

THEORY

1. INTRODUCTION

The purpose of this experiment is to determine the molar mass of a volatile liquid. The experiment is based on the ideal gas law, $PV = nRT$, where P is the pressure, V is the volume, n is the number of moles, R is the gas constant, and T is the temperature. By measuring the mass of the liquid, the volume of the gas, and the temperature and pressure, the molar mass can be calculated.

The experiment involves the following steps: 1. Weighing a small amount of the liquid. 2. Vaporizing the liquid in a known volume. 3. Measuring the temperature and pressure of the gas. 4. Calculating the molar mass using the ideal gas law.

The molar mass of the liquid is determined by the following equation:

$$M = \frac{mRT}{PV}$$

Symbol	Quantity	Units
m	Mass of liquid	g
R	Gas constant	J/mol·K
T	Temperature	K
P	Pressure	atm
V	Volume of gas	L

RESULTS

EXPERIMENT

