13-1	3.59E - 04	2	
Ammonia	7664-41-7	5.69E + 00	25	35
Aniline	62-53-3	1.90E - 03	2	
Benzaldehyde	100-52-7	6.40E - 02		

Fresh waste landfill surface—ambient air				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
Benzene	71-43-2	6.89E - 02	0.5	2.5
Bromoform	75-25-2	4.26E - 05	0.5	
Butanoic acid	107-92-6	6.49E - 02		
Butyl acetate	123-86-4	8.98E - 02	150	200
Butyl formate	592-84-7	2.39E - 05		
Camphene	79-92-5	1.08E - 05		
Camphor	76-22-2	9.00E - 05	2	3
Caproic acid	142-62-1	2.27E - 04		
Carbon disulphide	75-15-0	3.63E - 02	1	
Chlorobenzene	108-90-7	9.80E - 03	10	
Cis-1,4-Dichloro-2-butene	1476-11-5	1.58E - 05		
Cyclohexanone	108-94-1	1.64E - 04	20	
Decanal	112-31-2	4.38E - 05		
Decane	124-18-5	6.10E - 04		
Chloroacetaldehyde	170-20-0	1.31E - 05	1	
Dichlorodifluoromethane	75-71-8	2.06E - 02	1000	
Dichloroethylene	540-59-0	1.64E - 02	200	
Diethyl phthalate	84-66-2	2.00E - 04	0.55	
Diethyl sulphide	352-93-2	4.53E - 02	10	
Dimethyl disulphide	624-92-0	3.92E - 02	0.5	
Dimethyl sulphide	75-18-3	4.01E - 02	10	
Dimethyl trisulfide	3658-80-8	2.05E - 02		
Dimethylamine	124-40-3	2.80E - 02	5	15
Ethanol	64-17-5	1.75E - 01	1000	
Ethyl acetate	141-78-6	1.45E - 01	400	
Ethyl disulphide	110-81-6	2.17E - 01		
Ethyl mercaptan	75-08-1	1.89E - 04	0.5	
Ethylbenzene	100-41-4	1.43E - 01	20	
Eucalyptol	470-82-6	1.30E - 04		
Formaldehyde	50-00-0	1.87E - 02	0.1	0.3
Formic acid	64-18-6	1.48E - 03	5	10
Heptanal	111-71-7	2.57E - 05		
Heptane	142-82-5	1.46E - 05	400	500
Heptanoic acid	111-14-8	5.63E - 06		
Hexachlorobutadiene	87-68-3	9.00E - 04	0.02	
Hydrogen sulphide	2148878	6.22E - 01	1	5
Isobutyric acid	79-31-2	1.17E - 04		
Isopropyl benzene	98-82-8	4.27E - 04	50	
Isovaleraldehyde	590-86-3	1.90E - 03		
Isovaleric acid	503-74-2	2.41E - 02		
Limonene	5989-27-5	2.18E - 01		
Methanethiol	74-93-1	3.95E - 02	0.5	
Methanol	67-56-1	1.82E - 02	200	250
Methyl cyclohexane	108-87-2	9.23E - 04	400	
Methyl pentane	107-83-5	6.90E - 03		
Methyl propionate	554-12-1	1.09E - 04		
Methylamine	74-89-5	2.97E - 03	5	15
Methylene chloride	75-09-2	2.72E - 02	50	
Naphthalene	91-20-3	7.59E - 03	10	
n-Butanone	78-93-3	1.81E - 02	200	300
n-Butyraldehyde	123-72-8	4.05E - 02		

Fresh waste landfill surface—ambient air				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
n-Hexane	110-54-3	4.10E - 02	50	
Nonanal	124-19-6	1.22E - 04		
n-Undecane	1120-21-4	2.16E - 02		
Octane	111-65-9	1.84E - 05	300	
p-cymene	99-87-6	2.24E - 03		
Pentanol	71-41-0	1.97E - 03		
p-Ethyl toluene	622-96-8	1.83E - 02		
Propanal	123-38-6	1.59E - 02	20	
Propanone	67-64-1	9.18E - 02	250	500
Propionic acid	79-09-4	1.54E - 02	10	
Pyridine	110-86-1	4.78E - 05	1	
Styrene	100-42-5	5.05E - 02	10	20
Tetrachloroethylene	127-18-4	1.13E - 02	25	100
Toluene	108-88-3	3.83E - 02	20	
Trans-1,4-Dichloro-2-butene	110-57-6	1.12E - 05		
Trichloroethene	79-01-6	7.99E - 04	10	25
Trichlorofluoromethane	75-69-4	7.02E - 01	1000	
Trimethylamine	75-50-3	2.76E - 03	5	15
Valeric acid	109-52-4	2.52E - 02		
Vinyl acetate	108-05-4	5.07E - 05	10	15
o-Xylene	95-47-6	2.18E - 02	100	150
m-Xylene	108-38-3	8.60E - 02	100	150
p-Xylene	106-42-3	5.00E - 04	100	150
α- Pinene	80-56-8	9.15E - 03	20	
α-Terpinene	99-86-5	6.26E - 05		
α-Terpinolene	1124-27-2	3.00E - 05		
β-Phellandrene	555-10-2	8.90E - 04		
ϒ-terpinene	99-85-4	1.90E - 04		

Table S5. Chemical compounds identified from fresh waste landfill surface emissions reported in scientific literature, sampled with both methods. In the table, the maximum concentration observed, the associated sampling method, the TLV and HQ values, and the carcinogenic definition are reported, according to EU Regulation (EC) No 1272/2008. The HQ values reported are used to establish the HI value for the odor source considered.

Fresh waste landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
1,1,2,2-Tetrachloroethane	79-34-5	Ambient Air	1.34E - 04	1		1.34E - 04	
1,1,2-Trichloroethane	79-00-5	Ambient Air	9.13E - 04	10		9.13E - 05	Carc. 2
1,1,3-Trimethylcyclohexane	3073-66-3	Ambient Air	3.00E - 05				Not available
1,2,3,5-Tetramethylbenzene	527-53-7	Ambient Air	1.80E - 04				Not available
1,2,3-Trichloropropane	96-18-4	Ambient Air	6.63E - 06	10		6.63E - 07	Carc. 1B
1,2,3-Trimethylbenzene	526-73-8	Ambient Air	3.60E - 04	25		1.44E - 05	Not available
1,2,4-Tribromobenzene	615-54-3	Ambient Air	4.71E - 06				Not available
1,2,4-Trichlorobenzene	120-82-1	Ambient Air	1.00E - 03	5		2.00E - 04	
1,2,4-Trimethylbenzene	95-63-6	Ambient Air	2.67E - 02	25		1.07E - 03	
1,2-Dibromoethane	106-93-4	Ambient Air	2.00E - 04				Carc. 1B
1,2-Dichlorobenzene	95-50-1	Ambient Air	2.23E - 02	25	50	8.92E - 04	
1,2-Dichloroethane	107-06-2	Ambient Air	7.17E - 03	10		7.17E - 04	Carc. 1B
1,2-Dichloropropane	78-87-5	Ambient Air	3.01E - 03	10		3.01E - 04	Carc. 1B

Fresh waste landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
1,3,5-Trimethyl benzene	108-67-8	Ambient Air	1.81E - 01	25		7.24E - 03	
1,3-Dichlorobenzene	541-73-1	Flux	1.48E - 04				
1,4-Dichlorobenzene	106-46-7	Ambient Air	2.36E - 02	10		2.36E - 03	Carc. 2
1-Ethyl-2-methylbenzene	611-14-3	Ambient Air	4.00E - 05				Not available
1-Ethyl-2-methylcyclopropane	19781-69-2	Ambient Air	1.80E - 04				Not available
1-Methyl-2-pentyl cyclohexane	215231-33-7	Ambient Air	4.00E - 05				Not available
1-Methyl-4-(1-methylethyl)-cyclohexane	99-82-1	Ambient Air	2.00E - 05				Not available
1-Nitrobutane	627-05-4	Ambient Air	4.74E - 06				Not available
2,3-Dimethylnonane	2884-06-2	Ambient Air	1.70E - 04				Not available
2,4,6-Trichloroaniline	634-93-5	Ambient Air	3.76E - 06				Not available
2,4-Dimethylhexane	589-43-5	Ambient Air	2.90E - 04				
2,6,10-Trimethyldodecane	3891-98-3	Ambient Air	4.20E - 04				Not available
2-Hexanone	591-78-6	Flux	5.59E - 04	5	10	1.12E - 04	
2-Methyl-1,3-dioxolane	497-26-7	Ambient Air	6.16E - 03				Not available
3-Pentanone	96-22-0	Ambient Air	5.39E - 02	200	300	2.70E - 04	
4,7-Dimethylundecane	17301-32-5	Ambient Air	1.98E - 03				Not available
4-Methyl-2-pentanone	108-10-1	Ambient Air	5.37E - 05	20	75	2.69E - 06	
6-Pentadecen-1-ol	64437-42-9	Ambient Air	4.60E - 04				Not available
7-Methyl-3,4-octadiene	37050-05-8	Ambient Air	7.50E - 04				Not available
Acenaphthylene	208-96-8	Ambient Air	6.10E - 06				Not available
Acetaldehyde	75-07-0	Ambient Air	2.84E - 02	25		1.14E - 03	Carc. 1B
Acetic acid	64-19-7	Ambient Air	2.09E + 00	10	15	2.09E - 01	
Acrolein	107-02-8	Ambient Air	9.70E - 03	0.1		9.70E - 02	
Acrylonitrile	107-13-1	Ambient Air	3.59E - 04	2		1.80E - 04	Carc. 1B
Ammonia	7664-41-7	Ambient Air	5.69E + 00	25	35	2.27E - 01	
Aniline	62-53-3	Ambient Air	1.90E - 03	2		9.50E - 04	
Anisole	100-66-3	Flux	2.51E - 04	5	10	5.02E - 05	Not available
Benzaldehyde	100-52-7	Ambient Air	6.40E - 02				
Benzene	71-43-2	Ambient Air	6.89E - 02	0.5	2.5	1.38E - 01	Carc. 1A
Bromoform	75-25-2	Ambient Air	4.26E - 05	0.5		8.51E - 05	
Butanal	123-72-8	Ambient Air	4.05E - 02				
Butanoic acid	107-92-6	Ambient Air	6.49E - 02				
Butanol	71-36-3	Flux	5.39E - 03	20		2.69E - 04	
Butyl acetate	123-86-4	Ambient Air	8.98E - 02	150	200	5.99E - 04	
Butyl formate	592-84-7	Ambient Air	2.39E - 05				
Camphene	79-92-5	Ambient Air	1.08E - 05				Not available
Camphor	76-22-2	Ambient Air	9.00E - 05	2	3	4.50E - 05	Not available
Caproic acid	142-62-1	Ambient Air	2.27E - 04				Not available
Carbon disulphide	75-15-0	Ambient Air	3.63E - 02	1		3.63E - 02	
Chloroacetaldehyde	170-20-0	Ambient Air	1.31E - 05	1		1.31E - 05	Not available
Chlorobenzene	108-90-7	Ambient Air	9.80E - 03	10		9.80E - 04	
Cis-1,4-Dichloro-2-butene	1476-11-5	Ambient Air	1.58E - 05				Not available
Crotonaldehyde	4170-30-3	Flux	1.16E - 03		0.3	3.86E - 03	
Cyclohexanone	108-94-1	Flux	1.16E - 03	20	50	5.78E - 05	
Decanal	112-31-2	Ambient Air	4.38E - 05				Not available
Decane	124-18-5	Flux	5.03E - 03				Not available
Dichlorodifluoromethane	75-71-8	Ambient Air	2.06E - 02	1000		2.06E - 05	Not available
Dichloroethylene	540-59-0	Ambient Air	1.64E - 02	200		8.22E - 05	

Fresh waste landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Diethyl phthalate	84-66-2	Ambient Air	2.00E - 04	0.55		3.64E - 04	Not available
Diethyl sulphide	352-93-2	Ambient Air	4.53E - 02	10		4.53E - 03	Not available
Dimethyl disulphide	624-92-0	Ambient Air	3.92E - 02	0.5		7.84E - 02	Not available
Dimethyl sulphide	75-18-3	Ambient Air	4.01E - 02	10		4.01E - 03	Not available
Dimethyl trisulfide	3658-80-8	Ambient Air	2.05E - 02				Not available
Dimethylamine	124-40-3	Ambient Air	2.80E - 02	5	15	5.60E - 03	
Ethanol	64-17-5	Ambient Air	1.75E - 01	1000		1.75E - 04	
Ethyl acetate	141-78-6	Ambient Air	1.45E - 01	400		3.62E - 04	
Ethyl disulphide	110-81-6	Ambient Air	2.17E - 01				Not available
Ethyl mercaptan	75-08-1	Ambient Air	1.89E - 04	0.5		3.78E - 04	
Ethyl propionate	105-37-3	Flux	1.78E - 03				
Ethylbenzene	100-41-4	Ambient Air	1.43E - 01	20		7.15E - 03	
Eucalyptol	470-82-6	Ambient Air	1.30E - 04				Not available
Formaldehyde	50-00-0	Ambient Air	1.87E - 02	0.1	0.3	1.87E - 01	Carc. 1B
Formic acid	64-18-6	Ambient Air	1.48E - 03	5	10	2.95E - 04	
Furfural	98-01-1	Flux	4.89E - 04	0.2		2.45E - 03	Carc. 2
Heptanal	111-71-7	Ambient Air	2.57E - 05				
Heptane	142-82-5	Ambient Air	1.46E - 05	400	500	3.66E - 08	
Heptanoic acid	111-14-8	Ambient Air	5.63E - 06				
Hexachlorobutadiene	87-68-3	Ambient Air	9.00E - 04	0.02		4.50E - 02	Not available
Hydrogen sulphide	7783-06-4	Ambient Air	6.22E - 01	1	5	6.22E - 01	
Isobutyric acid	79-31-2	Ambient Air	1.17E - 04				
Isopropyl benzene	98-82-8	Ambient Air	4.27E - 04	50		8.54E - 06	
Isovaleraldehyde	590-86-3	Ambient Air	1.90E - 03				Not available
Isovaleric acid	503-74-2	Ambient Air	2.41E - 02				Not available
Limonene	5989-27-5	Ambient Air	2.18E - 01				
Methanethiol	74-93-1	Ambient Air	3.95E - 02	0.5		7.91E - 02	
Methanol	67-56-1	Ambient Air	1.82E - 02	200	250	9.12E - 05	
Methyl cyclohexane	108-87-2	Ambient Air	9.23E - 04	400		2.31E - 06	
Methyl pentane	107-83-5	Ambient Air	6.90E - 03				
Methyl propionate	554-12-1	Ambient Air	1.09E - 04				
Methylamine	74-89-5	Ambient Air	2.97E - 03	5	15	5.94E - 04	
Methylene chloride	75-09-2	Ambient Air	2.72E - 02	50		5.43E - 04	Carc. 2
m-Xylene	108-38-3	Ambient Air	8.60E - 02	100	150	8.60E - 04	
Naphthalene	91-20-3	Ambient Air	7.59E - 03	10		7.59E - 04	Carc. 2
n-Butanone	78-93-3	Ambient Air	1.81E - 02	200	300	9.05E - 05	
n-Hexane	110-54-3	Ambient Air	4.10E - 02	50		8.21E - 04	
n-Hexanol	111-27-3	Flux	5.31E - 04				
Nonanal	124-19-6	Flux	1.79E - 03				Not available
n-Undecane	1120-21-4	Ambient Air	2.16E - 02				Not available
Octane	111-65-9	Flux	1.85E - 03	300			
o-Xylene	95-47-6	Ambient Air	2.18E - 02	100	150	2.18E - 04	
p-Cymene	99-87-6	Ambient Air	2.24E - 03				Not available
Pentanol	71-41-0	Ambient Air	1.97E - 03				
p-Ethyl toluene	622-96-8	Ambient Air	1.83E - 02				Not available
Phenol	108-95-2	Flux	2.28E - 03	5			
Propanal	123-38-6	Ambient Air	1.59E - 02	20		7.94E - 04	
Propanone	67-64-1	Ambient Air	9.18E - 02	250	500	3.67E - 04	
Propionic acid	79-09-4	Ambient Air	1.54E - 02	10		1.54E - 03	

Fresh waste landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
p-Xylene	106-42-3	Flux	8.96E - 04	100	150		
Pyridine	110-86-1	Ambient Air	4.78E - 05	1		4.78E - 05	
Styrene	100-42-5	Ambient Air	5.05E - 02	10	20	5.05E - 03	
Tetrachloroethylene	127-18-4	Ambient Air	1.13E - 02	25	100	4.53E - 04	Carc. 2
Tetrachloromethane	56-23-5	Flux	1.70E - 03	5	10		Carc. 2
Tetrahydrofuran	109-99-9	Flux	2.04E - 03	50	100	4.29E - 04	Carc. 2
Toluene	108-88-3	Ambient Air	3.83E - 02	20		1.91E - 03	
Trans-1,4-Dichloro-2-butene	110-57-6	Ambient Air	1.12E - 05				Not available
Trichloroethene	79-01-6	Ambient Air	7.99E - 04	10	25	7.99E - 05	Carc. 1B
Trichlorofluoromethane	75-69-4	Ambient Air	7.02E - 01	1000		7.02E - 04	Not available
Trichloromethane	67-66-3	Flux	1.80E - 03	10			Carc. 2
Trimethylamine	75-50-3	Ambient Air	2.76E - 03	5	15	5.53E - 04	
Valeric acid	109-52-4	Ambient Air	2.52E - 02				
Vinyl acetate	108-05-4	Ambient Air	5.07E - 05	10	15	5.07E - 06	Carc. 2
α- Pinene	80-56-8	Ambient Air	9.15E - 03	20		4.58E - 04	Not available
α-Terpinene	99-86-5	Ambient Air	6.26E - 05				Not available
α-Terpinolene	1124-27-2	Ambient Air	3.00E - 05				Not available
β-Phellandrene	555-10-2	Ambient Air	8.90E - 04				Not available
ϒ-terpinene	99-85-4	Ambient Air	1.90E - 04				Not available

Table S6. Chemical compounds identified from temporarily covered landfill surface emissions sampled with flux chamber reported in scientific literature. In the table, the maximum concentration observed and the TLV values are reported.

Temporarily covered landfill surface—flux chamber				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
1,1,2,2-Tetrachloroethane	79-34-5	7.28E - 06	1	
1,1,2-Trichloroethane	79-00-5	1.47E - 05	10	
1,1-Dichloro-1-fluoroethane	1717-00-6	4.18E - 06	500	
1,1-Dichloroethane	75-34-3	4.94E - 06	100	
1,2-Dichlorobenzene	95-50-1	5.82E - 05	25	50
1,2-Dichloroethane	107-06-2	3.01E - 04	10	
1,3-Dichlorobenzene	541-73-1	1.10E - 04		
2-Butanone	78-93-3	1.58E - 02	200	300
2-Hexanone	591-78-6	3.56E - 04	5	10
4-Methyl-2-pentanone	108-10-1	1.03E - 04	20	75
Acetic acid	64-19-7	2.17E - 03	10	15
Acrolein	107-02-8	1.16E - 03		0.1
Acrylonitrile	107-13-1	9.22E - 05	2	
Ammonia	7664-41-7	4.31E - 01	25	35
Anisole	100-66-3	1.45E - 04	5	10
Benzaldehyde	100-52-7	3.96E - 04		
Benzene	71-43-2	3.76E - 03	0.5	2.5
Butanal	123-72-8	1.66E - 02		
Butanol	71-36-3	1.96E - 02	20	
Butyl acetate	123-86-4	1.59E - 03	150	200
Butyl formate	592-84-7	2.87E - 05		
Butyric acid	107-92-6	1.22E - 03		
Caproic acid	142-62-1	6.13E - 04		

Carbon disulphide	75-15-0	1.62E - 03	1	
Chlorobenzene	108-90-7	2.61E - 05	10	
Cis-1,3-Dichloropropene	10061-01-5	1.54E - 05	1	
Crotonaldehyde	4170-30-3	9.06E - 03		0.3
Cyclohexanone	108-94-1	2.27E - 03	20	50
Decanal	112-31-2	1.47E - 03		
Decane	124-18-5	9.10E - 03		
Ethylbenzene	100-41-4	1.14E - 03	20	
Formic acid	64-18-6	2.32E - 02	5	10
Furfural	98-01-1	4.53E - 04	0.2	
Heptanal	111-71-7	3.23E - 04		
Heptanoic acid	111-14-8	1.66E - 03		
Hexaldehyde	66-25-1	1.92E - 03		
Hydrogen sulphide	2148878	5.74E - 01	1	5
Iodomethane	74-88-4	5.17E - 06	2	
Isobutyric acid	79-31-2	1.83E - 03		
Isocaproic acid	646-07-1	5.98E - 04		
Isovaleric acid	503-74-2	1.45E - 03		
Limonene	5989-27-5	3.95E - 05		
Methyl propionate	554-12-1	5.00E - 05		
Methylene chloride	75-09-2	2.29E - 03	50	
n-Hexanol	111-27-3	5.41E - 04		
Nonanal	124-19-6	1.99E - 03		
n-Pentanol	71-41-0	1.71E - 03		
Octanal	124-13-0	4.35E - 04		
Octane	111-65-9	1.93E - 03	300	
Pentanal	110-62-3	5.45E - 04	50	
Phenol	108-95-2	2.43E - 03	5	
Propanal	123-38-6	1.62E - 02	20	
Propanone	67-64-1	5.34E - 02	250	500
Propionic acid	79-09-4	1.16E - 03	10	
Styrene	100-42-5	3.39E - 03	10	20
Tetrachloroethene	127-18-4	1.35E - 03	25	100
Tetrachloromethane	56-23-5	1.17E - 03	5	10
Tetrahydrofuran	109-99-9	1.34E - 03	50	100
Toluene	108-88-3	1.56E - 02	20	
Trans-1,3. Dichloropropene	542-75-6	1.98E - 05	1	
Trans-1,4-Dichloro-2-butene	110-57-6	7.82E - 07		
Trichloroethene	79-01-6	1.17E - 02	10	25
Trichloromethane	67-66-3	1.36E - 03	10	
Valeric acid	109-52-4	1.19E - 03		
Vinyl acetate	108-05-4	6.50E - 04	10	15
m-xylene	108-38-3	2.34E - 03	100	150
p-xylene	106-42-3	2.56E - 03	100	150
α- Pinene	80-56-8	3.95E - 04	20	

Table S7. Chemical compounds identified from temporarily covered landfill surface emissions sampled in ambient air reported in scientific literature. In the table, the maximum concentration observed and the TLV values are reported.

Temporarily covered landfill surface—ambient air				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
1,1,3,3-Tetramethylcyclopentane	50876-33-0	4.00E - 05		
1,2,3-Trimethylbenzene	526-73-8	4.10E - 04	25	

Temporarily covered landfill surface—ambient air				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
1,2,4-Trimethylbenzene	95-63-6	1.60E - 04	25	
1,2-cis-Dichloroethylene	156-59-2	7.00E - 05	200	
1,3,5-Trimethyl benzene	108-67-8	1.90E - 04	25	
1-Ethyl-2-methylbenzene	611-14-3	1.40E - 04		
1-Ethyl-2-methylcyclopropane	19781-69-2	2.10E - 04		
1-Methyl-2-pentyl cyclohexane	54411-01-7	1.10E - 04		
1-Methyl-2-propylbenzene	1074-17-5	6.00E - 05		
1-Methyl-4-(1-methylethyl)-cyclohexane	99-82-1	2.00E - 05		
2,3,6-Trimethyloctane	62016-33-5	1.40E - 04		
2,3-Dimethylnonane	359554	3.00E - 05		
2,4-Dimethylheptane	2213-23-2	3.00E - 05		
2,4-Dimethylhexane	589-43-5	2.80E - 04	300	
2-Butoxyethanol	111-76-2	4.00E - 05	20	
2-Methyl-1,3-dioxolane	497-26-7	7.29E - 03		
2-Methyl-5-(1-methylethyl)-cyclohexanone	59471-80-6	1.60E - 04		
4,5-Dipropyloctane	20905-05-09	4.00E - 05		
4,7-Dimethylundecane	17301-32-5	5.50E - 04		
4-Methylcyclohexanone	589-92-4	2.10E - 04		
4-Methyl-1-(methyl ethyl)-bicyclo-(3,10)-hex-3-ene	28634-89-1	6.00E - 05		
5-Methyl-3-(1-methylethyl)-cyclohexanone	89-80-5	4.00E - 05		
6-Pentadecen-1-ol	64437-42-9	7.00E - 04		
7-Methyl-3,4-octadiene	37050-05-8	1.24E - 03		
Cinnamaldehyde	14371-10-9	1.20E - 04		
Butane	106-97-8	2.60E - 04	1000	
Camphene	79-92-5	4.00E - 05		
Decane	124-18-5	4.50E - 04		
Dichloromethane	75-09-2	1.40E - 04	50	
Diethyl phthalate	84-66-2	7.00E - 05	0.55	
Hexanal	66-25-1	1.00E - 05		
Ethyl acetate	141-78-6	4.00E - 05	400	
Ethylbenzene	100-41-4	4.80E - 04	20	
Eucalyptol	470-82-6	6.00E - 05		
Limonene	5989-27-5	9.00E - 05		
p-cymene	99-87-6	1.30E - 03		
Pentadecane	629-62-9	2.70E - 04		
Phthalic anhydride	85-44-9	1.60E - 04	1	
Propyl benzene	103-65-1	6.00E - 05		
Tetrachloroethylene	127-18-4	1.10E - 04	25	100
Toluene	108-88-3	1.28E - 03	20	
Undecene	821-95-4	3.00E - 05		
m-xylene	108-38-3	4.00E - 04	100	150
p-xylene	106-42-3	7.00E - 04	100	150
α- Pinene	80-56-8	5.10E - 04	20	

Table S8. Chemical compounds identified temporarily covered landfill surface emissions reported in scientific literature, sampled with both methods. In the table, the maximum concentration observed, the associated sampling method, the TLV and HQ values, and the carcinogenic definition are reported, according to EU Regulation (EC) No 1272/2008. The HQ values reported are used to establish the HI value for the odor source considered.

Temporarily covered landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
1,1,2,2-Tetrachloroethane	79-34-5	Flux	7.28E - 06	1		7.28E - 06	
1,1,2-Trichloroethane	79-00-5	Flux	1.47E - 05	10		1.47E - 06	Carc. 2
1,1,3,3-Tetramethylcyclopentane	50876-33-0	Ambient Air	4.00E - 05				Not available
1,1-Dichloro-1-fluoroethane	1717-00-6	Flux	4.18E - 06	500		8.36E - 09	
1,1-Dichloroethane	75-34-3	Flux	4.94E - 06	100		4.94E - 08	
1,2,3-Trimethylbenzene	526-73-8	Ambient Air	4.10E - 04	25		1.64E - 05	Not available
1,2,4-Trimethylbenzene	95-63-6	Ambient Air	1.60E - 04	25		6.40E - 06	
1,2-cis-Dichloroethylene	156-59-2	Ambient Air	7.00E - 05	200		3.50E - 07	
1,2-Dichlorobenzene	95-50-1	Flux	5.82E - 05	25	50	2.33E - 06	
1,2-Dichloroethane	107-06-2	Flux	3.01E - 04	10		3.01E - 05	Carc. 1B
1,3,5-Trimethyl benzene	108-67-8	Ambient Air	1.90E - 04	25		7.60E - 06	
1,3-Dichlorobenzene	541-73-1	Flux	1.10E - 04				
1-Ethyl-2-methylbenzene	611-14-3	Ambient Air	1.40E - 04				Not available
1-Ethyl-2-methylcyclopropane	19781-69-2	Ambient Air	2.10E - 04				Not available
1-Methyl-2-pentyl cyclohexane	54411-01-7	Ambient Air	1.10E - 04				Not available
1-Methyl-2-propylbenzene	1074-17-5	Ambient Air	6.00E - 05				Not available
1-Methyl-4-(1-methylethyl)-cyclohexane	99-82-1	Ambient Air	2.00E - 05				Not available
2,3,6-Trimethyloctane	62016-33-5	Ambient Air	1.40E - 04				Not available
2,3-Dimethylnonane	2884-06-2	Ambient Air	3.00E - 05				Not available
2,4-Dimethylheptane	2213-23-2	Ambient Air	3.00E - 05				Not available
2,4-Dimethylhexane	589-43-5	Ambient Air	2.80E - 04	300		9.33E - 07	
2-Butanone	78-93-3	Flux	1.58E - 02	200	300	7.92E - 05	
2-Butoxyethanol	111-76-2	Ambient Air	4.00E - 05	20		2.00E - 06	
2-Hexanone	591-78-6	Flux	3.56E - 04	5	10	7.13E - 05	
2-Methyl-1,3-dioxolane	497-26-7	Ambient Air	7.29E - 03				Not available
2-Methyl-5-(1-methylethyl)-cyclohexanone	59471-80-6	Ambient Air	1.60E - 04				Not available
4,5-Dipropyloctane	20905-05-09	Ambient Air	4.00E - 05				Not available
4,7-Dimethylundecane	17301-32-5	Ambient Air	5.50E - 04				Not available
4-Methyl-1-(methyl ethyl)-bicyclo-(3,10)-hex-3-ene	28634-89-1	Ambient Air	6.00E - 05				Not available
4-Methyl-2-pentanone	108-10-1	Flux	1.03E - 04	20	75	5.13E - 06	
4-Methylcyclohexanone	589-92-4	Ambient Air	2.10E - 04				Not available
5-Methyl-3-(1-methylethyl)-cyclohexanone	89-80-5	Ambient Air	4.00E - 05				Not available
6-Pentadecen-1-ol	64437-42-9	Ambient Air	7.00E - 04				Not available
7-Methyl-3,4-octadiene	37050-05-8	Ambient Air	1.24E - 03				Not available
Acetic acid	64-19-7	Flux	2.17E - 03	10	15	2.17E - 04	

Temporarily covered landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Acrolein	107-02-8	Flux	1.16E - 03		0.1	1.16E - 02	
Acrylonitrile	107-13-1	Flux	9.22E - 05	2		4.61E - 05	Carc. 1B
Ammonia	7664-41-7	Flux	4.31E - 01	25	35	1.72E - 02	
Anisole	100-66-3	Flux	1.45E - 04	5	10	2.89E - 05	Not available
Benzaldehyde	100-52-7	Flux	3.96E - 04				
Benzene	71-43-2	Flux	3.76E - 03	0.5	2.5	7.51E - 03	Carc. 1A
Butanal	123-72-8	Flux	1.66E - 02				
Butane	106-97-8	Ambient Air	2.60E - 04	1000		2.60E - 07	
Butanol	71-36-3	Flux	1.96E - 02	20		9.82E - 04	
Butyl acetate	123-86-4	Flux	1.59E - 03	150	200	1.06E - 05	
Butyl formate	592-84-7	Flux	2.87E - 05				
Butyric acid	107-92-6	Flux	1.22E - 03				
Camphene	79-92-5	Ambient Air	4.00E - 05				Not available
Caproic acid	142-62-1	Flux	6.13E - 04				Not available
Carbon disulphide	75-15-0	Flux	1.62E - 03	1		1.62E - 03	
Chlorobenzene	108-90-7	Flux	2.61E - 05	10		2.61E - 06	
Cinnamaldehyde	14371-10-9	Ambient Air	1.20E - 04				Not available
Cis-1,3-Dichloropropene	10061-01-5	Flux	1.54E - 05	1		1.54E - 05	
Crotonaldehyde	4170-30-3	Flux	9.06E - 03		0.3	3.02E - 02	
Cyclohexanone	108-94-1	Flux	2.27E - 03	20	50	1.14E - 04	
Decanal	112-31-2	Flux	1.47E - 03				Not available
Decane	124-18-5	Flux	9.10E - 03				Not available
Diethyl phthalate	84-66-2	Ambient Air	7.00E - 05	0.55		1.27E - 04	Not available
Ethyl acetate	141-78-6	Ambient Air	4.00E - 05	400		1.00E - 07	
Ethylbenzene	100-41-4	Flux	1.14E - 03	20		5.70E - 05	
Eucalyptol	470-82-6	Ambient Air	6.00E - 05				Not available
Formic acid	64-18-6	Flux	2.32E - 02	5	10	4.64E - 03	
Furfural	98-01-1	Flux	4.53E - 04	0.2		2.27E - 03	Carc. 2
Heptanal	111-71-7	Flux	3.23E - 04				Not available
Heptanoic acid	111-14-8	Flux	1.66E - 03				
Hexaldehyde	66-25-1	Flux	1.92E - 03				Not available
Hydrogen sulphide	7783-06-4	Flux	5.74E - 01	1	5	5.74E - 01	
Iodomethane	74-88-4	Flux	5.17E - 06	2		2.58E - 06	Carc. 2
Isobutyric acid	79-31-2	Flux	1.83E - 03				
Isocaproic acid	646-07-1	Flux	5.98E - 04				Not available
Isovaleric acid	503-74-2	Flux	1.45E - 03				Not available
Limonene	5989-27-5	Ambient air	9.00E - 05				
Methyl propionate	554-12-1	Flux	5.00E - 05				
Methylene chloride	75-09-2	Flux	2.29E - 03	50		4.58E - 05	Carc. 2
m-Xylene	108-38-3	Flux	2.34E - 03	100	150	2.34E - 05	
n-Hexanol	111-27-3	Flux	5.41E - 04				
Nonanal	124-19-6	Flux	1.99E - 03				Not available
n-Pentanol	71-41-0	Flux	1.71E - 03				
Octanal	124-13-0	Flux	4.35E - 04				Not available
Octane	111-65-9	Flux	1.93E - 03	300		6.43E - 06	Not available
p-Cymene	99-87-6	Ambient Air	1.30E - 03				Not available
Pentadecane	629-62-9	Ambient Air	2.70E - 04				Not available
Pentanal	110-62-3	Flux	5.45E - 04	50		1.09E - 05	Not available

Temporarily covered landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Phenol	108-95-2	Flux	2.43E - 03	5		4.86E - 04	
Phthalic anhydride	85-44-9	Ambient Air	1.60E - 04	1		1.60E - 04	
Propanal	123-38-6	Flux	1.62E - 02	20		8.11E - 04	
Propanone	67-64-1	Flux	5.34E - 02	250	500	2.14E - 04	
Propionic acid	79-09-4	Flux	1.16E - 03	10		1.16E - 04	
Propyl benzene	103-65-1	Ambient Air	6.00E - 05				
p-xylene	106-42-3	Flux	2.56E - 03	100	150	2.56E - 05	
Styrene	100-42-5	Flux	3.39E - 03	10	20	3.39E - 04	
Tetrachloroethene	127-18-4	Flux	1.35E - 03	25	100	5.40E - 05	Carc. 2
Tetrachloromethane	56-23-5	Flux	1.17E - 03	5	10	2.35E - 04	Carc. 2
Tetrahydrofuran	109-99-9	Flux	1.34E - 03	50	100	2.67E - 05	Carc. 2
Toluene	108-88-3	Flux	1.56E - 02	20		7.80E - 04	
Trans-1,3. Dichloropropene	542-75-6	Flux	1.98E - 05	1		1.98E - 05	
Trans-1,4-Dichloro-2-butene	110-57-6	Flux	7.82E - 07				Not available
Trichloroethene	79-01-6	Flux	1.17E - 02	10	25	1.17E - 03	Carc. 1B
Trichloromethane	67-66-3	Flux	1.36E - 03	10		1.36E - 04	Carc. 2
Undecene	821-95-4	Ambient Air	3.00E - 05				Not available
Valeric acid	109-52-4	Flux	1.19E - 03				
Vinyl acetate	108-05-4	Flux	6.50E - 04	10	15	6.50E - 05	Carc. 2
α- Pinene	80-56-8	Ambient Air	5.10E - 04	20		2.55E - 05	Not available

Table S9. Chemical compounds identified from permanently covered landfill surface emissions sampled with flux chamber reported in scientific literature. In the table, the maximum concentration observed and the TLV values are reported.

Permanently covered landfill surface—flux chamber				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
1,1,1,2-Tetrafluoroethane	811-97-2	4.22E - 06		
1,1,2-Trichloroethane	79-00-5	5.93E - 08	10	
1,1-Dichloroethane	75-34-3	5.27E - 05	100	
1,2,3-Trimethylbenzene	526-73-8	5.88E - 04	25	
1,2,4-Trimethylbenzene	95-63-6	1.41E - 03	25	
1,2-Dichloroethane	107-06-2	9.63E - 04	10	
1,2-Dichloroethene, trans	156-60-5	5.06E - 09	200	250
1,3,5-Trimethyl benzene	108-67-8	4.35E - 04	25	
1-Ethyl-2-methylbenzene	611-14-3	3.18E - 06		
1-Methylnaphthalene	90-12-0	1.30E - 04	0.5	
1-Propanol	71-23-8	1.53E - 03	100	
2-Ethylcycloheptanone	3183-41-3	3.96E - 08		
2-Hexanone	591-78-6	6.84E - 05	5	10
2-Methylbutanal	96-17-3	4.55E - 06		
2-Methylnaphthalene	91-57-6	3.89E - 04	0.5	
4,7-Dimethylundecane	17301-32-5	3.28E - 06		
Acetic acid	64-19-7	3.39E - 01	10	15
Acetonitrile	75-05-8	2.99E - 05	20	
Ammonia	7664-41-7	4.31E - 01	25	35
Anisole	100-66-3	2.03E - 04	5	10
Benzaldehyde	100-52-7	1.39E - 03		

Permanently covered landfill surface—flux chamber				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
Benzene	71-43-2	5.19E - 03	0.5	2.5
Bromoform	75-25-2	5.18E - 07	0.5	
Butanal	123-72-8	3.78E - 03		
Butanol	71-36-3	1.70E - 02	20	
Butyl acetate	123-86-4	1.30E - 03	150	200
Carbon disulphide	75-15-0	2.42E - 03	1	
Chlorobenzene	108-90-7	3.00E - 04	10	
Chloroform	67-66-3	5.25E - 03	10	
Crotonaldehyde	4170-30-3	1.07E - 02		0.3
Cyclohexane	110-82-7	1.35E - 03	100	
Cyclohexane isocyanato	3173-53-3	7.55E - 04		
Cyclohexane isothiocyanato	1122-82-3	6.53E - 06		
Cyclohexanone	108-94-1	2.54E - 02	20	50
Decanal	112-31-2	1.25E - 01		
Decane	124-18-5	2.35E - 03		
Dichloromethane	75-09-2	2.57E - 03	50	
D-Limonene	5989-27-5	2.77E - 03		
Hexanal	66-25-1	4.57E - 03		
Ethanol	64-17-5	5.17E - 02		1000
Ethyl acetate	141-78-6	4.99E - 03	400	
Ethyl hexanoate	123-66-0	3.22E - 06		
Ethylbenzene	100-41-4	2.92E - 03	20	
Ethyl cyclohexane	1678-91-7	3.35E - 05		
Ethyl hexanol	104-76-7	2.23E - 02		
Furfural	98-01-1	4.45E - 04	0.2	
Heptanal	111-71-7	3.31E - 03		
Hydrogen sulphide	2148878	5.74E - 01	1	5
Isononene	31387-92-5	4.59E - 05		
Isoprene	78-79-5	8.51E - 06		
Isopropyl alcohol	67-63-0	4.60E - 03	200	400
Isovaleraldehyde	590-86-3	1.92E - 04		
Isovaleric acid	503-74-2	4.73E - 06		
Xylene	1330-20-7	1.91E - 07	100	150
p-Xylene	106-42-3	8.08E - 03	100	150
m-Xylene	108-38-3	6.43E - 04	100	150
Methyl acetate	79-20-9	1.45E - 03	200	250
Toluene	108-88-3	2.47E + 01	20	
Methyl isobutyl ketone	108-10-1	1.38E - 03	20	75
Methyl-ethyl ketone	78-93-3	1.15E - 02	200	300
Methyl-nonane	871-83-0	1.81E - 07		
Naphthalene	91-20-3	4.80E - 04	10	
n-Heptane	142-82-5	3.84E - 05	400	500
n-Hexane	110-54-3	4.14E - 03	50	
n-Hexanol	111-27-3	1.58E - 04		
Nonanal	124-19-6	1.45E - 01		
n-Pentane	109-66-0	6.05E - 02	600	750
n-Pentanol	71-41-0	1.60E - 03		
n-propyl nitrate	627-13-4	2.63E - 06	25	40
n-Propyl benzene	103-65-1	1.79E - 04		
n-Tetradecane	629-59-4	1.94E - 02		
n-Tridecane	629-50-5	4.29E - 06		

Permanently covered landfill surface—flux chamber				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
Octamethylcyclotetrasiloxane	556-67-2	1.95E - 05	10	15
Octanal	124-13-0	1.92E - 02		
Octane	111-65-9	1.20E - 03	300	
o-Dichlorobenzene	95-50-1	4.18E - 05	25	50
p-cymene	99-87-6	6.18E - 04		
p-Dichlorobenzene	106-46-7	4.18E - 05	10	
Phenol	108-95-2	1.67E - 02	5	
Propane	74-98-6	2.33E - 06	1000	
Propanone	67-64-1	1.09E - 01	250	500
Propyl thiophene	69280-76-8	4.35E - 05		
p-Tolualdehyde	104-87-0	1.54E - 05		
Styrene	100-42-5	2.77E - 03	10	20
Tert-Butyl ethyl ether	637-92-3	6.83E - 03	25	
Tert-Butyl methyl ether	1634-04-4	1.67E - 03	50	
Tetrachloroethylene	127-18-4	6.36E - 03	25	100
Tetrachloromethane	56-23-5	4.22E - 03	5	10
Tetrahydrofuran	109-99-9	1.66E - 03	50	100
Trans-1,2-Dichloroethene	540-59-0	9.51E - 05	200	
Trans-1,4-Dichloro-2-butene	110-57-6	1.44E - 07		
Trichloroethene	79-01-6	3.51E - 04	10	25
Trichlorofluoromethane	75-69-4	5.67E - 06		1000
Trimethylbenzene	25551-13-7	1.42E - 06	25	
Trimethyl cyclohexane	3073-66-3	3.05E - 07		
Trimethyl hexane	921-47-1	2.28E - 05		
Trimethylsilanol	1066-40-6	3.87E - 05		
α- Pinene	80-56-8	2.98E - 03	20	
β- Pinene	127-91-3	2.21E - 03	20	

Table S10. Chemical compounds identified from permanently covered landfill surface emissions sampled in ambient air reported in scientific literature. In the table, the maximum concentration observed and the TLV values are reported.

Permanently covered landfill surface—ambient air				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
1,1,2,2-Tetrachloroethane	79-34-5	6.41E - 05	1	
1,1,2-Trichloroethane	79-00-5	5.94E - 04	10	
1,2,3-Trichloropropane	96-18-4	9.95E - 06	10	
1,2,4-Tribromobenzene	615-54-3	3.11E - 06		
1,2-Dichlorobenzene	95-50-1	3.33E - 06	25	50
1,2-Dichloroethane	107-06-2	4.94E - 05	10	
1,2-Dichloropropane	78-87-5	6.45E - 04	10	
1,3 Dichlorobenzene	541-73-1	6.65E - 06		
1,4-Dichlorobenzene	106-46-7	6.65E - 06	10	
1-Nitrobutane	627-05-4	4.74E - 06		
2,4,6-Trichloroaniline	634-93-5	4.98E - 06		
2-Butanone	78-93-3	6.10E - 05	200	300
4-Methyl-2-pentanone	108-10-1	4.88E - 06	20	75
Acenaphthylene	208-96-8	6.10E - 06		
Acetic acid	64-19-7	8.96E - 05	10	15
Acrolein	107-02-8	6.98E - 05		0.1
Acrylonitrile	107-13-1	8.29E - 05	2	
Ammonia	7664-41-7	5.43E + 00	25	35

Permanently covered landfill surface—ambient air				
Compound	**CAS number**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**
Benzene	71-43-2	8.45E - 02	0.5	2.5
Bromoform	75-25-2	2.13E - 05	0.5	
Butanal	123-72-8	1.36E - 05		
Butyl acetate	123-86-4	1.26E - 05	150	200
Butyl formate	592-84-7	4.79E - 06		
Butyric acid	107-92-6	5.55E - 06		
Camphene	79-92-5	7.18E - 06		
Caproic acid	142-62-1	4.63E - 05		
Carbon disulphide	75-15-0	1.22E - 04	1	
Chlorinated-dibenzo-pyran	32904-22-6	2.59E - 05		
Chlorobenzene	108-90-7	9.12E - 05	10	
Cis-1,4-Dichloro-2-butene	1476-11-5	1.18E - 05		
Cyclohexanone	108-94-1	3.49E - 05	20	50
Decanal	112-31-2	6.26E - 06		
Chloroacetaldehyde	107-20-0	1.87E - 05		1
Dichloroethylene	540-59-0	6.51E - 03	200	
Dimethyl disulphide	624-92-0	2.60E - 06	0.5	
Dimethyl sulphide	75-18-3	4.38E - 03	10	
Ethanol	64-17-5	7.24E - 01		1000
Ethyl mercaptan	75-08-1	2.36E - 05	0.5	
Ethylbenzene	100-41-4	1.57E - 01	20	
Formic acid	64-18-6	3.29E - 04	5	10
Heptanal	111-71-7	8.57E - 06		
Heptane	142-82-5	1.22E - 01	400	500
Heptanoic acid	111-14-8	1.13E - 05		
Hexane	110-54-3	1.13E - 05	50	
Hydrogen sulphide	2148878	1.29E - 01	1	5
Isobutyric acid	79-31-2	1.11E - 05		
Isopropyl benzene	98-82-8	2.32E - 04	50	
Isovaleric acid	503-74-2	9.58E - 06		
Limonene	5989-27-5	7.45E - 02		
Methylcyclohexane	108-87-2	7.00E - 02	400	
Methanethiol	74-93-1	9.96E - 04	0.5	
Methyl propionate	554-12-1	5.55E - 06		
Nonanal	124-19-6	7.56E - 05		
Octane	111-65-9	6.42E - 06	300	
p-cymene	99-87-6	2.02E - 01		
Pentanol	71-41-0	1.91E - 01		
Propanal	123-38-6	7.58E - 05	20	
Propionic acid	79-09-4	6.27E - 05	10	
Tetrachloroethene	127-18-4	6.37E - 04	25	100
Toluene	108-88-3	7.88E - 01	20	
Trans-1,4-Dichloro-2-butene	110-57-6	1.17E - 05		
Trichloroethene	79-01-6	3.76E - 04	10	25
Valeric acid	109-52-4	1.44E - 05		
Vinyl acetate	108-05-4	1.70E - 05	10	15
m-xylene	108-38-3	6.91E - 06	100	150
p-xylene	106-42-3	3.39E - 01	100	150
α- Pinene	80-56-8	2.63E - 01	20	
β- Pinene	127-91-3	1.59E - 01	20	

Table S11. Chemical compounds identified permanently covered landfill surface emissions reported in scientific literature, sampled with both methods. In the table, the maximum concentration observed, the associated sampling method, the TLV and HQ values, and the carcinogenic definition are reported, according to EU Regulation (EC) No 1272/2008. The HQ values reported are used to establish the HI value for the odor source considered.

Permanently covered landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
1,1,1,2-Tetrafluoroethane	811-97-2	Flux	4.22E - 06				Not available
1,1,2,2-Tetrachloroethane	79-34-5	Ambient Air	6.41E - 05	1		6.41E - 05	
1,1,2-Trichloroethane	79-00-5	Ambient Air	5.94E - 04	10		5.94E - 05	Carc. 2
1,1-Dichloroethane	75-34-3	Flux	5.27E - 05	100		5.27E - 07	
1,2,3-Trichloropropane	96-18-4	Ambient Air	9.95E - 06	10		9.95E - 07	Carc. 1B
1,2,3-Trimethylbenzene	526-73-8	Flux	5.88E - 04	25		2.35E - 05	Not available
1,2,4-Tribromobenzene	615-54-3	Ambient Air	3.11E - 06				Not available
1,2,4-Trimethylbenzene	95-63-6	Flux	1.41E - 03	25		5.63E - 05	
1,2-Dichloroethane	107-06-2	Flux	9.63E - 04	10		9.63E - 05	Carc. 1B
1,2-Dichloroethene, trans	156-60-5	Flux	5.06E - 09	200	250	2.53E - 11	
1,2-Dichloropropane	78-87-5	Ambient Air	6.45E - 04	10		6.45E - 05	Carc. 1B
1,3 Dichlorobenzene	541-73-1	Ambient Air	6.65E - 06				
1,3,5-Trimethyl benzene	108-67-8	Flux	4.35E - 04	25		1.74E - 05	
1-Ethyl-2-methylbenzene	611-14-3	Flux	3.18E - 06				Not available
1-Methylnaphthalene	90-12-0	Flux	1.30E - 04	0.5		2.59E - 04	Not available
1-Nitrobutane	627-05-4	Ambient Air	4.74E - 06				Not available
1-Propanol	71-23-8	Flux	1.53E - 03	100		1.53E - 05	
2,4,6-Trichloroaniline	634-93-5	Ambient Air	4.98E - 06				Not available
2-Ethylcycloheptanone	3183-41-3	Flux	3.96E - 08				Not available
2-Hexanone	591-78-6	Flux	6.84E - 05	5	10	1.37E - 05	
2-Methylbutanal	96-17-3	Flux	4.55E - 06				Not available
2-Methylnaphthalene	91-57-6	Flux	3.89E - 04	0.5		7.78E - 04	Not available
4,7-Dimethylundecane	17301-32-5	Flux	3.28E - 06				Not available
Acenaphthylene	208-96-8	Ambient Air	6.10E - 06				Not available
Acetic acid	64-19-7	Flux	3.39E - 01	10	15	3.39E - 02	
Acetonitrile	75-05-8	Flux	2.99E - 05	20		1.50E - 06	
Acrolein	107-02-8	Ambient Air	6.98E - 05		0.1	6.98E - 04	
Acrylonitrile	107-13-1	Ambient Air	8.29E - 05	2		4.15E - 05	Carc. 1B
Ammonia	7664-41-7	Ambient Air	5.43E + 00	25	35	2.17E - 01	
Anisole	100-66-3	Flux	2.03E - 04	5	10	4.07E - 05	Not available
Benzaldehyde	100-52-7	Flux	1.39E - 03				
Benzene	71-43-2	Ambient Air	8.45E - 02	0.5	2.5	1.69E - 01	Carc. 1A
Bromoform	75-25-2	Ambient Air	2.13E - 05	0.5		4.26E - 05	
Butanal	123-72-8	Flux	3.78E - 03				
Butanol	71-36-3	Flux	1.70E - 02	20		8.49E - 04	
Butyl acetate	123-86-4	Flux	1.30E - 03	150	200	8.64E - 06	
Butyl formate	592-84-7	Ambient Air	4.79E - 06				
Butyric acid	107-92-6	Ambient Air	5.55E - 06				
Camphene	79-92-5	Ambient Air	7.18E - 06				Not available
Caproic acid	142-62-1	Ambient Air	4.63E - 05				Not available
Carbon disulphide	75-15-0	Flux	2.42E - 03	1		2.42E - 03	
Chlorinated-dibenzo-pyran	32904-22-6	Ambient Air	2.59E - 05				Not available
Chloroacetaldehyde	107-20-0	Ambient Air	1.87E - 05		1	1.87E - 05	Carc. 2
Chlorobenzene	108-90-7	Flux	3.00E - 04	10		3.00E - 05	
Chloroform	67-66-3	Flux	5.25E - 03	10		5.25E - 04	Carc. 2
Cis-1,4-Dichloro-2-butene	1476-11-5	Ambient Air	1.18E - 05				Not available

Permanently covered landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Crotonaldehyde	4170-30-3	Flux	1.07E - 02		0.3	3.55E - 02	
Cyclohexane	110-82-7	Flux	1.35E - 03	100		1.35E - 05	
Cyclohexane isocyanato	3173-53-3	Flux	7.55E - 04				Not available
Cyclohexane isothiocyanato	1122-82-3	Flux	6.53E - 06				Not available
Cyclohexanone	108-94-1	Flux	2.54E - 02	20	50	1.27E - 03	
Decanal	112-31-2	Flux	1.25E - 01				Not available
Decane	124-18-5	Flux	2.35E - 03				Not available
Dichloroethylene	540-59-0	Ambient Air	6.51E - 03	200		3.26E - 05	
Dichloromethane	75-09-2	Flux	2.57E - 03	50		5.14E - 05	Carc. 2
Dimethyl disulphide	624-92-0	Ambient Air	2.60E - 06	0.5		5.19E - 06	Not available
Dimethyl sulphide	75-18-3	Ambient Air	4.38E - 03	10		4.38E - 04	Not available
Ethanol	64-17-5	Ambient Air	7.24E - 01		1000	7.24E - 04	
Ethyl acetate	141-78-6	Flux	4.99E - 03	400		1.25E - 05	
Ethyl cyclohexane	1678-91-7	Flux	3.35E - 05				Not available
Ethyl hexanoate	123-66-0	Flux	3.22E - 06				Not available
Ethyl hexanol	104-76-7	Flux	2.23E - 02				Not available
Ethyl mercaptan	75-08-1	Ambient Air	2.36E - 05	0.5		4.72E - 05	
Ethylbenzene	100-41-4	Ambient Air	1.57E - 01	20		7.83E - 03	
Formic acid	64-18-6	Ambient Air	3.29E - 04	5	10	6.59E - 05	
Furfural	98-01-1	Flux	4.45E - 04	0.2		2.23E - 03	Carc. 2
Heptanal	111-71-7	Flux	3.31E - 03				Not available
Heptane	142-82-5	Ambient Air	1.22E - 01	400	500	3.05E - 04	
Heptanoic acid	111-14-8	Ambient Air	1.13E - 05				
Hexanal	66-25-1	Flux	4.57E - 03				Not available
Hydrogen sulphide	7783-06-4	Flux	5.74E - 01	1	5	5.74E - 01	
Isobutyric acid	79-31-2	Ambient Air	1.11E - 05				
Isononene	31387-92-5	Flux	4.59E - 05				Not available
Isoprene	78-79-5	Flux	8.51E - 06				Carc. 1B
Isopropyl alcohol	67-63-0	Flux	4.60E - 03	200	400	2.30E - 05	
Isopropyl benzene	98-82-8	Ambient Air	2.32E - 04	50		4.64E - 06	
Isovaleraldehyde	590-86-3	Flux	1.92E - 04				Not available
Isovaleric acid	503-74-2	Ambient Air	9.58E - 06				Not available
Limonene	5989-27-5	Ambient Air	7.45E - 02				
Methanethiol	74-93-1	Ambient Air	9.96E - 04	0.5		1.99E - 03	
Methyl acetate	79-20-9	Flux	1.45E - 03	200	250	7.26E - 06	
Methyl isobutyl ketone	108-10-1	Flux	1.38E - 03	20	75	6.90E - 05	
Methyl propionate	554-12-1	Ambient Air	5.55E - 06				
Methylcyclohexane	108-87-2	Ambient Air	7.00E - 02	400		1.75E - 04	
Methyl-ethyl ketone	78-93-3	Flux	1.15E - 02	200	300	5.73E - 05	
Methyl-nonane	871-83-0	Flux	1.81E - 07				Not available
m-Xylene	108-38-3	Flux	6.43E - 04	100	150	6.43E - 06	
Naphthalene	91-20-3	Flux	4.80E - 04	10		4.80E - 05	Carc. 2
n-Hexane	110-54-3	Flux	4.14E - 03	50		8.27E - 05	
n-Hexanol	111-27-3	Flux	1.58E - 04				
Nonanal	124-19-6	Flux	1.45E - 01				Not available
n-Pentane	109-66-0	Flux	6.05E - 02	600	750	1.01E - 04	
n-Propyl benzene	103-65-1	Flux	1.79E - 04				
n-propyl nitrate	627-13-4	Flux	2.63E - 06	25	40	1.05E - 07	Not available
n-Tetradecane	629-59-4	Flux	1.94E - 02				Not available
n-Tridecane	629-50-5	Flux	4.29E - 06				Not available

Permanently covered landfill surface							
Compound	**CAS Number**	**Sampling method**	**C_{MAX} [ppm]**	**TLV-TWA [ppm]**	**TLV-STEL [ppm]**	**HQ**	**Carcinogenic**
Octamethylcyclotetrasiloxane	556-67-2	Flux	1.95E - 05	10	15	1.95E - 06	
Octanal	124-13-0	Flux	1.92E - 02				Not available
Octane	111-65-9	Flux	1.20E - 03	300		3.99E - 06	
o-Dichlorobenzene	95-50-1	Flux	4.18E - 05	25	50	1.67E - 06	
p-cymene	99-87-6	Ambient Air	2.02E - 01				Not available
p-Dichlorobenzene	106-46-7	Flux	4.18E - 05	10		4.18E - 06	Carc. 2
Pentanol	71-41-0	Ambient Air	1.91E - 01				
Phenol	108-95-2	Flux	1.67E - 02	5		3.34E - 03	
Propanal	123-38-6	Ambient Air	7.58E - 05	20		3.79E - 06	
Propane	74-98-6	Flux	2.33E - 06	1000		2.33E - 09	
Propanone	67-64-1	Flux	1.09E - 01	250	500	4.36E - 04	
Propionic acid	79-09-4	Ambient Air	6.27E - 05	10		6.27E - 06	
Propyl thiophene	69280-76-8	Flux	4.35E - 05				Not available
p-Tolualdehyde	104-87-0	Flux	1.54E - 05				Not available
p-xylene	106-42-3	Ambient Air	3.39E - 01	100	150	3.39E - 03	
Styrene	100-42-5	Flux	2.77E - 03	10	20	1.39E - 04	
Tert-Butyl ethyl ether	637-92-3	Flux	6.83E - 03	25		2.73E - 04	Not available
Tert-Butyl methyl ether	1634-04-4	Flux	1.67E - 03	50		3.35E - 05	
Tetrachloroethylene	127-18-4	Flux	6.36E - 03	25	100	2.54E - 04	Carc 2.
Tetrachloromethane	56-23-5	Flux	4.22E - 03	5	10	8.44E - 04	Carc. 2
Tetrahydrofuran	109-99-9	Flux	1.66E - 03	50	100	3.32E - 05	Carc. 2
Toluene	108-88-3	Flux	2.47E + 01	20		1.23E + 00	
Trans-1,4-Dichloro-2-butene	110-57-6	Ambient Air	1.17E - 05				Not available
Trichloroethene	79-01-6	Ambient Air	3.76E - 04	10	25	3.76E - 05	Carc. 1B
Trichlorofluoromethane	75-69-4	Flux	5.67E - 06		1000	5.67E - 09	Not available
Trimethyl cyclohexane	3073-66-3	Flux	3.05E - 07				Not available
Trimethyl hexane	921-47-1	Flux	2.28E - 05				Not available
Trimethylbenzene	25551-13-7	Flux	1.42E - 06	25		5.69E - 08	Not available
Trimethylsilanol	1066-40-6	Flux	3.87E - 05				Not available
Valeric acid	109-52-4	Ambient Air	1.44E - 05				
Vinyl acetate	108-05-4	Ambient Air	1.70E - 05	10	15	1.70E - 06	Carc. 2
Xylene	1330-20-7	Flux	1.91E - 07	100	150	1.91E - 09	
α- Pinene	80-56-8	Ambient Air	2.63E - 01	20		1.31E - 02	Not available
β- Pinene	127-91-3	Ambient Air	1.59E - 01	20		7.94E - 03	Not available