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# Presence of helminth eggs in domestic wastewater and its removal at low temperature UASB reactors in Peruvian highlands

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## Abstract

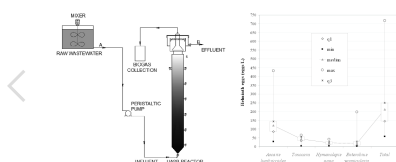
This work studied the anaerobic sludge filtration capacity for pathogens reduction in a 29 L and 1.65 m height lab-scale UASB reactor treating domestic wastewater at low temperatures in the city of Puno (Peru). The anaerobic sludge filtration capacity was performed applying upflow velocities of 0.12, 0.14, 0.16, 0.20, 0.27 and 0.41 m/h. Results show that the HE removal varied between 89 and 95% and the most common specie was *Ascaris lumbricoides*. Faecal coliform and *Escherichiacoli* removal varied in the range of 0.9-2.1 and 0.8-1.6 log<sub>10</sub> respectively. Likely related to the low operational temperatures, the total COD removal varied between 37 and 62%. The best performance in terms of removal of HE, total COD and turbidity was obtained at the lowest upflow velocity of 0.12 m/h. In order to meet WHO standards for water reuse a post-treatment unit will be required to polish the effluent.

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