

# A four-year survey in the farming region of Chile, occurrence and human exposure to polychlorinated dibenzo-p-dioxins and dibenzofurans, and dioxin-like polychlorinated biphenyls in different raw meats

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© 2016 Elsevier B.V. For the first time in South America, a four-year survey (2011–2014) was conducted to assess the occurrence of polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs) and dioxin-like polychlorinated biphenyls (dl-PCBs) in different raw meats (bovine, pork, ovine, chicken, and turkey) sampled from ten of the fifteen regions of Chile. When expressed as pg World Health Organization Toxic Equivalent (WHO-TEQ2005) g<sup>-1</sup> fat, the highest PCDD/F values for each species were 0.54 (bovine-2012), 0.27 (pork-2013), 0.23 (ovine-2011), 0.61 (chickens-2013), and 0.34 (turkey-2012). The highest mean dl-PCBs levels were 0.18 (bovine-2011), 0.05 (pork-2014), 0.13 (ovine-2011), 0.1 (chicken-2014), and 0.21 (turkey-2013). Penta- and tetra-chlorinated congeners dominated PCDD/F WHO-TEQ2005 profiles during the survey, while PCB 126 dominated dl-PCBs profiles. Statistically significant interspecies differences were found. Dietary intake was also estimated, and the highest total PCDD/F and dl