

# Occurrence, variability and human exposure to Polychlorinated Dibenzo-p-dioxins (PCDDs), Polychlorinated Dibenzofurans (PCDFs) and Dioxin-Like Polychlorinated Biphenyls (DL-PCBs) in dairy products from Chile during the 2011-2013 survey

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© 2014 Elsevier Ltd. Levels, congener profiles of PCDD/Fs, DL-PCBs and human exposure for these xenobiotics never have been reported in Chile. For that purpose 102 raw cow milk samples were collected from seven different regions of Chile during 2011 until 2013. The highest mean level for PCDD/Fs, corresponds to 0.32pg WHO-TEQ2005g-1fat (2012) and for DL-PCBs 0.17pg WHO-TEQ2005g-1fat (2011), using the upper bound approach. Penta and tetra chlorinated congeners dominated PCDD/Fs profiles in a WHO-TEQ2005 basis during the survey. In the case of DL-PCBs, PCB 126 dominated the profiles with 89%. Statistical analysis showed significant difference among years only in DL-PCBs residues. Also dietary intake was estimated, and the highest level for total sum of PCDD/Fs and DL-PCBs for adult was 0.16pg WHO-TEQ kg-1b.w d-1 (2011) and for children correspond to 0.65pg WHO-TEQ kg-1b.wd-1 (2011). Concentrations and dietary intake for the studied compounds in milk and butter samples were below internat