

Title: Nitrogen removal characteristics of simultaneous nitrification and denitrification in various bioreactors

Name: Thai-Hang Le
University of Yamanashi, 400-8510, Japan

This study focused on acclimatizing nitrogen removal sludge and enhancement of nitrogen removal efficiency using different carriers in bioreactors. Three types of carriers used in the research were concrete block, sponge and commercial carrier. The synthesis wastewater was continuously fed to reactors, the controlled aeration period was supplied and maintained three hours for aeration and five hours for non-aeration (retention time was approximately 12 hours). The reactors was operated at 40 mg/L and 80 mg/L of ammonium concentration with C/N 2.5 and 3.5 The performance of reactors were compared and results showed that they had absolutely high performances of ammonium removal (up to 95%) and total nitrogen removal (up to 88%). The sponge reactor had higher performance compared to the concrete block and commercial reactors. The main processes for nitrogen removal were nitrification and denitrification. Also, the active bacteria were observed on both surface of the carriers by using SEM.

Biography

Thai-Hang has completed her Master Degree at the age of 25 years from Naresuan University, Thailand and now she is a PhD student at University of Yamanashi, Japan under MEXT Scholarship. She used to work in Climate Change Bureau in Natural Resources and Environmental Department of Ho Chi Minh City, Vietnam as project management officer. During her study, she has 3 publications in international journals as 1st author and several publications as 2nd author/contributor.

Presenting author details

Full name: Thai-Hang Le
Contact number: (+81) 080-8442-3633
Facebook account: https://www.facebook.com/hangle224
Linked In account: https://www.linkedin.com/in/thai-hang-le-2206b7124/
Session name/ number: Track 14: Water Microbiology/Track 14-6: Sludge Microbiology
Category: (Oral presentation/ Poster presentation) Poster presentation