

Toxicity Equivalent Factor

In compiling this report, the concentration of dioxins were expressed by TEQs (Toxic Equivalent Quantity), which are calculated by multiplying the measured value of concentration of each isomer of dioxins by the Toxic Equivalent Factor (TEF) and then adding them up. TEF is the relative toxicity of dioxins, and the TEF of the most toxic dioxin compound, 2,3,7,8-TCDD is 1.

a) Toxic Equivalent Factor (TEF) of PCDDs and PCDFs

Isomers		WHO-TEF (1998)	I-TEF (1988)
P C D D	2,3,7,8-TCDD	1	1
	1,2,3,7,8-PCDD	1	0.5
	1,2,3,4,7,8-HCDD	0.1	0.1
	1,2,3,6,7,8-HCDD	0.1	0.1
	1,2,3,7,8,9-HCDD	0.1	0.1
	1,2,3,4,6,7,8-HCDD	0.01	0.01
	1,2,3,4,6,7,8,9-OCDD	0.0001	0.001
P C D F	2,3,7,8-TCDF	0.1	0.1
	1,2,3,7,8-PCDF	0.05	0.05
	2,3,4,7,8-PCDF	0.5	0.5
	1,2,3,4,7,8-HCDF	0.1	0.1
	1,2,3,6,7,8-HCDF	0.1	0.1
	1,2,3,7,8,9-HCDF	0.1	0.1
	2,3,4,6,7,8-HCDF	0.1	0.1
	1,2,3,4,6,7,8-HCDF	0.01	0.01
	1,2,3,4,7,8,9-HCDF	0.01	0.01
	1,2,3,4,6,7,8,9-OCDF	0.0001	0.001

b) Toxic Equivalent Factor(TEF) of Coplanar PCBs

Isomers		WHO-TEF (1998)
Non-ortho	3,4,4',5-TCB	0.0001
	3,3',4,4'-TCB	0.0001
	3,3',4,4',5-PCB	0.1
	3,3',4,4',5,5'-HCB	0.01
Mono-ortho	2',3,4,4',5-PCB	0.0001
	2,3',4,4',5-PCB	0.0001
	2,3,3',4,4'-PCB	0.0001
	2,3,4,4',5-PCB	0.0005
	2,3',4,4',5,5'-HCB	0.00001
	2,3,3',4,4',5-HCB	0.0005
	2,3,3',4,4',5'-HCB	0.0005
	2,3,3',4,4',5,5'-HCB	0.0001