LEVELS AND PROFILE OF PCDD/Fs AND cPCBs IN WALLOON BREAST MILK FROM INDUSTRIAL AREA

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This study presents some preliminary results obtained from breast milk samples (N=20) issued of volunteer mothers living in industrial area (Wallonia, Belgium). Samples were collected between August 2000 and April 2001 (most of them in the city of Liege) from primi and multiparae women between the ages of 26 and 38 at different times of lactation. The representative mean TEQ value for all samples was 30.2 ±11.5pg TEQ/g of fat. The relative contribution of PCDDs was 15.5 ±6.1 pg TEQ/g of fat (51%) and 14.8 ±5.6 pg TEQ/g of fat (49%) for PCDFs. If cPCBs are included in the TEQ, the mean value is 40.9 ±14.9 pg TEQ/g of fat. The congener distribution is typical for breast milk issued from industrialized countries. The most prominent PCDDs congeners being the more chlorinated such as 1,2,3,6,7,8-HxCDD and OCDD on a concentration basis. For the PCDFs, a decrease in concentration is observed coming from the less chlorinated congeners such as 2,3,4,7,8-PeCDF to 1,2,3,4,7,8,9-HpCDF and OCDF. For cPCBs, PCB-126 is more abundant than PCB-77 and PCB-169. Once expressed in TEQ, the most contributing congeners become 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,6,7,8-HxCDD, 2,3,4,7,8-PeCDF and PCB-126.
These results seem to indicate relatively higher background levels for the studied population in comparison with neighboring countries. Continuous efforts have to be done to reduce emission from industry in order to decrease general population body burden and preserve this first choice quality food for newborn infants.