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Occurrence of polychlorinated dibenzo-*p*-dioxins, dibenzofurans, and polychlorinated biphenyls in wildlife of Antarctic and Arctic Polar Regions. Senthil Kumar, K.*, Kannan, K., Corsolini, S., Evans, T., Nakanishi, J., Giesy, J.P., Masunaga, S. Graduate School of Environment and Information Sciences, Yokohama National University, Tokiwadai, Hodogaya-ku, Yokohama, Japan, National Food Safety and Toxicology Center, Michigan State University, East Lansing, MI, USA, Department di Scienze Ambientali Universita di Siena, Siena, Italy, U.S. Fish and Wildlife Service, Anchorage, Alaska. For the first time we reported concentrations dioxins, furans and non- and mono-*ortho*-substituted dioxin-like PCBs in Arctic polar bear livers, Antarctic penguin/skua eggs, weddell seal liver, two fish species and krill wholebody. Levels of PCDD/DFs were with increasing order of weddell seal (8.3), fish (12-17), krill (27), polar bear 29 (7.9-65), penguins 83 (17-390) and skua 130 (86-210) on pg/g fat wt. Contrastingly, greater concentrations of dioxin-like PCBs were noticed in polar bear 2500 (1700-3600) followed by skua 1400 (800-1900), penguins 270 (17-1500), seal (57), fish (7.7-25) and krill (0.9) on ng/g fat wt. The WHO- TEF based TEQ was higher in skua 270 (220-350) followed by penguin 150 (28-650), polar bear 120 (85-190), seal (23), fish (1.6-3.6) and krill (0.33) on pgTEQ/g on fat weight.

