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Occurrence of contaminants of emerging concern in mussels (*Mytilus* spp.) along the California coast and the influence of land use, stormwater discharge, and treated wastewater effluent

Nathan G. Dodder[1], Keith A. Maruya[1], P. Lee Ferguson[2], Richard Grace[3], Susan Klosterhaus[4,*], Mark J. La Guardia[5], Gunnar G. Lauenstein[6] and Juan Ramirez[7]

[1]Southern California Coastal Water Research Project, Costa Mesa, CA

[2]Department of Civil & Environmental Engineering, Duke University, Department of Civil & Environmental Engineering, Durham, NC

[3]AXYS Analytical Services, Sidney, Canada

[4]San Francisco Estuary Institute, Richmond, CA

[5]Virginia Institute of Marine Science, College of William & Mary, Virginia Institute of Marine Science, Gloucester Point, VA

[6]National Oceanic and Atmospheric Administration, National Centers for Coastal Ocean Science, Silver Spring, MD

[7]TDI-BI/B&B Laboratories, College Station, TX 77845

**Currently at: Cradle to Cradle Products Innovation Institute, San Francisco, CA*

ABSTRACT

Contaminants of emerging concern were measured in mussels collected along the California coast in 2009- 2010. The seven classes were alkylphenols, pharmaceuticals and personal care products, polybrominated diphenyl ethers (PBDE), other flame retardants, current use pesticides, perfluorinated compounds (PFC), and single walled carbon nanotubes. At least one contaminant was detected at 67 of the 68 stations (98%), and 67 of the 167 analytes had at least one detect (40%). Alkylphenol, PBDE, and PFC concentrations increased with urbanization and proximity to stormwater discharge; pesticides had higher concentrations at agricultural stations. These results suggest that certain compounds; for example, alkylphenols, lomefloxacin, and PBDE, are appropriate for inclusion in future coastal bivalve monitoring efforts based on maximum concentrations >50 ng/g dry weight and detection frequencies >50%. Other compounds, for example PFC and hexabromocyclododecane (HBCD), may also be suggested for inclusion due to their >25% detection frequency and potential for biomagnification.

Full Text

http://ftp.sccwrp.org/pub/download/DOCUMENTS/AnnualReports/2013AnnualReport/ar13_037_047.pdf