

## Vaporization of a Single N-Pentane Liquid Drop in a Flowing Immiscible Liquid Media

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**Abstract :** Vaporization of a single n-pentane drop in a direct contact with another flowing immiscible liquid (warm water) has been experimentally investigated. The experiments were carried out utilising a cylindrical Perspex tube of diameter 10 cm and height and 150 cm. Saturated liquid n-pentane and warm water at 45oC were used as the dispersed and continuous phases, respectively. Photron FASTCAM SA 1.1 high speed camera (75,000f/s) with software V. 321 was implemented during the experiments. Five different continuous phase flow rates (warm water) (10, 20, 30, 40, and 46 L/h) were used in the study. The results indicated that the increase of the continuous phase (warm water) flow rate results in increasing of the drop/bubble diameter.

**Keywords :** drop evaporation, direct contact heat transfer, drop/bubble growth, experimental technique

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