

## Introduction

Gas-liquid as well as gas-liquid-solid bubble column reactors are widely used in chemical industry. Most of the important industrial applications in two phase as well as three phase systems have been compiled by Shah et al. (1981)<sup>1</sup> in their recent review on bubble column reactors. The main advantages of the bubble column reactors are simplicity of operation, the absence of moving parts and the ease with which the liquid-phase residence time can be varied. Though easy to use, bubble column reactors are difficult to design, because of the complexity of flow characteristics and unknown behavior under different set of design parameters, such as liquid properties, high throughputs etc. Present study has been proposed to develop more understanding of the hydrodynamic and the mixing properties under the influence of different liquids, and different gas and liquid throughputs in bubble columns.