

Comprehensive Review of PFAS Occurrence, Regulatory Frameworks, Analytical, and Remediation Methodologies: Emphasis on the Arabian Gulf and arid Regions

^{1,2}Arun K K., ¹Haya Saleh Al Yasi, ¹Ojima Z. Wada, ²Fares AlMomani*, ¹Khaled A. Mahmoud*

¹Qatar Environment and Energy Research Institute (QEERI), Hamad Bin Khalifa University,
Qatar Foundation, P.O. Box 5825, Doha, Qatar

²Department of Chemical Engineering, Qatar University, Qatar

Correspondence: kmahmoud@hbku.edu.qa

falmomani@qu.edu.qa

Table S1: Class 1 PFAS compounds

Class	Compound
Perfluorocarboxylic acids (PFCAs)	- Heptafluorobutyric acid (PFBA) - Perfluoropentanoic acid (PFPeA) - Perfluorohexanoic acid (PFHxA) - Perfluoroheptanoic acid (PFHpA) - Perfluorooctanoic acid (PFOA) - Perfluorononanoic acid (PFNA) - Perfluorodecanoic acid (PFDA)
Perfluorosulfonic acids (PFSAs)	- Perfluorobutanesulfonic acid (PFBS) - Perfluorohexanesulfonic acid (PFHxS) - Perfluorooctanesulfonic acid (PFOS)
Fluorotelomer alcohols (FTOHs)	- 1H,1H,2H,2H-Perfluoro-1-hexanol (4:2 FTOH) - 1H,1H,2H,2H-Perfluoro-1-octanol (6:2 FTOH) - 1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH) - 1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)
Fluoroalkyl ether carboxylic acids (FECAs) & Fluoroalkyl ether sulfonic acids (FESAs)	- 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)propanoic acid (HFPO-DA) - Sodium dodecafluoro-3H-4,8-dioxanonanoate (ADONA) - Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (9Cl-PF3ONS)
Fluoroalkyl sulfonamides (FOSAs)	- N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA-M) - N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA) - N-methylperfluoro-1-octanesulfonamide (N-MeFOSA-M) - N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)
Fluoroalkyl phosphate diesters (diPAPs)	- Sodium bis(1H,1H,2H,2H-perfluorooctyl) phosphate (6:2 diPAP) - Sodium bis(1H,1H,2H,2H-perfluorodecyl) phosphate (8:2 diPAP)

