

NUTRIENTS

Nutrient Requirement

Nutrients such as nitrogen, phosphorous and sulphur, as well as, trace elements should be present in sufficient amount and in available form. Ratios of COD/N and COD/P have been recommended to be less than 70 and 350, respectively [Brunetti *et al.*, 1983]. However, the wastewater with phosphatic buffer with very high concentration retards granular yield [Vanderhaegen *et al.*, 1993].

High concentration of sulphate in a wastewater can induce an anaerobic ecosystem with a high proportion of sulphate reducing bacteria (SRB). If H₂S produced by SRB accumulates to high levels, it inhibits methanogen growth and activity. However, the presence of low concentrations of sulphate (0.15 to 0.30 mM) in the reactor effluent appears beneficial to the growth of methanogens [Zeeuw *et al.*, 1980, Hickey and Goodwin 1991a, Visser *et al.*, 1993].