**BAB IV**

**NERACA MASSA**

Kapasitas Produksi : 70.000 Ton/Tahun

Operasi Pabrik : 300 Hari/Tahun

Basis : 1 jam operasi

Bahan Baku : *Crude Palm Oil* (CPO)

Produk : Bioavtur

**4.1. *Mixing Tank* (M-01)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | | **Output (Kg/Jam)** |
| **Aliran 2** | **Aliran 3** | **Aliran 5** |
| C12H24O2 | 32,3839 | - | 32,3839 |
| C14H28O2 | 178,1113 | - | 178,1113 |
| C16H32O2 | 7124,4528 | - | 7124,4528 |
| C18H36O2 | 728,6372 | - | 728,6372 |
| C18H34O2 | 6347,2398 | - | 6347,2398 |
| C18H32O2 | 1635,3858 | - | 1635,3858 |
| C20H32O2 | 504,3694 | - | 504,3694 |
| C20H40O2 | 145,7274 | - | 145,7274 |
| C10H21NO8P+ | 6,7249 | - | 6,7249 |
| C40H56 | 25,2185 | - | 25,2185 |
| Ca | 28,0205 | - | 28,0205 |
| Mg | 28,0205 | - | 28,0205 |
| Fe | 28,0205 | - | 28,0205 |
| H3PO4 | - | 11,2642 | 11,2642 |
| **Total** | 16812,3125 | 11,2642 | **16823,5768** |
| **16823,5768** | |

**4.2. *Mixing Tank* (M-02)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | | **Output (Kg/Jam)** |
| **Aliran 5** | **Aliran 4** | **Aliran 6** |
| C12H24O2 | 32,3839 | - | 32,3839 |
| C14H28O2 | 178,1113 | - | 178,1113 |
| C16H32O2 | 7124,4528 | - | 7124,4528 |
| C18H36O2 | 728,6372 | - | 728,6372 |
| C18H34O2 | 6347,2398 | - | 6347,2398 |
| C18H32O2 | 1635,3858 | - | 1635,3858 |
| C20H32O2 | 504,3694 | - | 504,3694 |
| C20H40O2 | 145,7274 | - | 145,7274 |
| C10H21NO8P+ | 6,7249 | - | 6,7249 |
| C40H56 | 25,2185 | - | 25,2185 |
| Ca | 28,0205 | - | 28,0205 |
| Mg | 28,0205 | - | 28,0205 |
| Fe | 28,0205 | - | 28,0205 |
| H3PO4 | 11,2642 | - | 11,2642 |
| SiO2 | - | 127,8726 | 127,8726 |
| Al2O3 | - | 41,1841 | 41,1841 |
| Fe2O3 | - | 11,5679 | 11,5679 |
| MgO | - | 10,9824 | 10,9824 |
| CaO | - | 10,2758 | 10,2758 |
| **Total** | 16823,5768 | 201,8829 | **17025,4597** |
| **17025,4597** | |

**4.3. Niagara Filter (NF-01)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 6** | **Aliran 7** | **Aliran 8** |
| C12H24O2 | 32,3839 | 32,3839 | - |
| C14H28O2 | 178,1113 | 178,1113 | - |
| C16H32O2 | 7124,4528 | 7124,4528 | - |
| C18H36O2 | 728,6372 | 728,6372 | - |
| C18H34O2 | 6347,2398 | 6347,2398 | - |
| C18H32O2 | 1635,3858 | 1635,3858 | - |
| C20H32O2 | 504,3694 | 504,3694 | - |
| C20H40O2 | 145,7274 | 145,7274 | - |
| C10H21NO8P+ | 6,7249 | - | 6,7249 |
| C40H56 | 25,2185 | - | 25,2185 |
| Ca | 28,0205 | - | 28,0205 |
| Mg | 28,0205 | - | 28,0205 |
| Fe | 28,0205 | - | 28,0205 |
| H3PO4 | 11,2642 | - | 11,2642 |
| SiO2 | 127,8726 | - | 127,8726 |
| Al2O3 | 41,1841 | - | 41,1841 |
| Fe2O3 | 11,5679 | - | 11,5679 |
| MgO | 10,9824 | - | 10,9824 |
| CaO | 10,2758 | - | 10,2758 |
| **Total** |  | 16696,3076 | 329,1521 |
| **17025,4597** | **17025,4597** | |

**4.4. *Mixing Point (MP-01)***

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | | **Output (Kg/Jam)** |
| **Aliran 7** | **Aliran 1** | **Aliran 9** |
| C12H24O2 | 32,3839 | - | 32,3839 |
| C14H28O2 | 178,1113 | - | 178,1113 |
| C16H32O2 | 7124,4528 | - | 7124,4528 |
| C18H36O2 | 728,6372 | - | 728,6372 |
| C18H34O2 | 6347,2398 | - | 6347,2398 |
| C18H32O2 | 1635,3858 | - | 1635,3858 |
| C20H32O2 | 504,3694 | - | 504,3694 |
| C20H40O2 | 145,7274 | - | 145,7274 |
| H2 | - | 1448,6502 | 1448,6502 |
| CH4 | - | 2,7929 | 2,7929 |
| **Total** | 16696,3076 | 1451,4431 | **18147,7507** |
| **18147,7507** | |

**4.5.Reaktor Hidrogenasi (R-01)**

|  |  |  |
| --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** |
| **Aliran 9** | **Aliran 10** |
| C12H24O2 | 32,3839 | 3,2384 |
| C14H28O2 | 178,1113 | 17,8111 |
| C16H32O2 | 7124,4528 | 712,4453 |
| C18H36O2 | 728,6372 | 72,8637 |
| C18H34O2 | 6347,2398 | 634,7240 |
| C18H32O2 | 1635,3858 | 163,5386 |
| C20H32O2 | 504,3694 | 50,4369 |
| C20H40O2 | 145,7274 | 14,5727 |
| C12H26 | - | 24,7830 |
| C14H30 | - | 139,2537 |
| C16H34 | - | 5662,2501 |
| C18H38 | - | 586,6554 |
| C18H36 | - | 5106,1235 |
| C18H34 | - | 1314,4854 |
| C20H34 | - | 409,2296 |
| C20H42 | - | 118,5719 |
| H2O | - | 2001,1751 |
| H2 | 1448,6502 | 1112,7994 |
| CH4 | 44,8036 | 44,8036 |
| **Total** | **18189,7614** | **18189,7614** |

**4.6. Kolom Distilasi (KD-01)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 10** | **Aliran 11** | **Aliran 17** |
| C12H24O2 | 3,2384 | 0,0001 | 3,2383 |
| C14H28O2 | 17,8111 | - | 17,8111 |
| C16H32O2 | 712,4453 | - | 712,4453 |
| C18H36O2 | 72,8637 | - | 72,8637 |
| C18H34O2 | 634,7240 | - | 634,7240 |
| C18H32O2 | 163,5386 | - | 163,5386 |
| C20H32O2 | 50,4369 | - | 50,4369 |
| C20H40O2 | 14,5727 | - | 14,5727 |
| C12H26 | 24,7830 | 24,7829 | - |
| C14H30 | 139,2537 | 137,8612 | 1,3925 |
| C16H34 | 5662,2501 | 56,6225 | 5605,6276 |
| C18H38 | 586,6554 | 0,0001 | 586,6552 |
| C18H36 | 5106,1235 | 0,0130 | 5106,1105 |
| C18H34 | 1314,4854 | 0,0004 | 1314,4850 |
| C20H34 | 409,2296 | - | 409,2296 |
| C20H42 | 118,5719 | - | 118,5719 |
| H2O | 2001,1751 | 2001,1751 | - |
| H2 | 1112,7994 | 1112,7994 | - |
| CH4 | 44,8036 | 44,8036 | - |
| **Total** | **18189,7614** | 3378,0584 | 14811,7030 |
| **18189,7614** | |

**4.7. *Condensor* (CD-01)**

|  |  |  |
| --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** |
| **Aliran 11** | **Aliran 12** |
| C12H24O2 | 0,0001 | 0,0001 |
| C14H28O2 | - | - |
| C16H32O2 | - | - |
| C18H36O2 | - | - |
| C18H34O2 | - | - |
| C18H32O2 | - | - |
| C20H32O2 | - | - |
| C20H40O2 | - | - |
| C12H26 | 24,7829 | 24,7829 |
| C14H30 | 137,8612 | 137,8612 |
| C16H34 | 56,6225 | 56,6225 |
| C18H38 | 0,0001 | 0,0001 |
| C18H36 | 0,0130 | 0,0130 |
| C18H34 | 0,0004 | 0,0004 |
| C20H34 | - | - |
| C20H42 | - | - |
| H2O | 2001,1751 | 2001,1751 |
| H2 | 1112,7994 | 1112,7994 |
| CH4 | 44,8036 | 44,8036 |
| **Total** | **3378,0584** | **3378,0584** |

**4.8. Akumulator (ACC-01)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 12** | **Aliran 13** | **Aliran 14** | |
| C12H24O2 | 0,0001 | - | 0,0001 | |
| C14H28O2 | - | - | - | |
| C16H32O2 | - | - | - | |
| C18H36O2 | - | - | - | |
| C18H34O2 | - | - | - | |
| C18H32O2 | - | - | - | |
| C20H32O2 | - | - | - | |
| C20H40O2 | - | - | - | |
| C12H26 | 24,7829 | - | 24,7829 | |
| C14H30 | 137,8612 | - | 137,8612 | |
| C16H34 | 56,6225 | - | 56,6225 | |
| C18H38 | 0,0001 | - | 0,0001 | |
| C18H36 | 0,0130 | - | 0,0130 | |
| C18H34 | 0,0004 | - | 0,0004 | |
| C20H34 | - | - | - | |
| C20H42 | - | - | - | |
| H2O | 2001,1751 | - | 2001,1751 | |
| H2 | 1112,7994 | 1112,7994 | - | |
| CH4 | 44,8036 | 44,8036 | - | |
| **Total** | **3378,0584** | 1157,6030 | 2220,4554 | |
| **3378,0584** | |

**4.9. Dekanter (DC-01)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 14** | **Aliran 15** | **Aliran 16** |
| C12H24O2 | 0,0001 | 0,0001 | - |
| C14H28O2 | - | - | - |
| C16H32O2 | - | - | - |
| C18H36O2 | - | - | - |
| C18H34O2 | - | - | - |
| C18H32O2 | - | - | - |
| C20H32O2 | - | - | - |
| C20H40O2 | - | - | - |
| C12H26 | 24,7829 | 24,7829 | - |
| C14H30 | 137,8612 | 137,8612 | - |
| C16H34 | 56,6225 | 56,6225 | - |
| C18H38 | 0,0001 | 0,0001 | - |
| C18H36 | 0,0130 | 0,0130 | - |
| C18H34 | 0,0004 | 0,0004 | - |
| C20H34 | - | - | - |
| C20H42 | - | - | - |
| H2O | 2001,1751 | - | 2001,1751 |
| **Total** | **2220,4554** | 219,2803 | 2001,1751 |
| **2220,4554** | |

**4.10. *Reboiler* (RB-01)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 17** | **Aliran 18** | **Aliran 19** |
| C12H24O2 | 3,2383 | - | 3,2383 |
| C14H28O2 | 17,8112 | 0,0001 | 17,8111 |
| C16H32O2 | 712,4487 | 0,0035 | 712,4453 |
| C18H36O2 | 72,8645 | 0,0008 | 72,8637 |
| C18H34O2 | 634,7353 | 0,0113 | 634,7240 |
| C18H32O2 | 163,5398 | 0,0013 | 163,5386 |
| C20H32O2 | 50,4373 | 0,0004 | 50,4369 |
| C20H40O2 | 14,5733 | 0,0005 | 14,5727 |
| C12H26 | - | - | - |
| C14H30 | 1,3925 | - | 1,3925 |
| C16H34 | 5605,6333 | 0,0057 | 5605,6276 |
| C18H38 | 586,6566 | 0,0013 | 586,6552 |
| C18H36 | 5106,1200 | 0,0094 | 5106,1105 |
| C18H34 | 1314,4879 | 0,0029 | 1314,4850 |
| C20H34 | 409,2319 | 0,0023 | 409,2296 |
| C20H42 | 118,5724 | 0,0005 | 118,5719 |
| **Total** | **14811,7429** | 0,0399 | 14811,7030 |
| **14811,7429** | |

**4.11. *Mixing Point* (MP-02)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | | **Output (Kg/Jam)** | |
| **Aliran 20** | **Aliran 13** | | **Aliran 21** | |
| C12H24O2 | 3,2384 | - | | 3,2384 | |
| C14H28O2 | 17,8111 | - | | 17,8111 | |
| C16H32O2 | 712,4453 | - | | 712,4453 | |
| C18H36O2 | 72,8637 | - | | 72,8637 | |
| C18H34O2 | 634,7240 | - | | 634,7240 | |
| C18H32O2 | 163,5386 | - | | 163,5386 | |
| C20H32O2 | 50,4369 | - | | 50,4369 | |
| C20H40O2 | 14,5727 | - | | 14,5727 | |
| C12H26 | 24,7830 | - | | 24,7830 | |
| C14H30 | 139,2537 | - | | 139,2537 | |
| C16H34 | 5662,2501 | - | | 5662,2501 | |
| C18H38 | 586,6554 | - | | 586,6554 | |
| C18H36 | 5106,1235 | - | | 5106,1235 | |
| C18H34 | 1314,4854 | - | | 1314,4854 | |
| C20H34 | 409,2296 | - | | 409,2296 | |
| C20H42 | 118,5719 | - | | 118,5719 | |
| H2 | - | 1112,7994 | | 1112,7994 | |
| CH4 | - | 44,8036 | | 44,8036 | |
| **Total** | 15030,9833 | 1157,6030 | | **16188,5863** | |
| **16188,5863** | |  | |

**4.12. Reaktor *Hydrocracking* (R-02)**

|  |  |  |
| --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** |
| **Aliran 21** | **Aliran 22** |
| C12H24O2 | 3,2384 | - |
| C14H28O2 | 17,8111 | - |
| C16H32O2 | 712,4453 | - |
| C18H36O2 | 72,8637 | - |
| C18H34O2 | 634,7240 | - |
| C18H32O2 | 163,5386 | - |
| C20H32O2 | 50,4369 | - |
| C20H40O2 | 14,5727 | - |
| C12H26 | 24,7830 | 9438,4913 |
| C14H30 | 139,2537 | 15,4726 |
| C16H34 | 5662,2501 | 629,1389 |
| C18H38 | 586,6554 | 65,1839 |
| C18H36 | 5106,1235 | 567,3471 |
| C18H34 | 1314,4854 | 146,0539 |
| C20H34 | 409,2296 | 45,4700 |
| C20H42 | 118,5719 | 13,1747 |
| C11H24 | - | 22,7422 |
| C8H18 | - | 47,9363 |
| C8H10 | - | 158,2826 |
| C6H14 | - | 198,6494 |
| C6H12 | - | 1702,0412 |
| C6H10 | - | 431,1095 |
| C4H10 | - | 1453,3640 |
| C2H6 | - | 21,1061 |
| H2O | - | 222,3528 |
| H2 | 1112,7994 | 963,5323 |
| CH4 | 44,8036 | 47,1377 |
| **Total** | **16188,5863** | **16188,5863** |

**4.13. Kolom Distilasi (KD-02)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/jam)** | **Output (Kg/Jam)** | |
| **Aliran 22** | **Aliran 23** | **Aliran 29** |
| C12H26 | 9438,4913 | - | 9438,4913 |
| C14H30 | 15,4726 | - | 15,4726 |
| C16H34 | 629,1389 | - | 629,1389 |
| C18H38 | 65,1839 | - | 65,1839 |
| C18H36 | 567,3471 | - | 567,3471 |
| C18H34 | 146,0539 | - | 146,0539 |
| C20H34 | 45,4700 | - | 45,4700 |
| C20H42 | 13,1747 | - | 13,1747 |
| C11H24 | 22,7422 | - | 22,7422 |
| C8H18 | 47,9363 | 0,4794 | 47,4569 |
| C8H10 | 158,2826 | 0,0544 | 158,2282 |
| C6H14 | 198,6494 | 198,6490 | 0,0004 |
| C6H12 | 1702,0412 | 1701,9080 | 0,1332 |
| C6H10 | 431,1095 | 431,0403 | 0,0692 |
| C4H10 | 1453,3640 | 1453,3640 | - |
| C2H6 | 21,1061 | 21,1061 | - |
| H2O | 222,3528 | 220,1293 | 2,2235 |
| H2 | 963,5323 | 963,5323 | - |
| CH4 | 47,1377 | 47,1377 | - |
| **Total** | **16188,5863** | 5037,4004 | 11151,1859 |
| **16188,5863** | |

**4.14. *Condensor* (CD-02)**

|  |  |  |
| --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** |
| **Aliran 23** | **Aliran 24** |
| C12H26 | - | - |
| C14H30 | - | - |
| C16H34 | - | - |
| C18H38 | - | - |
| C18H36 | - | - |
| C18H34 | - | - |
| C20H34 | - | - |
| C20H42 | - | - |
| C11H24 | - | - |
| C8H18 | 0,4794 | 0,4794 |
| C8H10 | 0,0544 | 0,0544 |
| C6H14 | 198,6490 | 198,6490 |
| C6H12 | 1701,9080 | 1701,9080 |
| C6H10 | 431,0403 | 431,0403 |
| C4H10 | 1453,3640 | 1453,3640 |
| C2H6 | 21,1061 | 21,1061 |
| H2O | 220,1293 | 220,1293 |
| H2 | 963,5323 | 963,5323 |
| CH4 | 47,1377 | 47,1377 |
| **Total** | **5037,4004** | **5037,4004** |

**4.15. Akumulator (ACC-02)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 24** | **Aliran 25** | **Aliran 26** |
| C12H26 | - | - | - |
| C14H30 | - | - | - |
| C16H34 | - | - | - |
| C18H38 | - | - | - |
| C18H36 | - | - | - |
| C18H34 | - | - | - |
| C20H34 | - | - | - |
| C20H42 | - | - | - |
| C11H24 | - | - | - |
| C8H18 | 0,4794 | - | 0,4794 |
| C8H10 | 0,0544 | - | 0,0544 |
| C6H14 | 198,6490 | - | 198,6490 |
| C6H12 | 1701,9080 | - | 1701,9080 |
| C6H10 | 431,0403 | - | 431,0403 |
| C4H10 | 1453,3640 | 1453,3640 | - |
| C2H6 | 21,1061 | 21,1061 | - |
| H2O | 220,1293 | - | 220,1293 |
| H2 | 963,5323 | 963,5323 | - |
| CH4 | 47,1377 | 47,1377 | - |
| **Total** | **5037,4004** | 2485,1401 | 2552,2603 |
|  | **5037,4004** |

**4.16. Dekanter (DC-02)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 26** | **Aliran 27** | **Aliran 28** |
| C12H26 | - | - | - |
| C14H30 | - | - | - |
| C16H34 | - | - | - |
| C18H38 | - | - | - |
| C18H36 | - | - | - |
| C18H34 | - | - | - |
| C20H34 | - | - | - |
| C20H42 | - | - | - |
| C11H24 | - | - | - |
| C8H18 | 0,4794 | 0,4794 | - |
| C8H10 | 0,0544 | 0,0544 | - |
| C6H14 | 198,6490 | 198,6490 | - |
| C6H12 | 1701,9080 | 1701,9080 | - |
| C6H10 | 431,0403 | 431,0403 | - |
| C4H10 | - | - | - |
| C2H6 | - | - | - |
| H2O | 220,1293 | - | 220,1293 |
| H2 | - | - | - |
| CH4 | - | - | - |
| **Total** | **2552,2603** | 2332,1310 | 220,1293 |
| **2552,2603** | |

**4.17. *Reboiler* (RB-02)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | | **Output (Kg/Jam)** | |
| **Aliran 29** | **Aliran 30** | | **Aliran 31** | |
| C12H26 | 9438,5064 | 0,0151 | | 9438,4913 | |
| C14H30 | 15,4727 | 0,0001 | | 15,4726 | |
| C16H34 | 629,1459 | 0,0070 | | 629,1389 | |
| C18H38 | 65,1859 | 0,0020 | | 65,1839 | |
| C18H36 | 567,3635 | 0,0165 | | 567,3471 | |
| C18H34 | 146,0586 | 0,0047 | | 146,0539 | |
| C20H34 | 45,4748 | 0,0049 | | 45,4700 | |
| C20H42 | 13,1755 | 0,0009 | | 13,1747 | |
| C11H24 | 22,7422 | - | | 22,7422 | |
| C8H18 | 47,4569 | - | | 47,4569 | |
| C8H10 | 158,2283 | - | | 158,2282 | |
| C6H14 | 0,0004 | - | | 0,0004 | |
| C6H12 | 0,1332 | - | | 0,1332 | |
| C6H10 | 0,0692 | - | | 0,0692 | |
| C4H10 | - | - | | - | |
| C2H6 | - | - | | - | |
| H2O | 2,2235 | - | | 2,2235 | |
| H2 | - | - | | - | |
| CH4 | - | - | | - | |
| **Total** | **11151,2371** | 0,0512 | | 11151,1859 | |
| **11151,2371** | | | |

**4.18. Kolom Distilasi (KD-03)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | | |
| **Aliran 31** | **Aliran 32** | **Aliran 37** |
| C12H26 | 9438,4913 | 9438,4124 | 0,0789 |
| C14H30 | 15,4726 | 15,3179 | 0,1547 |
| C16H34 | 629,1389 | 39,8097 | 589,3292 |
| C18H38 | 65,1839 | 0,0011 | 65,1828 |
| C18H36 | 567,3471 | 0,0484 | 567,2987 |
| C18H34 | 146,0539 | 0,0027 | 146,0512 |
| C20H34 | 45,4700 | - | 45,4700 |
| C20H42 | 13,1747 | - | 13,1747 |
| C11H24 | 22,7422 | 22,7422 | - |
| C8H18 | 47,4569 | 47,4569 | - |
| C8H10 | 158,2282 | 158,2282 | - |
| C6H14 | 0,0004 | 0,0004 | - |
| C6H12 | 0,1332 | 0,1332 | - |
| C6H10 | 0,0692 | 0,0692 | - |
| C4H10 | - | - | - |
| C2H6 | - | - | - |
| H2O | 2,2235 | 2,2235 | - |
| H2 | - | - | - |
| **Total** | **11151,1859** | 9724,4457 | 1426,7402 |
| **11151,1859** | | |

**4.19. *Condensor* (CD-03)**

|  |  |  |
| --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** |
| **Aliran 32** | **Aliran 33** |
| C12H26 | 9438,4124 | 9438,4124 |
| C14H30 | 15,3179 | 15,3179 |
| C16H34 | 39,8097 | 39,8097 |
| C18H38 | 0,0011 | 0,0011 |
| C18H36 | 0,0484 | 0,0484 |
| C18H34 | 0,0027 | 0,0027 |
| C20H34 | - | - |
| C20H42 | - | - |
| C11H24 | 22,7422 | 22,7422 |
| C8H18 | 47,4569 | 47,4569 |
| C8H10 | 158,2282 | 158,2282 |
| C6H14 | 0,0004 | 0,0004 |
| C6H12 | 0,1332 | 0,1332 |
| C6H10 | 0,0692 | 0,0692 |
| C4H10 | - | - |
| C2H6 | - | - |
| H2O | 2,2235 | 2,2235 |
| H2 | - | - |
| CH4 | - | - |
| **Total** | **9724,4457** | **9724,4457** |

**4.20. Akumulator (ACC-03)**

|  |  |  |
| --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** |
| **Aliran 33** | **Aliran 34** |
| C12H26 | 9438,4124 | 9438,4124 |
| C14H30 | 15,3179 | 15,3179 |
| C16H34 | 39,8097 | 39,8097 |
| C18H38 | 0,0011 | 0,0011 |
| C18H36 | 0,0484 | 0,0484 |
| C18H34 | 0,0027 | 0,0027 |
| C20H34 | - | - |
| C20H42 | - | - |
| C11H24 | 22,7422 | 22,7422 |
| C8H18 | 47,4569 | 47,4569 |
| C8H10 | 158,2282 | 158,2282 |
| C6H14 | 0,0004 | 0,0004 |
| C6H12 | 0,1332 | 0,1332 |
| C6H10 | 0,0692 | 0,0692 |
| C4H10 | - | - |
| C2H6 | - | - |
| H2O | 2,2235 | 2,2235 |
| H2 | - | - |
| CH4 | - | - |
| **Total** | **9724,4457** | **9724,4457** |

**4.21. Dekanter (DC-03)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 34** | **Aliran 35** | **Aliran 36** |
| C12H26 | 9438,4124 | 9438,4124 | - |
| C14H30 | 15,3179 | 15,3179 | - |
| C16H34 | 39,8097 | 39,8097 | - |
| C18H38 | 0,0011 | 0,0011 | - |
| C18H36 | 0,0484 | 0,0484 | - |
| C18H34 | 0,0027 | 0,0027 | - |
| C20H34 | - | - | - |
| C20H42 | - | - | - |
| C11H24 | 22,7422 | 22,7422 | - |
| C8H18 | 47,4569 | 47,4569 | - |
| C8H10 | 158,2282 | 158,2282 | - |
| C6H14 | 0,0004 | 0,0004 | - |
| C6H12 | 0,1332 | 0,1332 | - |
| C6H10 | 0,0692 | 0,0692 | - |
| C4H10 | - | - | - |
| C2H6 | - | - | - |
| H2O | 2,2235 | - | 2,2235 |
| H2 | - | - | - |
| CH4 | - | - | - |
| **Total** | **9724,4457** | 9722,2222 | 2,2235 |
| **9724,4457** | |

**4.22. Reboiler (RB-03)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Komponen** | **Input (Kg/Jam)** | **Output (Kg/Jam)** | |
| **Aliran 37** | **Aliran 38** | **Aliran 39** |
| C12H26 | 0,0789 | - | 0,0789 |
| C14H30 | 0,1547 | - | 0,1547 |
| C16H34 | 589,3554 | 0,0262 | 589,3292 |
| C18H38 | 65,1888 | 0,0060 | 65,1828 |
| C18H36 | 567,3385 | 0,0398 | 567,2987 |
| C18H34 | 146,0637 | 0,0124 | 146,0512 |
| C20H34 | 45,4787 | 0,0088 | 45,4700 |
| C20H42 | 13,1768 | 0,0021 | 13,1747 |
| C11H24 | - | - | - |
| C8H18 | - | - | - |
| C8H10 | - | - | - |
| C6H14 | - | - | - |
| C6H12 | - | - | - |
| C6H10 | - | - | - |
| C4H10 | - | - | - |
| C2H6 | - | - | - |
| H2O | - | - | - |
| H2 | - | - | - |
| CH4 | - | - | - |
| **Total** | **1426,8355** | 0,0953 | 1426,7402 |
| **1426,8355** | |