Equation:

\[ \text{Pyrrrole} + 4 \text{ Benzaldehyde} \rightarrow \text{meso-Tetraethylporphyrin} + 4\text{H}_2\text{O} + 3\text{H}_2 \]

Objectives:

1) Synthesize a porphyrin
2) Gain familiarity w/ measurements & calculations related to the magnetic susceptibility of an organic compound.

Reagents:

- Propane Acid: MW 74.08, Safety: Hazardous, corrosive, do not touch or inhale
- Pyrrrole (density 0.966 g/mL): LD50=67.099 mg/kg via inhalation or skin absorption
- Benzaldehyde: 106.12 g/mol, eye irritant, hazards unknown
- Methanol: 32.04 g/mol, toxic, harmful to touch (irritant)

Calculations:

\[ \frac{0.0356 \text{ mol benzaldehyde}}{14 \text{ mol benzaldehyde}} = 0.0025 \text{ mol porphyrin} \]

\[ \frac{0.036 \text{ mol pyrrrole}}{67.099 \text{ g/mol}} = 0.966 \text{ g} \]

\[ \frac{0.0356 \text{ mol benzaldehyde}}{106.12 \text{ g/mol}} = 3.597 \text{ mL} \]