Annex

European legislation

Appendix A – Maximum and action levels as laid down in the European legislation

Table A.2: Action levels (ALs) for PCDD/Fs and DL-PCBs in different foods

Food	Action level for PCDD/Fs (WHO-TEQ)[a]	Action level for DL-PCBs (WHO-TEQ)[a]
Meat and meat products (excluding edible offal)[b] of the following animals		
• bovine animals and sheep	1.75 pg/g fat[c]	1.75 pg/g fat[c]
• poultry	1.25 pg/g fat[c]	0.75 pg/g fat[c]
• pigs	0.75 pg/g fat[c]	0.50 pg/g fat[c]
Mixed fats	1.00 pg/g fat[c]	0.75 pg/g fat[c]
Muscle meat of farmed fish and farmed fishery products	1.50 pg/g wet weight	2.50 pg/g wet weight
Raw milk[b] and dairy products[b], including butter fat	1.75 pg/g fat[c]	2.00 pg/g fat[c]
Hen eggs and egg products[b]	1.75 pg/g fat[c]	1.75 pg/g fat[c]
Clays as food supplement	0.50 pg/g wet weight	0.50 pg/g wet weight
Cereals and oilseeds	0.50 pg/g wet weight	0.35 pg/g wet weight
Fruits, vegetables (including fresh herbs)[d]	0.30 pg/g wet weight	0.10 pg/g wet weight

PCDD/F: polychlorinated dibenzo-p-dioxin and dibenzofuran; DL-PCB: dioxin-like polychlorinated biphenyls; WHO: World Health Organization; TEQ: toxic equivalents.

TW Indicative scale Vegetation (Feed)		
DR CALUX/GC-MS		
PCDD/F	dl-PCB	PCDD/F/dl-PCB
pg TEQ eq./g		
> 1.40	> 1.40	> 2.80
> 0.70	> 0.70	> 1.40
> 0.350	> 0.350	> 0.70
> 0.175	> 0.175	> 0.350
> 0.08	> 0.08	> 0.175
< 0.08	< 0.08	< 0.175

Table A.3: Maximum levels for PCDD/Fs and for the sum of PCDD/Fs and DL-PCBs in feed

Feed	Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt)[(a),(b)] relative to a feed with a moisture content of 12%	Maximum content in ng WHO-PCDD/F-DL-PCBs-TEQ/kg (ppt)[(a),(b)] relative to a feed with a moisture content of 12%
Feed materials of plant origin with the exception of:	0.75	1.25
• Vegetable oils and their by-products	0.75	1.5
Feed materials of mineral origin	0.75	1.0
Feed materials of animal origin:		
• Animal fat, including milk fat and egg fat	1.50	2.0
• Other land animal products including milk and milk products and eggs and egg products	0.75	1.25
• Fish oil	5.0	20.0
• Fish, other aquatic animals, and products derived thereof with the exception of fish oil, hydrolysed fish protein containing more than 20% fat[(c)] and crustacean meal	1.25	4.0
• Hydrolysed fish protein containing more than 20% fat; crustacean meal[(d)]	1.75	9.0
The feed additives kaolinitic clay, vermiculite, natrolite-phonolite, synthetic calcium aluminates and clinoptilolite of sedimentary origin belonging to the functional groups of binders and anticaking agents	0.75	1.5
Feed additives belonging to the functional group of compounds of trace elements	1.0	1.5
Premixtures	1.0	1.5
Compound feed with the exception of:	0.75	1.5
• compound feed for pet animals and fish,	1.75	5.5
• Compound feed for fur animals.	–	–

PCDD/F: polychlorinated dibenzo-p-dioxin and dibenzofuran; DL-PCB: dioxin-like polychlorinated biphenyls; WHO: World Health Organization; TEQ: toxic equivalents.

(a): Upper bound concentrations: upper bound concentrations are calculated on the assumption that all values of the different congeners below the limit of quantification are equal to the limit of quantification.

(b): Table of TEF (= toxic equivalency factors) for dioxins, furans and DL-PCBs: WHO-TEFs for human risk assessment based on the conclusions of the World Health Organisation (WHO) – International Programme on Chemical Safety (IPCS) expert meeting which was held in Geneva in June 2005 (van den Berg et al., 2006).