

SUMMARY

The study includes the effect of gas velocity and liquid phase properties on ϵ_g , KLa , t_m and t_c in bubble column with draught tube when the ratio of the draught tube diameter to column diameter equal to 0.5 and the gas dispersion into the base of the draught tube by using [a multi hole, 0.15mm equivalent diameter and 0.61% free section] distributor.

Water and five aqueous solutions of methanol, ethanol, isopropanol, glycerol and CMC (carboxymethyl cellulose), were used as the liquid phase. From experimental observations ϵ_g and KLa increases with increasing gas velocity and coalescence inhibition of liquid, while t_m and t_c decreases with increasing gas velocity.

It was found that increasing liquid viscosity and coalescence reduces ϵ_g and KLa but increases t_m and t_c .