



BIOMEDICINE 2021: Covid pandemic and its impact on water and wastewater treatment plant

Rajendrakumar V. Sarf *

Introduction

Current evidence indicates that the COVID-19 virus is transmitted through respiratory droplets or contact. Contact transmission occurs when contaminated hands touch the mucosa of the mouth, nose, or eyes; the virus can also be transferred from one surface to another by contaminated hands, which facilitates indirect contact transmission. Consequently, hand hygiene is extremely important to prevent the spread of the COVID-19 virus. The COVID-19 virus has not been detected in drinking water. Conventional water treatment methods use Aeration, flocculation, sedimentation, filtration and disinfection. The entry of COVID-19 Virus is likely by washing the hand. When the hand is washed the lipid cover on the virus is washed away resulting in total kill of virus. COVID-19 virus has been detected in the feces of some patients diagnosed with COVID-19. However, the quantity of virus released from the body, how long it will be released from the body after infection & whether the virus in the stool is infectious are not yet known. The

risk is expected to be low based on data from previous outbreaks of related corona viruses, such as severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS). There have been no reports of fecal-oral transmission of COVID-19 to date.

The risk of transmission of the virus that causes COVID-19 through sewerage systems is thought to be low. Till date there is no evidence that this has occurred. In the 2003 SARS outbreak, Standard municipal wastewater system chlorination practices are sufficient to inactivate corona viruses, as long as utilities monitor free available chlorine during treatment to ensure it has not been depleted. Waste water treatment consists of Preliminary, Primary & Secondary treatment. Tertiary treatment is used where water is to be recycled. Removal of virus along with flocculated suspended solids cannot be ruled out. Aerosols are generated both in water & waste water treatment plants. This paper critically evaluates the effect of various treatment units of water & wastewater treatment plants on removal of Covid 19 and risk associated with the workers and end users of the finished product from the water & wastewater treatment plant.



This work is partly presented at 3rd International Conference on Biomedicine & Pharmacotherapy -Webinar- July 26-July 27, 2021.