

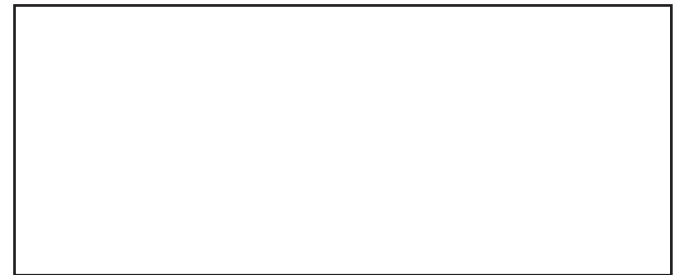
The mechanisms removal of pesticides and heavy metal from agricultural runoff in treatment train: A review

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Abstract:

Pesticides have been used widespread over the world in agricultural to protect from pest and reduce crop losses. However, it affects the environment with toxic chemical. Exceed of toxic constituents in the ecosystem will result-ed bad side effects. The hydrological cycle is related to the existence of pesticides and heavy metal which it can penetrate through many sources into the soil or water bodies especially runoff. Therefore, proper mechanisms of pesticide and heavy metal removal should be study to improve the quality of ecosystem free or reduce from unwanted substances. This paper reviews on the use of treatment train and its mechanisms to reduce pesticides and heavy metal from agricultural runoff. Organochlorine (OCL) is a common pesticide that was found in the agricultural runoff. OCL are one of toxic chemical that can disturb the ecosystem such as inhibits plants growth and harm human health by having symptoms as asthma, active cancer cell, vomit, diarrhoea, etc. Thus, this unwanted contaminant gives disadvantages to the environment and need treatment system. Hence, treatment train by bio-retention system are suitable because removal efficiency achieves until 90 % of pesticides removal with selected



vegetated plant and additive.

Biography:

Nor Amirah Ahmad Zubairi has completed her degree in Civil Engineering courses at the age of 23 years from Universiti Teknologi Petronas and pursue postgraduate studies in same courses for water and environmental cluster at Master level.