



## Limits for definition of POPs waste proposed by IPEN

POPs waste is defined, according to Article 6 of the Stockholm Convention, by setting Low POPs Content Levels (LPCLs). This establishes an important type of “limit value”, because POPs waste should be treated in such a way that the POPs are either destroyed or irreversibly transformed. They cannot be landfilled, reused, or recycled, because the POPs content in that waste would then also be recycled and that would not stop this chemical pollution from entering the environment. POPs waste cannot be exported to countries lacking the capacity for its destruction or transformation, which in most cases means it cannot be exported from developed to developing countries.

Currently, there are provisional Low POPs Content Levels for POPs already listed under the Stockholm Convention. Some of these “provisional” levels are not safe and do not

meet health and environment protection requirements. They were set under pressure from groups with economic interests in certain industrial sectors.

### HBCD and PBDEs

The two options currently available for LPCLs for brominated flame retardants (BFRs) give the parties of the Stockholm Convention the incorrect message that both options are acceptable and that 1000 mg/kg is a safe value. It leads to continuous use of recycled plastics with high levels of PBDEs and HBCD. It also allows exports of wastes with high levels of BFRs to developing countries. IPEN has found very serious contaminations of recycled plastics containing PBDEs and brominated dioxins (PBDD/Fs), which accompany PBDEs as unintentional byproducts of their production. Brominated dioxins are of similar toxicity as chlorinated dioxins (PCDD/Fs).

The table below contains LPCLs suggested by IPEN

POP	IPEN proposal
HBCD	100 mg/kg
Hexa-, hepta-, tetra-, penta-, and decabromodiphenyl ether (PBDEs)	50 mg/kg as a sum
PCDDs, PCDFs, and dioxin-like PCBs	1µg TEQ/kg



the LPCLs for PCDD/Fs, as they nearly always accompany PCDD/Fs and are found together in analyses of wastes and other matrices.

Maintaining the current provisional LPCLs for dioxins will leave approximately 75 - 10 kg TEQ of dioxins in wastes uncontrolled every year on a global scale. **Seven and a half kilograms may seem little, but it is equal to the tolerable daily intake of dioxins for a global population of 133 planet Earths.**

### Proposed Levels of LPCLs for Short-Chain Chlorinated Paraffins (SCCPs) and Per- and Polyfluoroalkyl Substances (PFASs)

Considering SCCPs' demonstrated long-range transportation and their ability to accumulate, there is a potential for increases in environmental levels should releases continue or increase. The current provisional LPCLs would result in these kinds of increased releases. Our suggestion of 100 ppm for LPCLs is based on available scientific data evidence, including the report prepared by BiPRO for the German Federal Environment Agency in 2015.

Per- and polyfluoroalkyl substances (PFASs) are a very large group of toxic substances. Only three groups of these - PFOS, PFOA, and PFHxS and related substances – have so far been listed in Annex A to the Stockholm Convention. Their levels are harmful to the environment at already very low concentrations and therefore, stricter LPCLs than already agreed and/or proposed so far should be applied for these substances in wastes. Levels of PFASs at parts per trillion (ppt) in food products and/or drinking water are considered unsafe for human health. We recommend one limit value for all PFOS, PFOA and PFHxS and their salts at a level of 0.025 mg/kg (ppm) and one limit value of 10 mg/kg for the total sum of these three substances and their related compounds.

### Dioxins (PCDDs and PCDFs) and dioxin-like PCBs (dl PCBs)

It has been found that contamination of soil with levels of 0.05 µg TEQ/kg – or even less – can lead to serious pollution of the food chain and to simply unacceptable levels of dioxins in food products, such as poultry meat and eggs or sea food (fish, crabs etc.). Soil contamination at this critical level can be caused by unsafe disposal of waste with levels of PCDD/Fs of 1 µg TEQ/kg or lower.

A recently published study revealed several cases where processed waste contained PCDD/Fs levels between 20 and 12,000 pg TEQ/g (0.02 and 12 ppb), which led to contamination of chicken eggs up to 12 times above the tolerable level set in the EU. Based on these findings, IPEN suggests that the LPCL should be set at 1 µg TEQ/kg. This is an acceptable maximum limit for POPs waste, which should be combined with a ban on the use of waste with levels above 0.05 µg TEQ/kg without any pretreatment of the soil surface.

The current provisional level of LPCLs for PCBs is defined using only their intentionally produced congeners. **The levels do not reflect unintentional POP produced.** Therefore, we suggest to include dioxin-like PCBs under

POP	IPEN proposal
SCCPs	100 mg/kg
PFOS, PFOA, and PFHxS and related compounds	0.025 mg/kg for PFOS, PFOA or PFH <sub>x</sub> S and their salts individually; 10 mg/kg for sum of PFOS, PFOA, PFH <sub>x</sub> S and related compounds