Environmental behaviour of onylphenol ethoxylates in coastal waters

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Abbreviations

A$_8$PEO  octylphenol ethoxylate
A$_9$PEC  nonylphenox ethoxy acetic acid
A$_9$PEO$_n$  nonylphenol ethoxylate having $n$ ethoxylate units
ACN  acetonitrile
AEO  alcohol ethoxylates
AP  alkylphenol
APCI  atmospheric pressure chemical ionization
APEO  alkylphenol ethoxylate
ASE  accelerated solvent extraction
BCF  bioconcentration factor
CAPE  carboxy alkylphenol ethoxylate
CAPEC  carboxy alkylphenox ethoxy acetic acid
CDA  coconut diethanol amide
CEFIC  European Chemical Industry Council (Conseil Européen des Fédérations des Industries Chimiques)
DCPEG  dicarboxylated polyethylene glycol
DDT  dichlorodiphenyl trichloroethane
DOC  dissolved organic carbon
DTDMAC  ditallow dimethyl ammonium chloride
EO  ethoxylate (-CH$_2$CH$_2$O-)
ER-CALUX  estrogen receptor-mediated chemical activated luciferase reporter gene expression
EU  European Union
f$_{oc}$  fraction organic carbon
GC-FID  gas chromatography – flame ionisation detector
GC-MS  gas chromatography - mass spectrometry
GC-TSQ-MS  gas chromatography triple-stage-quadrupole mass spectrometry
HPLC  high performance liquid chromatography
IMO  International Maritime Organization
IR-MS  isotope ratio mass spectrometry
KAC  potassium acetate
Kd  SPM/ water partition coefficient
K$_s$  dispersion coefficient
LAB  linear alkylbenzenes
LAS  linear alkylbenzene sulfonates
LC50  lethal concentration for 50% of the test population
LC-ESI-MS  liquid chromatography electrospray mass spectrometry
LC-ESI-MS/MS  liquid chromatography electrospray tandem mass spectrometry
LC-Flu  liquid chromatography with fluorescence detection
LLE  liquid-liquid extraction
LOD  limit of detection
LOES  Landelijk Onderzoek Oestrogene Stoffen
Abbreviations

logK_{oc}  SPM/water partition coefficient normalized on organic carbon (logarithm)
LSBR  laboratory-scale bioreactor
MCPEG  monocarboxylated polyethylene glycol
MeOH  methanol
MONOS  Modeling nonionic surfactants in Dutch estuaries
MPC  maximum permissible concentration
MTC  Department of Environmental Toxicology and Chemistry
m/z  mass to charge ratio
NaAc  sodium acetate
NH_{4}Ac  ammonium acetate
NOEC  no observed effect concentration
NP  nonylphenol
NPEO  APEO having a linear 1-nonyl chain
oc\%  organic carbon percentage
OECD  Organization for Economic Cooperation and Development
OP  octylphenol
OSPAR  Oslo and Paris Convention for the Protection of the Marine Environment of the North East Atlantic
PAH  polycyclic aromatic hydrocarbons
PCB  polychlorinated biphenyls
PEC/PNEC  ratio of predicted environmental concentration over predicted no effect concentration
PRISTINE  Priority surfactants and their toxic metabolites in waste effluent discharges: an integrated study
RIKZ  Rijksinstituut voor Kust en Zee (National Institute for Coastal and Marine Management)
RIVM  Rijksinstituut voor Volksgezondheid en Milieu (National Institute of Public Health and the Environment)
RIZA  Rijksinstituut voor Integraal Zoetwaterbeheer en Afvalwaterbehandeling (Institute for Inland Water Management and Waste Water Treatment)
RP-LC-MS  reversed phase LC-MS
SFE  supercritical fluid extraction
SIM  selected ion monitoring
SPE  Solid Phase Extraction
SPM  suspended particulate material
SPME  Solid Phase Microextraction
SURTRANS  Nonionic surfactants and their transformation products in the Dutch coastal zone and North Sea: determination, fate and risk assessment
TBT  tributyl tin
TPEO  APEO having a 2,2,4,4-tetramethylpentyl alkyl chain
v:v  volume:volume
vrijmibo  vrijdag-middag-borrel
WWTP  wastewater treatment plant