

COMPARISON OF RESULTS OF COMPUTATIONAL EXPERIMENTS FOR PCB-180

E.1. Gas/particle partitioning:

E.1.1. Input data

Twelve sets of input data (different ambient temperatures in the range from – 12° C to 25° C) are proposed for modelling experiments with PCB-180.

Table E.1. Input data for computation experiments with PCB-180 describing gas/particle partitioning.

N	Exp. 1	Exp. 2	Exp. 3	Exp. 4	Exp. 5	Exp. 6	Exp. 7	Exp. 8	Exp. 9	Exp. 10	Exp. 11	Exp. 12
Averaged ambient temperature, C	-12	-5	0	3	5	8	10	12	15	17	20	25
Total Suspended Matter, TSP, $\mu\text{g}/\text{m}^3$	30	30	35	31	18	25	30	30	40	33	34	29
Organic content in the aerosol, %	20	20	20	20	20	20	20	20	20	20	20	21

Output: PCB particulate fractions calculated for a range of temperatures (for PCB-180: from – 12°C to 25°C).

E.1.2. Comparison of the results

Table E.2. Calculation results: fractions of particulate phase of PCB-180 calculated by models and statistical parameters used for evaluation

N	Temperature (°C)	EVN-BETR and UK-MODEL	DEHM-POP	CAM/POPs*	MSCE-POP**		ClimoChem	SimpleBox***	m_φ	σ_φ
					1	2				
1	-12	0.98	0.93	0.99	0.98	0.97	0.22	1.00	0.87	0.29
2	-5	0.95	0.84	0.97	0.94	0.92	0.14	0.99	0.82	0.30
3	0	0.92	0.75	0.95	0.87	0.87	0.12	–	0.75	0.32
4	3	0.86	0.64	0.92	0.81	0.80	0.09	–	0.69	0.31
5	5	0.73	0.45	0.82	0.76	0.64	0.05	–	0.57	0.29
6	8	0.71	0.44	0.81	0.67	0.62	0.05	–	0.55	0.27
7	10	0.69	0.42	0.79	0.60	0.60	0.05	0.92	0.58	0.28
8	12	0.63	0.36	0.74	0.53	0.54	0.05	0.90	0.47	0.24
9	15	0.60	0.34	0.71	0.43	0.52	0.05	–	0.44	0.23
10	17	0.49	0.25	0.60	0.36	0.41	0.04	–	0.36	0.20
11	20	0.40	0.20	0.51	0.27	0.33	0.03	–	0.29	0.17
12	25	0.23	0.11	0.31	0.16	0.19	0.02	–	0.17	0.10

* - an additional input data of 12 size-bin structure is applied on the TSP in the experiment of CAM/POPs model;

** - see process description of MSCE-POP model (MSCE-POP 1: current version; MSCE-POP 2: experimental version).

*** - only 4 experiments for SimpleBox

The plot of dependence of φ on T calculated by participating models is presented in Fig. E.1.

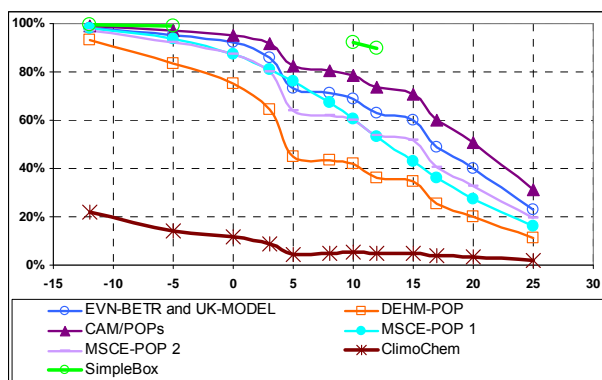


Fig. E.1. Fractions of PCB-180 particulate phase for different ambient temperatures (Calculation results of the participating models)

Table E.3. Coefficients of regression dependence between the models (α / β)

	DEHM-POP	CAM/POPs	MSCE-POP 1	MSCE-POP 2	CliMoChem	SimpleBox *
EVN-BETR and UK-MODEL	1.08/-0.26	0.88/0.16	1.15/-0.17	1.04/-0.09	0.20 /-0.06	0.27 / 0.73
DEHM-POP	-	0.72/0.41	0.99/0.14	0.92/0.18	0.21 / -0.02	0.17 / 0.84
CAM/POPs	-	-	1.28/-0.35	1.15/-0.26	0.21 / -0.09	0.38 / 0.62
MSCE-POP 1	-	-	-	0.88/0.07	0.17/ -0.03	0.21/ 0.79
MSCE-POP 2	-	-	-	-	0.21/-0.05	0.22 / 0.78
CliMoChem	-	-	-	-	-	0.55 / 0.89

* - by 4 experiments only

Table E.4. Correlation coefficients

	DEHM-POP	CAM/POPs	MSCE-POP 1	MSCE-POP 2	CliMoChem	SimpleBox *
EVN-BETR and UK-MODEL	0.96	0.99	0.98	0.99	0.81	1.00
DEHM-POP	-	0.92	0.96	0.98	0.93	0.99
CAM/POPs	-	-	0.97	0.97	0.75	1.00
MSCE-POP 1	-	-	-	0.98	0.80	1.00
MSCE-POP 2	-	-	-	-	0.86	1.00
CliMoChem	-	-	-	-	-	0.93

* - by 4 experiments only

Table E.5. Residual square deviation (σ)

	DEHM-POP	CAM/POPs	MSCE-POP 1	MSCE-POP 2	CliMoChem	SimpleBox *)
EVN-BETR and UK-MODEL	0.248	0.080	0.159	0.089	0.114	0.004
DEHM-POP	-	0.268	0.264	0.145	0.072	0.011
CAM/POPs	-	-	0.218	0.182	0.128	0.002
MSCE-POP 1	-	-	-	0.145	0.115	0.005
MSCE-POP 2	-	-	-	-	0.099	0.006
CliMoChem	-	-	-	-	-	0.031

* - by 4 experiments only

E.2. Dry deposition of particulate phase

E.2.1. Input data

The following four sets of input data are proposed for modelling experiments with PCB-180

Table E.6. Input data for computation experiments with PCB-180 describing dry deposition of particulate phase

N	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Type of underlying surfaces	Grass	Forest	Bare soil	Seawater
Mean wind velocity, m/sec	4	4	4	4
Air concentration of particulate phase, ng/m ³	1	1	1	1

E.2.2. Comparison of the results

See chapter 4.2.3. According to EVN-BETR and UK-MODEL, DEHM-POP, G-CIEMS, CAM/POPs, CliMoChem, SimpleBox and MSCE-POP parameterizations, these calculations were made for all considered PCB congeners together.

E.3. Wet deposition

E.3.1. Input data

Eight sets of input data are proposed for modeling experiments with PCB-180.

Table E.7. Input data for computation experiments with PCB-180 describing wet deposition

N	Experiment 1	Experiment 2	Experiment 3	Experiment 4	Experiment 5	Experiment 6	Experiment 7	Experiment 8
Precipitation intensity, mm/hour	1	1	1	1	10	10	10	10
Precipitation height, m	1000	1000	1000	1000	1000	1000	1000	1000
Average ambient temperature, °C	-1	3	10	15	-1	3	10	15
Air concentration, gaseous phase, pg/m ³	5.5	2	25	4.5	5.5	2	25	4.5
Air concentration, particulate phase, pg/m ³	4.3	1.3	1.5	0.5	4.3	1.3	1.5	0.5

Output: calculated wet deposition fluxes, ng/m²/hour and total (dissolved+particulate) concentrations of PCB in precipitation, pg/l.

E.3.2. Comparison of the results

Since additional experiments on wet deposition (last four experiments) were made only by two participating models, statistical processing is performed for the calculation results of the first four experiments. It should be mentioned that results of Experiments 5, 6, 7 and 8 calculated by MSCE-POP and SimpleBox show the same concentration in precipitation as in Experiments 1, 2, 3 and 4, respectively. Fluxes between Experiments 1, 2, 3, 4 and Experiments 5, 6, 7, 8 differ ten times in accordance with the different values of precipitation intensity given (See Table E.7).

Table E.8. Calculation results: total (dissolved + particulate) concentrations of PCB-180 in precipitation (pg/l) and statistical parameters used for evaluation

N	Temperature (C)	EVN-BETR and UK model	CAM/POPs*	MSCE-POP	CliMoChem	SimpleBox	m_φ	σ_φ
1	-1	138	5720.22	663	1890	929	1868	2245
2	3	609	1403.2	199	1200	277	738	542
3	10	3900	9109.5	250	1283	410	2991	3720
4	15	570	1048.27	78	411	113	444	396

* - A typical 12 size-bin structure of Sulphate Aerosol as additional input data in this experiment.

Table E.9. Calculation results: wet deposition flux of PCB-180 (ng/m²/hour) and statistical parameters used for evaluation

N	Temperature (C)	EVN-BETR and UK model	CAM/POPs*	MSCE-POP	CliMoChem	SimpleBox	m_φ	σ_φ
1	-1	0.138	5.720	0.663	0.255	0.929	1.541	2.358
2	3	0.609	1.403	0.199	0.077	0.277	0.513	0.535
3	10	3.900	9.110	0.250	0.093	0.410	2.752	3.891
4	15	0.570	1.048	0.078	0.030	0.113	0.368	0.438

* - a typical 12 size-bin structure of Sulphate Aerosol as additional input data in this experiment.

Table E.10. Correlation coefficients for concentration in precipitation

	CAM/POPs	MSCE-POP	CliMoChem	SimpleBox
EVN-BETR and UK model	0.76	-0.24	-0.003	-0.16
CAM/POPs	-	0.44	0.57	0.51
MSCE-POP	-	-	0.91	1.00
CliMoChem	-	-	-	0.92

Отформатировано

Отформатировано

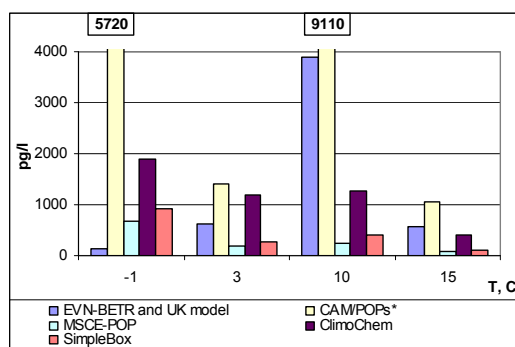


Fig. E.2. Concentration in precipitation calculated by different models for different values of ambient temperatures, pg/l

Table E.11. Coefficients of regression dependence between the models, (α / β), for concentration in precipitation

	CAM/POPs	MSCE-POP	CliMoChem	SimpleBox
EVN-BETR and UK model	1.67 / 2142.46	-0.04 / 343.25	-0.001 / 1197.41	-0.03 / 474.41
CAM/POPs	-	0.03 / 171.19	0.09 / 809.54	0.05 / 227.75
MSCE-POP	-	-	2.18 / 548.82	1.38 / 20.34
CliMoChem	-	-	-	0.54 / -209.67
Mean concentration in precipitation	4320.3	297.5	1196.1	432.2

Table E.12. Residual square deviation (σ) for concentration in precipitation

	CAM/POPs	MSCE-POP	CliMoChem	SimpleBox
EVN-BETR and UK model	4322.2	427.2	1051.5	603.6
CAM/POPs	-	395.0	867.6	524.5
MSCE-POP	-	-	434.5	50.7
CliMoChem	-	-	-	235.4

E.4. Gaseous exchange between the atmosphere and soil

E.4.1. Input data

Four sets of input data are proposed for modelling experiments with PCB-180.

Table E.13 Input data for computation experiments with PCB-180 describing air/soil exchange

N	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Average ambient temperature, °C	10	10.9	12.9	13.9
Air concentration, gaseous phase, pg/m ³	0.3	1.3	2.4	0.7
Bulk soil density, kg/m ³	1210	1080	890	1360
Volumetric water content in soil, %	20.6	41.4	26.4	16.8
Volumetric air content in soil, %	20	20	20	20
Fraction of organic carbon in soil, %	7.1	17.7	12.3	4

Output: calculation of PCB-180 soil concentrations, ng/g and gaseous fluxes from and to soil and/or net gaseous flux to soil, ng/m²/d.

E.4.2. Comparison of the results

1) Fig. E.3. illustrates air concentration trend used in calculations for Experiment 1.

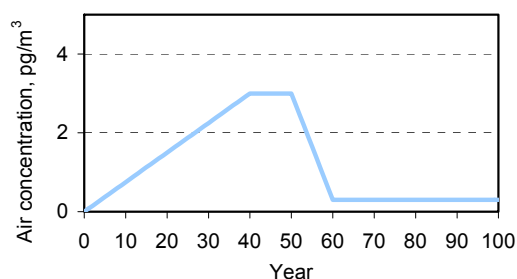


Fig. E.3. Air concentration trend used for calculations for MSCE-POP model (second version) for Experiment 1

Table E.14. Calculation results: soil concentrations of PCB-180 (ng/g) calculated by models and statistical parameters used for evaluation

N	Air conc pg/m ³	EVN-BETR and UK-MODEL	DEHM- POP	CAM/POPs*	MSCE-POP**		CliMoChem	SimpleBox	m	σ
					1	2				
1	0.3	0.004	0.355	0.638	0.013	0.075	0.068	0.0001	0.16	0.24
2	1.3	0.019	3.742	6.604	0.064	0.363	0.488	0.0003	1.61	2.58
3	2.4	0.034	4.808	7.203	0.139	0.792	0.855	0.0005	1.98	2.86
4	0.7	0.006	0.768	0.710	0.027	0.154	0.056	0.0001	0.25	0.34

* - A typical 12 size-bin structure of Sulphate Aerosol as additional input data in this experiment;

** - MSCE-POP 1: steady-state calculations; MSCE-POP 2: calculations from dynamic model.

Table E.15. Calculation results: net gaseous flux to soil of PCB-180 (ng/m²/d) calculated by models and statistical parameters used for evaluation

N	Air conc pg/m ³	EVN-BETR and UK-MODEL	CAM/POPs	MSCE-POP**		CliMoChem	SimpleBox	m *	σ *
				1	2				
1	0.3	3.59E-04	3.51E-13	6.75E-03	3.62E-03	0	2.71E-02	7.563E-03	1.125E-02
2	1.3	1.62E-03	3.27E-12	3.15E-02	2.50E-02	0	1.18E-01	3.513E-02	4.812E-02
3	2.4	2.89E-03	3.84E-12	5.40E-02	2.94E-02	0	2.17E-01	6.058E-02	8.998E-02
4	0.7	8.47E-04	3.94E-13	1.26E-02	-4.37E-03	0	6.31E-02	1.442E-02	2.790E-02

* - statistical parameters are calculated for models using steady-state and dynamic approaches.

Table E.16. Correlation coefficients for soil concentrations of PCB-180

	DEHM-POP	CAM/POPs	MSCE-POP 1	MSCE-POP 2	CliMoChem	SimpleBox
EVN-BETR and UK-MODEL	0.97	0.93	0.99	0.99	1.00	1.00
DEHM-POP	-	0.99	0.93	0.93	0.98	0.98
CAM/POPs	-	-	0.87	0.87	0.94	0.94
MSCE-POP 1	-	-	-	1.00	0.98	0.98
MSCE-POP 2	-	-	-	-	0.98	0.98
CliMoChem	-	-	-	-	-	1.00

Table E.17. Correlation coefficients for net gaseous flux to soil of PCB-180*

	CAM/POPs	MSCE-POP 1	MSCE-POP 2	SimpleBox
EVN-BETR and UK-MODEL	0.92	1.00	0.86	1.00
CAM/POPs	-	0.94	0.98	0.91
MSCE-POP 1	-	-	0.90	1.00
MSCE-POP 2	-	-	-	0.85

* - statistical parameters are calculated for models using steady-state and dynamic approaches.

Table E.18. Coefficients of regression dependence between the models (α / β) for soil concentrations

	DEHM-POP	CAM/POPs	MSCE-POP 1	MSCE-POP 2	CliMoChem	SimpleBox
EVN-BETR and UK-MODEL	152.07 / -0.007	239.01 / -0.023	4.00 / -0.003	22.80 / -0.017	27.29 / -0.068	0.02 / -0.00002
DEHM-POP	-	1.62 / -0.140	0.02 / 0.003	0.14 / 0.017	0.17 / -0.044	0.0001 / -0.000001
CAM/POPs	-	-	0.01 / 0.009	0.08 / 0.053	0.10 / -0.013	0.0001 / 0.00002
MSCE-POP 1	-	-	-	5.70 / -0.0004	6.63 / -0.036	0.004 / 0.000003
MSCE-POP 2	-	-	-	-	1.16 / -0.036	0.001 / 0.000003
CliMoChem	-	-	-	-	-	0.001 / 0.00003
Mean soil concentration	2.4184	3.7888	0.0608	0.3461	0.3668	0.0002

Table E.19. Coefficients of regression dependence between the models (α / β) for net gaseous flux to soil of PCB-180*

	CAM/POPs	MSCE-POP 1	MSCE-POP 2	SimpleBox
EVN-BETR and UK-MODEL	1.54E-09 / -2.40E-13	19.26 / -0.001	12.69 / -0.005	74.82 / -0.001
CAM/POPs	-	1.09E+10 / 0.005	8.62E+09 / -0.004	4.06E+10 / 0.026
MSCE-POP 1	-	-	0.69 / -0.005	3.85 / 0.005
MSCE-POP 2	-	-	-	4.29 / 0.049
Mean flux	1.96E-12	2.62E-02	1.34E-02	1.06E-01

* - statistical parameters are calculated for models using steady-state and dynamic approaches.

Table E.20. Residual square deviation (σ) for soil concentrations

	DEHM-POP	CAM/POPs	MSCE-POP 1	MSCE-POP 2	CliMoChem	SimpleBox
EVN-BETR and UK-MODEL	0.962	2.364	0.013	0.076	0.051	0.00002
DEHM-POP	-	0.926	0.036	0.206	0.145	0.0001
CAM/POPs	-	-	0.048	0.276	0.218	0.0001
MSCE-POP 1	-	-	-	0.001	0.138	0.0001
MSCE-POP 2	-	-	-	-	0.138	0.0001
CliMoChem	-	-	-	-	-	0.00002

Table E.21. Residual square deviation (σ) for net gaseous flux to soil of PCB-180*

	CAM/POPs	MSCE-POP 1	MSCE-POP 2	SimpleBox
EVN-BETR and UK-MODEL	1.27E-12	3.15E-03	1.45E-02	3.51E-03
CAM/POPs	-	1.22E-02	5.92E-03	5.94E-02
MSCE-POP 1	-	-	1.25E-02	1.43E-02
MSCE-POP 2	-	-	-	7.55E-02

* - statistical parameters are calculated for models using steady-state and dynamic approaches.

2) Accumulation/clearance dynamics of POPs in soil (optional):

Figs. E.4, E.5, E.6 and E.7 below show the results of the experiment obtained by CAM/POPs, MSCE-POP, EVN-BETR and UK model, and SimpleBox models, respectively.

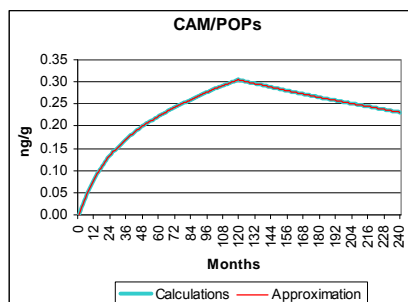


Fig. E.4. Long-term trends of accumulation and clearance obtained by CAM/POPs model

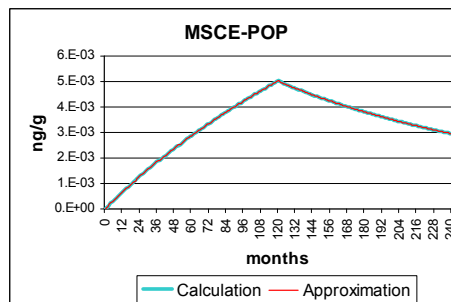


Fig. E.5. Long-term trends of accumulation and clearance obtained by MSCE-POP model

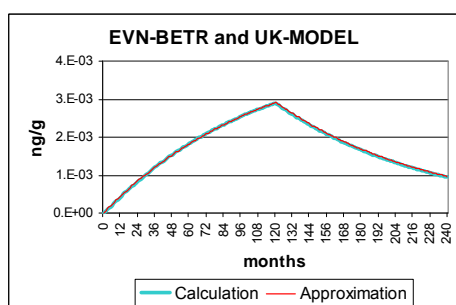


Fig. E.6. Long-term trends of accumulation and clearance obtained by EVN-BETR and UK-MODEL model

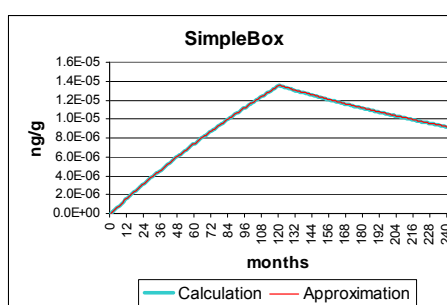


Fig. E.7. Long-term trends of accumulation and clearance obtained by SimpleBox model

Table E.22. Parameters of multi-exponential approximation

		EVN-BETR and UK model		CAM/POPs		SimpleBox		MSCE-POP	
		Slow	Fast	Slow	Fast	Slow	Fast	Slow	Fast
Accumulation phase	Lambda	8.64E-03	8.64E-03	4.08E-03	5.11E-02	3.22E-03	3.22E-03	3.07E-03	1.73E-02
	$t_{1/2}$, years	6.69	6.69	14.15	1.13	17.93	17.94	18.81	3.35
Clearance phase	Lambda	9.16E-03	9.33E-03	1.89E-03	5.00E-03	3.25E-03	3.25E-03	3.28E-03	1.00E-02
	$t_{1/2}$, years	6.31	6.19	30.49	11.55	17.77	17.76	17.61	5.78

E.5. Gaseous exchange between the atmosphere and water

E.5.1. Input data

Four sets of input data are proposed for modelling experiments with PCB-180.

Table E.23. Input data for calculation experiments with PCB-180 describing air/water exchange

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Average ambient temperature, °C	23	23	10	13.9
Air concentration, gaseous phase, pg/m ³	3.3	3.4	4.1	14
Mean wind velocity, m/sec	3	5.6	5	3.25

Output: calculation of PCB-180 water concentrations, pg/l and gaseous fluxes from and to water and/or net gaseous flux to water, ng/m²/d;

E.5.2. Comparison of the results

Table E.24. Calculation results: water concentrations of PCB-180 (pg/l) calculated by all participating models and statistical parameters used for evaluation

N	EVN-BETR and UK-MODEL	CAM/POPs	DEHM-POP	CliMoChem	SimpleBox	MSCE-POP	<i>m</i>	σ
1	0.96	1.70	2.24	744.91	2.10	0.89	125	303
2	0.96	5.20	4.99	716.02	3.72	0.91	122	291
3	5.16	23.10	0.45	2135.2	7.07	3.87	362	868
4	12.50	50.00	0.47	5532.53	14.94	8.98	937	2252

Table E.25. Calculation results: statistical evaluation of PCB-180 water concentrations (pg/l) calculated by models having results of the same order

N	EVN-BETR and UK-MODEL	CAM/POPs	DEHM-POP	SimpleBox	MSCE-POP	<i>m</i>	σ
1	0.96	1.70	2.24	2.10	0.89	1.6	0.6
2	0.96	5.20	4.99	3.72	0.91	3.2	2.1
3	5.16	23.10	0.45	7.07	3.87	7.9	8.8
4	12.50	50.00	0.47	14.94	8.98	17.4	19.0

Table E.26. Calculation results: Gaseous flux to water of PCB-180 (ng/m²/d) calculated by all participating models and statistical parameters used for evaluation

N	EVN-BETR and UK-MODEL	CAM/POPs	CliMoChem	SimpleBox	MSCE-POP	<i>m</i>	σ
1	0.47	0.32	0.13	0.63	0.43	0.4	0.2
2	0.47	0.35	0.14	1.15	0.50	0.5	0.4
3	1.03	0.29	0.22	1.57	0.67	0.8	0.6
4	3.47	0.76	0.71	3.57	2.14	2.1	1.4

Table E.27. Correlation coefficients for water concentrations

	CAM/POPs	DEHM-POP	CliMoChem	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	1.00	-0.71	1.00	0.99	1.00
CAM/POPs	-	-0.70	0.99	1.00	1.00
DEHM-POP	-	-	-0.67	-0.63	-0.71
CliMoChem	-	-	-	0.99	1.00
SimpleBox	-	-	-	-	0.99

Table E.28. Correlation coefficients for gaseous flux to water

	CAM/POPs	CliMoChem	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	0.96	1.00	0.98	1.00
CAM/POPs	-	0.97	0.93	0.98
CliMoChem	-	-	0.98	1.00
SimpleBox	-	-	-	0.98

Table E.29. Coefficients of regression dependence between the models (α / β) for water concentrations

	CAM/POPs	DEHM-POP	CliMoChem	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	4.04 / 0.22	-0.28 / 3.40	415.10 / 250.25	1.04 / 1.86	0.70 / 0.23
CAM/POPs	-	-0.07 / 3.40	101.38 / 254.67	0.26 / 1.81	0.17 / 0.22
DEHM-POP	-	-	-713.26 / 3735.43	-1.69 / 10.40	-1.26 / 6.24
CliMoChem	-	-	-	0.002 / 1.26	0.002 / -0.16
SimpleBox	-	-	-	-	0.66 / -0.95
Mean concentration in water	20.00	2.04	2282.16	6.96	3.66

Table E.30. Coefficients of regression dependence between the models (α / β) for gaseous flux to water

	CAM/POPs	CliMoChem	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	0.15 / 0.23	0.19 / 0.04	0.88 / 0.53	0.56 / 0.17
CAM/POPs	-	1.21 / -0.22	5.42 / -0.60	3.57 / -0.60
CliMoChem	-	-	4.57 / 0.36	2.93 / 0.06
SimpleBox	-	-	-	0.62 / -0.14
Mean gaseous flux to water	0.43	0.30	1.73	0.94

Table E.31. Residual square deviation, σ for water concentrations

	CAM/POPs	DEHM-POP	CliMoChem	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	3.41	2.62	297.58	1.16	0.03
CAM/POPs	-	2.64	601.54	0.94	0.56
DEHM-POP	-	-	2900.80	7.65	4.65
CliMoChem	-	-	-	1.32	0.53
SimpleBox	-	-	-	-	0.77

Table E.32. Residual square deviation, σ for gaseous flux to water

	CAM/POPs	CliMoChem	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	0.11	0.02	0.40	0.10
CAM/POPs	-	0.12	0.80	0.30
CliMoChem	-	-	0.41	0.05
SimpleBox	-	-	-	0.26

E.6. Gaseous exchange between the atmosphere and vegetation

E.6.1. Input data

Three sets of input data are proposed for modelling experiments with PCB-180.

Table E.33. Input data for calculation experiments with PCB-180 describing air/vegetation exchange

N	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Type of vegetation compartment:	Grass	Grass	Grass	Grass
Average ambient temperature, °C	5	25	11	20
Air concentration, gaseous phase, pg/m ³	1	11	0.77	4
Mean wind velocity, m/sec	4	4	4	4

Output: calculation of PCB-180 concentration in vegetation, ng/g dry weight and gaseous fluxes from and to vegetation and/or net gaseous flux to vegetation, ng/m²/d;

E.6.2. Comparison of the results

Table E.34. Calculation results: concentrations of PCB-180 in vegetation calculated by models, ng/g d.w

N	Air concentration, pg/m ³	EVN-BETR and UK-MODEL	SimpleBox*	MSCE-POP
1	1	0.120	0.081	0.018
2	11	0.130	0.458	0.192
3	0.77	0.061	0.054	0.014
4	4	0.098	0.207	0.070

* - ng/g wet weight

Table E.35. Calculation results: net gaseous flux of PCB-180 to vegetation calculated by models, ng/m²/d

N	Air concentration, pg/m ³	EVN-BETR and UK-MODEL	SimpleBox	MSCE-POP
1	1	-0.02	2.85	0.06
2	11	-0.06	27.25	0.62
3	0.77	-0.01	2.12	0.04
4	4	-0.04	10.32	0.23

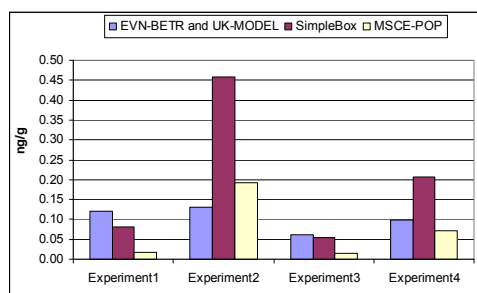


Fig. E.8. Comparison of concentration in vegetation calculated by different models, ng/g

Table E.36. Correlation coefficients for concentrations in vegetation

	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	0.65	0.63
SimpleBox	—	1.00

Table E.37. *Correlation coefficients for net gaseous flux*

	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	-0.96	-0.95
SimpleBox	—	1.00

Table E.38. *Coefficients of regression dependence between the models (α / β) for concentrations in vegetation*

	SimpleBox	MSCE-POP
EVN-BETR and UK-MODEL	3.9 / -0.2	1.69 / -0.1
SimpleBox	—	0.45 / 0.02

Table E.39. *Coefficients of regression dependence between the models (α / β) for net gaseous flux*

	SimpleBox
MSCE-POP	0.023 / -0.008