



## **DAFTAR ISI**

|   |      |
|---|------|
| HALAMAN PERSOALAN .....                     | ii   |
| HALAMAN PENGESAHAN .....                    | iii  |
| HALAMAN BEBAS PLAGIASI .....                | iv   |
| HALAMAN KEBENARAN DOKUMEN .....             | v    |
| KATA PENGANTAR.....                         | vi   |
| INTISARI.....                               | viii |
| <i>ABSTRACT</i> .....                       | ix   |
| DAFTAR ISI .....                            | x    |
| DAFTAR GAMBAR .....                         | xii  |
| DAFTAR TABEL .....                          | xiii |
| BAB I PENDAHULUAN .....                     | 14   |
| 1.1 Latar Belakang .....                    | 14   |
| 1.2 Rumusan Masalah .....                   | 16   |
| 1.3 Tujuan Penelitian.....                  | 16   |
| 1.4 Batasan Masalah.....                    | 16   |
| 1.5 Metode Penelitian.....                  | 17   |
| 1.6 Sistematika Penulisan.....              | 17   |
| BAB II TINJAUAN PUSTAKA .....               | 19   |
| 2.1 Tinjauan Pustaka .....                  | 19   |
| 2.2 <i>Microbubble</i> .....                | 20   |
| 2.2.1 <i>Aerasi</i> .....                   | 21   |
| 2.2.2 <i>Diffuser Aerstone</i> .....        | 21   |
| 2.2.3 Metoda <i>Porous Plate</i> (PP) ..... | 22   |
| 2.3 Biodiesel.....                          | 22   |
| 2.3.1 Spesifikasi Biodiesel B30 .....       | 23   |



|  |    |
|--|----|
| 2.3.2 Produksi Biodiesel .....         | 24 |
| 2.4 Nilai Kalor.....                   | 25 |
| 2.4.1 <i>High Heating Value</i> .....  | 26 |
| 2.4.2 <i>Low Heating Value</i> .....   | 26 |
| 2.5 Viskositas .....                   | 27 |
| 2.6 Densitas .....                     | 27 |
| BAB III METODOLOGI PENELITIAN.....     | 28 |
| 3.1 Jenis Penelitian .....             | 28 |
| 3.2 Alat dan Bahan .....               | 28 |
| 3.3 Prosedur Penelitian.....           | 29 |
| 3.3.1 <i>Flowchart</i> Penelitian..... | 30 |
| 3.3.2 Tempat dan Waktu Pengujian.....  | 31 |
| 3.3.3 Pengujian .....                  | 31 |
| 3.4 Pengumpulan Data dan Analisa ..... | 31 |
| 3.5 Kesimpulan.....                    | 32 |
| BAB IV HASIL DAN PEMBAHASAN .....      | 33 |
| 4.1 Pengujian Viskositas .....         | 33 |
| 4.2 Pengujian Densitas .....           | 34 |
| 4.3 Pengujian Nilai Kalor.....         | 35 |
| BAB V KESIMPULAN DAN SARAN .....       | 37 |
| 5.1 Kesimpulan.....                    | 37 |
| 5.2 Saran.....                         | 37 |
| DAFTAR PUSTAKA .....                   | 39 |
| LAMPIRAN .....                         | 41 |