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Best Papers of 2013

Triclosan and Triclocarban: Ecological and Human Health Risks

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ON THE COVER: Sustainable management of water and soil resources is critical for the health of human populations and supporting ecosystems. This issue's Feature article identifies adverse impacts of the widespread use of triclosan and triclocarban, explores the underlying reason for the lack of efficacy of these antimicrobial additives of soap, and urges the design of greener, more sustainable chemical alternatives to achieve human and environmental health objectives.

Comment

Features

The polychlorinated aromatic antimicrobials triclosan and triclocarban are in widespread use for killing microorganisms indiscriminately, rapidly, and by nonspecific action. While their utility in healthcare settings is undisputed, benefits to users of antimicrobial personal care products are few to none. Yet, these latter, high-volume uses have caused widespread contamination of the environment, wildlife, and human populations. This feature article presents a timeline of scientific evidence and regulatory actions in the U.S. concerning persistent polychlorinated biocides, showing a potential path forward to judicious and sustainable uses of synthetic antimicrobials, including the design of greener and safer next-generation alternatives.The polychlorinated aromatic antimicrobials triclosan and triclocarban are in widespread use for killing microorganisms indiscriminately, rapidly, and by nonspecific action. While their utility in healthcare settings is undisputed, benefits to users of antimicrobial personal care products are few to none. Yet, these latter, high-volume uses have caused widespread contamination of the environment, wildlife, and human populations. This feature article presents a timeline of scientific evidence and regulatory actions in the U.S. concerning persistent polychlorinated biocides, showing a potential path forward to judicious and sustainable uses of synthetic antimicrobials, including the design of greener and safer next-generation alternatives.

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Additions and Corrections

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