

AN ABSTRACT OF A THESIS

VAPORIZATION OF ORGANIC LIQUIDS INTO LAMINAR
AIR STREAMS IN A WETTED-WALL COLUMN

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Master of Science in Chemical Engineering

The vaporization of acetone, benzene, and hexane into a countercurrent laminar air stream was conducted in a glass wetted-wall column. Both air flow rates and liquid flow rates were varied in this study. It was found that mass transfer rates were affected by both the air flow rate and the liquid flow rate. Experimental results were compared with the Graetz theoretical solution which is based on zero liquid flow. At a constant air flow rate, increasing liquid flow had the effect of first increasing the mass transfer rate, but at higher liquid flow rates the mass transfer rate was observed to decrease. A possible explanation for this effect is discussed.

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CERTIFICATE OF APPROVAL OF THESIS

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