SUSPENDED SOLIDS

Effect of Suspended Solids

Finely dispersed and poorly flocculating matter in wastewater can affect the UASB system adversely when present in high concentration [Brunetti *et al*., 1983, Lettinga *et al*., 1980a, Hickey *et al*., 1991b]. It reduces the specific menthanogenic activity of the sludge. The presence of SS in the influent may slow down the growth in the amount of granular sludge. The attachment of newly formed bacteria to the continuously supplied fresh particles will retard or even prevent the development of granules. Also, the prolonged continuous entrapment of voluminous suspended solids in a granular sludge bed may even lead to a spontaneous and sudden washout of almost the complete sludge bed [Lettinga *et al*., 1991].

High concentration of suspended solids in the influent is detrimental for performance of the reactor. The continuous accumulation of inert SS in the sludge bed may reduce the specific methanogenic activity of the sludge. The SS in the influent can be governed by two criteria such as, i) the influent SS should be less than 1g/L, and ii) the ratio of SS to COD should be less than 0.5 [Souza, 1986].