

**Recommended
Toxic Equivalency Factors
(TEFs)
for Dioxins and Furans**

TEF Refresher

- TEF is multiplied by the congener concentration to obtain a 2,3,7,8-TCDD equivalent concentration.
- The 2,3,7,8-TCDD equivalent concentration is used in which is used with the slope factor for 2,3,7,8-TCDD in the risk assessment to estimate the cancer risk for that congener.

Implications for Shortforms & Method 1 Standards

- TEFs are used with the 2,3,7,8-TCDD slope factor, but are set independently.
- Revising TEFs does not change Shortforms.
- Revising TEFs does not change the Method 1 Standards.

Comparison of New MassDEP (WHO) TEFs with Old MassDEP TEFs for Dioxin

	New MassDEP (WHO 2005) TEFs		MassDEP 1995 TEFs
		Mono-, di- and tri- CDDs	0.001
1,2,3,7,8-PeCDD	1	2,3,7,8-PeCDDs	0.5
		All other PeCDDs	0.05
1,2,3,4,7,8-HxCDD	0.1	2,3,7,8-HxCDDs	0.1
		All other HxCDDs	0.01
1,2,3,6,7,8-HxCDD	0.1	2,3,7,8-HxCDDs	0.1
		All other HxCDDs	0.01
1,2,3,7,8,9-HxCDD	0.1	2,3,7,8-HxCDDs	0.1
		All other HxCDDs	0.01
1,2,3,4,6,7,8-HpCDD	0.01	2,3,7,8-HpCDDs	0.1
		All other HpCDDs	0.01
OCDD	0.0003	OCDD	0.001

Comparison of New MassDEP (WHO) TEFs with Old TEFs from 1995 Guidance for Furans

	New MassDEP (WHO 2005) TEFs		Old MassDEP 1995 TEFs
		Mono-, di- and tri- CDFs	0.001
2,3,7,8-TCDF	0.1	2,3,7,8-TCDF	0.1
		All other TCDFs	0.01
1,2,3,7,8-PeCDF	0.03	2,3,7,8-PeCDFs	0.5
2,3,4,7,8-PeCDF	0.3	All other PeCDFs	0.05
1,2,3,4,7,8-HxCDF	0.1	2,3,7,8-HxCDFs	0.1
1,2,3,6,7,8-HxCDF	0.1	All other HxCDFs	0.01
1,2,3,7,8,9-HxCDD	0.1		
2,3,4,6,7,8-HxCDF	0.1		
1,2,3,4,6,7,8-HpCDF	0.01	2,3,7,8-HpCDFs	0.1
1,2,3,6,7,8,9-HpCDF	0.01	All other HpCDFs	0.01
OCDF	0.0003	OCDF	0.001