

DAFTAR PUSTAKA

- Anshori, M., Jafar, R. M., Lestari, D., & Kresnowati, M. T. A. P. (2022). *Production of Carotenoids from Oil Palm Empty Fruit Bunches: Selection of Extraction Methods. Journal of Engineering and Technological Sciences*, 54(3). <https://doi.org/10.5614/j.eng.technol.sci.2022.54.3.3>
- Dini, I. R., & Afriani, E. (2022). *The effect of lignocellulolytic bacteria consortium on composting empty oil palm fruit bunches. International Journal of Science and Research Archive*, 7(1), 220–228. <https://doi.org/10.30574/ijrsra.2022.7.1.0130>
- Harefa, D. K., Arifuddin, A. M. N., Hijriah, Ardianti, A., Rachmianti, A., & Raditya, M. Y. (2023). *Study of The Potential of Palm Oil Empty Core Fiber As Composite Materials for Ship Hull. Indonesian Journal of Maritime Technology*, 1(1), 1–10. <https://doi.org/10.35718/ismatech.v1i1.883>
- Hibatullah, M., Priyamba, & Suhartanto, E. (2023). Analisis Pengoptimalan Pengutipan Kehilangan Minyak (*Oil Losses*) di Janjang Kosong dengan Metode Pencacahan Menggunakan Alat *Bunch Press*. *Agroforetech*, 1(1), 647–653. <https://jurnal.instiperjogja.ac.id/index.php/JOM/article/view/339?>
- Kumbara, Firlana, & Supriatna, J. (2024). Evaluasi Kajian *Oil Extraction Rate* (OER) Optimum sebagai Standar Panen Kelapa Sawit. *Jurnal Agro Industri Perkebunan*, 12(1), 19–28. <https://doi.org/10.25181/jaip.v12i1.3346>
- Lestari, E., Ridha, M. R., Puteri, A., Linangsari, T., Fatimah, Jaya, J. D., & Nuryati, N. (2025). Analisis *Oil Losses* Pada *Empty Bunch Press* Menggunakan Metode Statistical Process Control (SPC) di PT. XYZ. *Jurnal Teknologi Agro-Industri*, 12(2), 173–181. <https://jtai.politala.ac.id/index.php/JTAI/article/view/261/161>
- Ling, J. H., Lim, Y. T., Leong, W. K., & Sia, H. T. (2022). *The Advantages and Disadvantages of Palm Oil Empty Fruit Bunch on Bricks and Mortar. Journal of the Civil Engineering Forum*, 8(May), 193–204. <https://doi.org/10.22146/jcef.3762>

- Nasution, F. A. rasyid, & Bernadhi, B. D. (2026). Analisis *Losses* Minyak Sawit pada Proses Pengolahan Pabrik Kelapa Sawit PT Perkebunan Nusantara IV Regional IV Unit Usaha PKS Bunut. *Journal of Science, Technology, and Innovation*, 1(3), 179–189. <https://scriptaintelektual.com/inventa/article/view/1006/839>
- Pakpahan, A. P., Adisetya, E., & Ruswanto, A. (2025). Pengaruh Persentase TBS Kurang Masak terhadap Persentase *Oil Losses* Kondesat, *Unstripped Bunch*, dan *Oil Losses Empty Bunch* Pada *Vertical Sterilizer*. *Agroforetech*, 3(3), 1799–1802. <https://jurnal.instiperjogja.ac.id/index.php/JOM/article/view/2274/1313>
- Panjaitan, N., Lubis, J. A., Silitonga, N. K., & Faris, M. Z. (2025). *Root Cause Analysis of Oil Losses in Press Machines Using Fault Tree Analysis Method* †. *Engineering Proceedings*, 84(1). <https://doi.org/10.3390/engproc2025084096>
- Radwitya, E., Nopriyanti, M., & Septiani, N. (2023). Analisis Produktifitas Pada Mesin Empty Bunch Press Untuk Meningkatkan Jumlah *Oil Extraction* Rendemen (Oer) Minyak Kelapa Sawit. *Jurnal Teknologi Pangan Dan Industri Perkebunan (LIPIDA)*, 3(1), 237–247. <https://doi.org/10.58466/lipida.v3i1.1021>
- Rosyidah, E., & Masykuroh, E. (2024). Memahami Strategi Dan Mengatasi Tantangan Dalam Penelitian Metode Kuantitatif Eva. *JOURNAL SYNTAX IDEA*, 6(06), 1–17. <https://jurnal.syntax-idea.co.id/index.php/syntax-idea/article/view/3748/2184>
- Sari, D. W., Aji, A. K., Sylviana, W., & Islamiya, H. A. T. (2024). Total Faktor Produktivitas Industri Minyak Sawit Mentah: Apakah Penggunaan Mesin Lama Masih Mendukung Efisiensi Produksi? *Jurnal Ekonomi Indonesia*, 13(1), 1–23. <https://doi.org/10.52813/jei.v13i1.370>
- Saukani, M. A., Apriyanti, S. N., Butar-Butar, R., Manurung, E. F., Putra, P. D. D., Raja, P. M., Purwanto, H., Zakwan, & Rahimah. (2025). Analisa Kehilangan Minyak (*Oil Losses*) Pada Proses Produksi Di Pabrik Kelapa Sawit. *Jurnal Teknik Pengolahan Hasil Perkebunan Kelapa Sawit Dan*

Karet, 7(1), 84 – 94.

<https://ejurnal.itsi.ac.id/index.php/JAF/article/view/307/249>

Sianturi, L. I., & Yanto. (2026). Analisis Penggunaan Mesin *Empty Bunch Press* di PKS Aek Raso PT . Perkebunan Nusantara IV Regional 1. *Jurnal Praktik Keinsinyuran*, 3(1), 111–116.

<https://ejournal.atmajaya.ac.id/index.php/jpk/article/view/7602/3422>

Yardani, J., Ulimaz, A., & Astuti, P. W. (2025). Analisis Kehilangan Minyak (*Oil Losses*) Di *Empty Bunch* Menggunakan Alat *Bunch Press* Di PT. PQRS. *Jurnal Teknologi Pertanian Andalas*, 29, No. 1, 62–70.
<https://tpa.fateta.unand.ac.id/index.php/JTPA/article/view/1112/302>

LAMPIRAN

Lampiran 1.1 Hasil Perhitungan Analisa Metode *Soxhlet*.

Rabu, 22 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,9992 gr	64,5961 gr
Wadah	54,2029 gr	53,8958 gr
Sampel Basah	10,7963 gr	10,7003 gr
Wadah+Sampel Kering	58,9895 gr	61,3562 gr
Sampel Kering	4,7886 gr	7,4604 gr
Berat Air	6,0097 gr	3,2399 gr
Moisture	55,66 %	30,27 %
Bottom+Minyak	110,2220 gr	104,5831 gr
Bottom	109,6209 gr	104,3750 gr
Minyak	0,6011 gr	0,2081 gr
Sampel Kering-Minyak	4,1855 gr	7,2523 gr
O/WM	5,56 %	1,94 %
O/DM	12,55 %	2,78 %
O/Nos	14,36 %	2,86 %
Nos	38,76 %	67,77 %

Kamis, 23 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,9327 gr	64,4341 gr
Wadah	54,3213 gr	53,8085 gr
Sampel Basah	10,6114 gr	10,6256 gr
Wadah+Sampel Kering	58,7298 gr	61,1247 gr
Sampel Kering	4,4085 gr	7,3132 gr
Berat Air	6,2029 gr	3,3094 gr
Moisture	58,45 %	31,14 %
Bottom+Minyak	110,1423 gr	104,4552 gr
Bottom	109,6248 gr	104,2570 gr
Minyak	0,5175 gr	0,1982 gr

Sampel Kering-Minyak	3,891 gr	7,118 gr
O/WM	4,87 %	1,86 %
O/DM	11,73 %	2,70 %
O/Nos	13,29 %	2,78 %
Nos	36,66 %	66,98 %

Jum'at, 24 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6122 gr	63,9377 gr
Wadah	54,4610 gr	53,7845 gr
Sampel Basah	10,1512 gr	10,1532 gr
Wadah+Sampel Kering	58,5140 gr	59,6040 gr
Sampel Kering	4,053 gr	5,8195 gr
Berat Air	6,0982 gr	4,3337 gr
Moisture	60,07 %	42,68 %
Bottom+Minyak	105,1692 gr	104,4703 gr
Bottom	104,6289 gr	104,2982 gr
Minyak	0,5403 gr	0,1721 gr
Sampel Kering-Minyak	3,5127 gr	5,6474 gr
O/WM	5,32 %	1,69 %
O/DM	13,33 %	2,95 %
O/Nos	15,38 %	3,04 %
Nos	34,60 %	55,62 %

Sabtu, 25 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	63,8616 gr	63,5099 gr
Wadah	53,7214 gr	53,3678 gr
Sampel Basah	10,1402 gr	10,1421 gr
Wadah+Sampel Kering	58,0175 gr	60,2194 gr
Sampel Kering	4,2961 gr	6,8516 gr
Berat Air	5,8441 gr	3,2905 gr

Moisture	57,63 %	32,44 %
Bottom+Minyak	110,2312 gr	104,5795 gr
Bottom	109,7924 gr	104,4182 gr
Minyak	0,4388 gr	0,1613 gr
Sampel Kering-Minyak	3,8573 gr	6,6903 gr
O/WM	4,32 %	1,59 %
O/DM	10,21 %	2,35 %
O/Nos	11,37 %	2,41 %
Nos	38,03 %	65,96 %

Senin, 27 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6943 gr	64,2078 gr
Wadah	54,4433 gr	54,1453 gr
Sampel Basah	10,2510 gr	10,0625 gr
Wadah+Sampel Kering	58,4698 gr	61,4047 gr
Sampel Kering	4,0255 gr	7,2594 gr
Berat Air	6,2255 gr	2,8031 gr
Moisture	60,73 %	27,85 %
Bottom+Minyak	102,6088 gr	109,7358 gr
Bottom	102,2156 gr	109,6250 gr
Minyak	0,3932 gr	0,1108 gr
Sampel Kering-Minyak	3,6323 gr	7,1486 gr
O/WM	3,83 %	1,10 %
O/DM	9,77 %	1,52 %
O/Nos	10,82 %	1,54 %
Nos	35,43	71,04 %

Selasa, 28 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,1943 gr	64,2132 gr
Wadah	54,1460 gr	54,1453 gr

Sampel Basah	10,0483 gr	10,0679 gr
Wadah+Sampel Kering	57,9023 gr	58,9358 gr
Sampel Kering	3,7563 gr	4,7905 gr
Berat Air	6,292 gr	5,2774 gr
Moisture	62,61 %	52,41 %
Bottom+Minyak	110,3384 gr	103,6115 gr
Bottom	109,6453 gr	103,3922 gr
Minyak	0,6951 gr	0,2193 gr
Sampel Kering-Minyak	3,0612 gr	4,5712 gr
O/WM	6,91 %	2,17 %
O/DM	18,50 %	4,57 %
O/Nos	22,70 %	4,79 %
Nos	30,46 %	45,40 %

Rabu, 29 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,5354 gr	64,0574 gr
Wadah	54,4456 gr	53,8955 gr
Sampel Basah	10,0898 gr	10,1619 gr
Wadah+Sampel Kering	58,6929 gr	59,7101 gr
Sampel Kering	4,2473 gr	5,8146 gr
Berat Air	5,8425 gr	4,3473 gr
Moisture	57,90 %	42,78 %
Bottom+Minyak	103,1547 gr	103,9395 gr
Bottom	102,5561 gr	103,7342 gr
Minyak	0,5986 gr	0,2053 gr
Sampel Kering-Minyak	3,6487 gr	5,6093 gr
O/WM	5,93 %	2,02 %
O/DM	14,09 %	3,53 %
O/Nos	16,40 %	3,65 %
Nos	36,16 %	55,19 %

Kamis, 30 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,699 gr	63,9813 gr
Wadah	54,6195 gr	53,8764 gr
Sampel Basah	10,0705 gr	10,1049 gr
Wadah+Sampel Kering	58,6552 gr	58,6426 gr
Sampel Kering	4,0357 gr	4,7662 gr
Berat Air	6,0348 gr	5,3387 gr
Moisture	59,92 %	52,83 %
Bottom+Minyak	110,3605 gr	112,9178 gr
Bottom	109,9823 gr	112,7384 gr
Minyak	0,3782 gr	0,1594 gr
Sampel Kering-Minyak	3,6575 gr	4,6068 gr
O/WM	3,75 %	1,57 %
O/DM	9,37 %	3,34 %
O/Nos	10,34 %	3,46 %
Nos	36,31 %	45,58 %

Jum'at, 31 Oktober 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6998 gr	63,9603 gr
Wadah	54,6173 gr	53,8763 gr
Sampel Basah	10,0825 gr	10,0840 gr
Wadah+Sampel Kering	58,7431 gr	59,5520 gr
Sampel Kering	4,1758 gr	5,6757 gr
Berat Air	5,9567 gr	4,0275 gr
Moisture	59,07 %	39,93 %
Bottom+Minyak	110,4620 gr	112,9078 gr
Bottom	109,9758 gr	112,7580 gr
Minyak	0,4862 gr	0,1498 gr
Sampel Kering-Minyak	3,6396 gr	5,5259 gr

O/WM	4,82 %	1,48 %
O/DM	11,64 %	2,63 %
O/Nos	13,35 %	2,71 %
Nos	36,09 %	54,79 %

Sabtu, 1 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6835 gr	63,9474 gr
Wadah	54,6120 gr	53,8750 gr
Sampel Basah	10,0715 gr	10,0724 gr
Wadah+Sampel Kering	58,7724 gr	59,6603 gr
Sampel Kering	4,1604 gr	5,7853 gr
Berat Air	5,9111 gr	4,2871 gr
Moisture	58,69 %	42,56 %
Bottom+Minyak	110,4282 gr	104,8749 gr
Bottom	110,0090 gr	104,7512 gr
Minyak	0,4192 gr	0,1237 gr
Sampel Kering-Minyak	3,7412 gr	5,6616 gr
O/WM	4,16 %	1,22 %
O/DM	10,07 %	2,13 %
O/Nos	11,20 %	2,18 %
Nos	37,14 %	56,20 %

Senin, 3 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,7504 gr	64,1959 gr
Wadah	54,6197 gr	54,0692 gr
Sampel Basah	10,1307 gr	10,1267 gr
Wadah+Sampel Kering	58,2268 gr	59,6149 gr
Sampel Kering	3,6071 gr	5,5457 gr
Berat Air	6,5236 gr	4,581 gr
Moisture	64,39 %	45,23 %

Bottom+Minyak	102,8512 gr	103,8438 gr
Bottom	102,5563 gr	103,7156 gr
Minyak	0,2949 gr	0,1282 gr
Sampel Kering-Minyak	3,3122 gr	5,4175 gr
O/WM	2,91 %	1,26 %
O/DM	8,17 %	2,31 %
O/Nos	8,90 %	2,36 %
Nos	32,69 %	53,49 %

Selasa, 4 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	62,1576 gr	63,5822 gr
Wadah	52,0739 gr	53,5409 gr
Sampel Basah	10,0837 gr	10,0413 gr
Wadah+Sampel Kering	55,8712 gr	59,2031 gr
Sampel Kering	3,7973 gr	5,6622 gr
Berat Air	6,2864 gr	4,3791 gr
Moisture	62,34 %	43,61 %
Bottom+Minyak	110,7209 gr	102,7379 gr
Bottom	109,9799 gr	102,5424 gr
Minyak	0,7410 gr	0,1954 gr
Sampel Kering-Minyak	3,0563 gr	5,4668 gr
O/WM	7,34 %	1,94 %
O/DM	19,51 %	3,45 %
O/Nos	24,24 %	3,57 %
Nos	30,30 %	54,44 %

Rabu, 5 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6778 gr	64,3376 gr
Wadah	54,6184 gr	54,3190 gr
Sampel Basah	10,0594 gr	10,0186 gr

Wadah+Sampel Kering	57,7792 gr	60,0276 gr
Sampel Kering	3,1608 gr	5,7086 gr
Berat Air	6,8986 gr	4,31 gr
Moisture	68,57 %	43,01 %
Bottom+Minyak	105,2343 gr	104,4561 gr
Bottom	104,7525 gr	104,3001 gr
Minyak	0,4818 gr	0,156 gr
Sampel Kering-Minyak	2,679 gr	5,5526 gr
O/WM	4,78 %	1,55 %
O/DM	15,24 %	2,73 %
O/Nos	17,98 %	2,80 %
Nos	26,63 %	55,42 %

Kamis, 6 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,3591 gr	63,5852 gr
Wadah	54,3242 gr	53,5447 gr
Sampel Basah	10,0349 gr	10,0405 gr
Wadah+Sampel Kering	57,4801 gr	59,0583 gr
Sampel Kering	3,1559 gr	5,5136 gr
Berat Air	6,879 gr	4,5269 gr
Moisture	68,55 %	45,08 %
Bottom+Minyak	110,3789 gr	104,8725 gr
Bottom	110,0012 gr	104,7517 gr
Minyak	0,3777 gr	0,1208 gr
Sampel Kering-Minyak	2,7782 gr	5,3928 gr
O/WM	3,76 %	1,20 %
O/DM	11,96 %	2,19 %
O/Nos	13,59 %	2,24 %
Nos	27,68 %	53,71 %

Jum'at, 7 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,3497 gr	63,5915 gr
Wadah	54,3251 gr	53,5653 gr
Sampel Basah	10,0246 gr	10,0262 gr
Wadah+Sampel Kering	57,4931 gr	58,5175 gr
Sampel Kering	3,168 gr	4,9522 gr
Berat Air	6,8566 gr	5,074 gr
Moisture	68,39 %	50,60 %
Bottom+Minyak	110,2101 gr	104,8825 gr
Bottom	109,9863 gr	104,7489 gr
Minyak	0,2298 gr	0,1336 gr
Sampel Kering-Minyak	2,9382 gr	4,8186 gr
O/WM	2,29 %	1,33 %
O/DM	7,25 %	2,69 %
O/Nos	7,82 %	2,77 %
Nos	29,30 %	48,06 %

Sabtu, 8 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	62,1351 gr	64,1243 gr
Wadah	52,0728 gr	54,0716 gr
Sampel Basah	10,0623 gr	10,0527 gr
Wadah+Sampel Kering	55,8132 gr	59,8251 gr
Sampel Kering	3,7404 gr	5,7535 gr
Berat Air	6,3219 gr	4,2992 gr
Moisture	62,82 %	42,76 %
Bottom+Minyak	110,6460 gr	112,9102 gr
Bottom	109,9879 gr	112,7651 gr
Minyak	0,6581 gr	0,1451 gr
Sampel Kering-Minyak	3,0823 gr	5,6084 gr
O/WM	6,54 %	1,44 %

O/DM	17,59 %	2,52 %
O/Nos	21,35 %	2,58 %
Nos	30,63 %	55,78 %

Senin, 10 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	62,1141 gr	63,9019 gr
Wadah	52,0980 gr	53,8841 gr
Sampel Basah	10,0161 gr	10,0178 gr
Wadah+Sampel Kering	55,5117 gr	59,5942 gr
Sampel Kering	3,4137 gr	5,7101 gr
Berat Air	6,6024 gr	4,3077 gr
Moisture	65,91 %	43,00 %
Bottom+Minyak	110,4886 gr	104,2912 gr
Bottom	109,9872 gr	104,0801 gr
Minyak	0,5014 gr	0,2011 gr
Sampel Kering-Minyak	2,9123 gr	5,509 gr
O/WM	5,00 %	2,00 %
O/DM	14,68 %	3,52 %
O/Nos	17,21 %	3,65 %
Nos	29,07 %	54,99 %

Selasa, 11 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	63,9465 gr	64,4017 gr
Wadah	53,8867 gr	54,3395 gr
Sampel Basah	10,0598 gr	10,0632 gr
Wadah+Sampel Kering	57,5870 gr	59,9438 gr
Sampel Kering	3,7003 gr	5,6043 gr
Berat Air	6,3595 gr	4,4579 gr
Moisture	63,21%	44,30 %
Bottom+Minyak	104,9731 gr	102,7311 gr

Bottom	104,5363 gr	102,5530 gr
Minyak	0,4368 gr	0,1781 gr
Sampel Kering-Minyak	3,2635 gr	5,4262 gr
O/WM	4,34 %	1,76 %
O/DM	11,80 %	3,17 %
O/Nos	13,38 %	3,28 %
Nos	32,44 %	53,92 %

Rabu, 12 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6677 gr	63,5919 gr
Wadah	54,6158 gr	53,5391 gr
Sampel Basah	10,0519 gr	10,0528 gr
Wadah+Sampel Kering	57,6606 gr	59,8484 gr
Sampel Kering	3,0448 gr	6,3093 gr
Berat Air	7,0071 gr	3,7435 gr
Moisture	69,70 %	37,23 %
Bottom+Minyak	110,2553 gr	102,6713 gr
Bottom	110,0139 gr	102,5545 gr
Minyak	0,2414 gr	0,1168 gr
Sampel Kering-Minyak	2,8034 gr	6,1925 gr
O/WM	2,40 %	1,16 %
O/DM	7,92 %	1,85 %
O/Nos	8,61 %	1,88 %
Nos	27,88 %	61,59 %

Kamis, 13 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,437 gr	64,3707 gr
Wadah	54,3970 gr	54,3276 gr
Sampel Basah	10,0400 gr	10,0431 gr
Wadah+Sampel Kering	57,7597 gr	60,3935 gr

Sampel Kering	3,3627 gr	6,0659 gr
Berat Air	6,6773 gr	3,9772 gr
Moisture	66,50 %	39,60 %
Bottom+Minyak	104,7719 gr	110,0914 gr
Bottom	104,5502 gr	110,0176 gr
Minyak	0,2217 gr	0,0738 gr
Sampel Kering-Minyak	3,141 gr	5,9921 gr
O/WM	2,20 %	0,73 %
O/DM	6,59 %	1,21 %
O/Nos	7,05 %	1,23 %
Nos	31,28 %	59,66 %

Jumat, 14 November2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,3872 gr	64,3982 gr
Wadah	54,3251 gr	54,3288 gr
Sampel Basah	10,0621 gr	10,0694 gr
Wadah+Sampel Kering	57,6619 gr	59,4138 gr
Sampel Kering	3,3368 gr	5,085 gr
Berat Air	6,7253 gr	4,9844 gr
Moisture	66,82 %	49,50 %
Bottom+Minyak	110,4441 gr	102,7005 gr
Bottom	110,0132 gr	102,5459 gr
Minyak	0,4309 gr	0,1546 gr
Sampel Kering-Minyak	2,9059 gr	4,9304 gr
O/WM	4,28 %	1,53 %
O/DM	12,91 %	3,04 %
O/Nos	14,82 %	3,13 %
Nos	28,87 %	48,96 %

Sabtu, 15 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	63,6365 gr	63,9649 gr
Wadah	53,5430 gr	53,8756 gr
Sampel Basah	10,0935 gr	10,0893 gr
Wadah+Sampel Kering	57,2769 gr	60,1373 gr
Sampel Kering	3,7339 gr	6,2617 gr
Berat Air	6,3596 gr	3,8276 gr
Moisture	63,00 %	37,93 %
Bottom+Minyak	105,0264 gr	110,1193 gr
Bottom	104,5300 gr	109,9884 gr
Minyak	0,4964 gr	0,1309 gr
Sampel Kering-Minyak	3,2375 gr	6,1308 gr
O/WM	4,91 %	1,29 %
O/DM	13,29 %	2,09 %
O/Nos	15,33 %	2,13 %
Nos	32,07 %	60,76 %

Senin, 17 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,9808 gr	65,3698 gr
Wadah	54,8884 gr	55,2740 gr
Sampel Basah	10,0924 gr	10,0958 gr
Wadah+Sampel Kering	58,2005 gr	61,2948 gr
Sampel Kering	3,3121 gr	6,0208 gr
Berat Air	6,7803 gr	4,075 gr
Moisture	67,18 %	40,36 %
Bottom+Minyak	104,8433 gr	110,1226 gr
Bottom	104,5340 gr	110,0095 gr
Minyak	0,3093 gr	0,1131 gr
Sampel Kering-Minyak	3,0028 gr	5,9077 gr
O/WM	3,06 %	1,12 %

O/DM	9,33 %	1,87 %
O/Nos	10,30 %	1,91 %
Nos	29,75 %	58,51 %

Selasa, 18 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	65,3729 gr	64,9899 gr
Wadah	55,2713 gr	54,8866 gr
Sampel Basah	10,1016 gr	10,1033 gr
Wadah+Sampel Kering	59,4653 gr	61,1495 gr
Sampel Kering	4,194 gr	6,2629 gr
Berat Air	5,9076 gr	3,8404 gr
Moisture	58,48 %	38,01 %
Bottom+Minyak	104,9722 gr	112,8858 gr
Bottom	104,5444 gr	112,7686 gr
Minyak	0,4278 gr	0,1172 gr
Sampel Kering-Minyak	3,7662 gr	6,1457 gr
O/WM	4,23 %	1,16 %
O/DM	10,20 %	1,87 %
O/Nos	11,35 %	1,90 %
Nos	37,28 %	60,82 %

Rabu, 19 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	65,3288 gr	64,9378 gr
Wadah	55,2695 gr	54,8848 gr
Sampel Basah	10,0593 gr	10,0530 gr
Wadah+Sampel Kering	59,0290 gr	60,8279 gr
Sampel Kering	3,7595 gr	5,9431 gr
Berat Air	6,2998 gr	4,1099 gr
Moisture	62,63 %	40,88 %
Bottom+Minyak	105,0038 gr	103,3619 gr

Bottom	104,5254 gr	103,2661 gr
Minyak	0,4784 gr	0,0958 gr
Sampel Kering-Minyak	3,2811 gr	5,8473 gr
O/WM	4,75 %	0,95 %
O/DM	12,72 %	1,61 %
O/Nos	14,58 %	1,63 %
Nos	32,61 %	58,16 %

Kamis, 20 November2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	62,1563 gr	64,4602 gr
Wadah	52,0710 gr	54,3774 gr
Sampel Basah	10,0853 gr	10,0828 gr
Wadah+Sampel Kering	56,1677 gr	60,2747 gr
Sampel Kering	4,0967 gr	5,8973 gr
Berat Air	5,9886 gr	4,1855 gr
Moisture	59,37 %	41,51 %
Bottom+Minyak	105,1669 gr	110,1429 gr
Bottom	104,5416 gr	110,0061 gr
Minyak	0,6253 gr	0,1368 gr
Sampel Kering-Minyak	3,4714 gr	5,7605 gr
O/WM	6,20 %	1,35 %
O/DM	15,26 %	2,31 %
O/Nos	18,01 %	2,37 %
Nos	34,42 %	57,13 %

Lampiran 27 Analisa Sampel Metode *Soxhlet* Hari-27.

Jumat, 21 November2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	62,1352 gr	64,7865 gr
Wadah	52,0725 gr	54,7250 gr
Sampel Basah	10,0627 gr	10,0615 gr
Wadah+Sampel Kering	56,0439 gr	60,7551 gr

Sampel Kering	3,9714 gr	6,0301 gr
Berat Air	6,0913 gr	4,0314 gr
Moisture	60,53 %	40,06 %
Bottom+Minyak	104,9672 gr	110,1411 gr
Bottom	104,5412 gr	110,0059 gr
Minyak	0,4360 gr	0,1352 gr
Sampel Kering-Minyak	3,5354 gr	5,8949 gr
O/WM	4,23 %	1,34 %
O/DM	10,97 %	2,24 %
O/Nos	12,33 %	2,29 %
Nos	35,13 %	58,58 %

Sabtu, 22 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	62,1367 gr	64,7912 gr
Wadah	52,0728 gr	54,7253 gr
Sampel Basah	10,0639 gr	10,0689 gr
Wadah+Sampel Kering	56,0238 gr	60,7496 gr
Sampel Kering	3,596 gr	6,0243 gr
Berat Air	6,1129 gr	4,0446 gr
Moisture	60,74 %	40,16 %
Bottom+Minyak	110,4191 gr	104,1348 gr
Bottom	109,9872 gr	104,0003 gr
Minyak	0,4319 gr	0,1345 gr
Sampel Kering-Minyak	3,5191 gr	5,8898 gr
O/WM	4,29 %	1,33 %
O/DM	10,93 %	2,23 %
O/Nos	12,27 %	2,28 %
Nos	34,96 %	58,49 %

Senin, 24 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6143 gr	64,2118 gr
Wadah	54,5624 gr	54,1590 gr
Sampel Basah	10,0519 gr	10,0528 gr
Wadah+Sampel Kering	58,5618 gr	60,1770 gr
Sampel Kering	3,9994 gr	6,018 gr
Berat Air	6,0525 gr	4,0348 gr
Moisture	60,21 %	40,13 %
Bottom+Minyak	102,6198 gr	110,1280 gr
Bottom	102,2412 gr	110,0014 gr
Minyak	0,3786 gr	0,1266 gr
Sampel Kering-Minyak	3,6208 gr	5,8914 gr
O/WM	3,76 %	1,25 %
O/DM	9,46 %	2,10 %
O/Nos	10,45 %	2,14 %
Nos	36,02 %	58,60 %

Selasa, 25 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	65,3286 gr	64,9361 gr
Wadah	55,2760 gr	54,8820 gr
Sampel Basah	10,0526 gr	10,0541 gr
Wadah+Sampel Kering	58,3553 gr	60,0249 gr
Sampel Kering	3,0793 gr	5,1429 gr
Berat Air	6,9733 gr	4,9112 gr
Moisture	69,36 %	48,84 %
Bottom+Minyak	104,9314 gr	112,8788 gr
Bottom	104,5462 gr	112,7680 gr
Minyak	0,3852 gr	0,1108 gr
Sampel Kering-Minyak	2,6941 gr	5,0321 gr
O/WM	3,83 %	1,10 %

O/DM	12,50 %	2,15 %
O/Nos	14,29 %	2,20 %
Nos	26,80 %	50,05 %

Rabu, 26 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	65,1978 gr	64,8042 gr
Wadah	55,1283 gr	54,7408 gr
Sampel Basah	10,0695 gr	10,0634 gr
Wadah+Sampel Kering	59,2327 gr	60,9794 gr
Sampel Kering	4,1044 gr	6,2386 gr
Berat Air	5,9651 gr	3,8248 gr
Moisture	59,14 %	38,00 %
Bottom+Minyak	105,4311 gr	103,3642 gr
Bottom	105,0219 gr	103,2613 gr
Minyak	0,4092 gr	0,1029 gr
Sampel Kering-Minyak	3,572 gr	6,1357 gr
O/WM	4,06 %	1,02 %
O/DM	9,96 %	1,64 %
O/Nos	11,07 %	1,67 %
Nos	36,69 %	60,97 %

Kamis, 27 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6953 gr	63,8707 gr
Wadah	54,6029 gr	53,7762 gr
Sampel Basah	10,0924 gr	10,0945 gr
Wadah+Sampel Kering	58,5667 gr	59,7678 gr
Sampel Kering	3,9638 gr	5,9916 gr
Berat Air	6,1286 gr	4,1029 gr
Moisture	60,72 %	40,64 %
Bottom+Minyak	110,3732 gr	112,8689 gr

Bottom	109,9814 gr	112,7529 gr
Minyak	0,3918 gr	0,1160 gr
Sampel Kering-Minyak	3,572 gr	5,8756 gr
O/WM	3,88 %	1,14 %
O/DM	9,88 %	1,93 %
O/Nos	10,96 %	1,97 %
Nos	35,39 %	58,20 %

Jumat, 28 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,4488 gr	63,8312 gr
Wadah	54,3996 gr	53,7880 gr
Sampel Basah	10,0492 gr	10,0432 gr
Wadah+Sampel Kering	58,3305 gr	59,6234 gr
Sampel Kering	3,9309 gr	5,8354 gr
Berat Air	6,1183 gr	4,2078 gr
Moisture	60,88 %	41,89 %
Bottom+Minyak	105,1165 gr	104,4293 gr
Bottom	104,6259 gr	104,2971 gr
Minyak	0,4906 gr	0,1322 gr
Sampel Kering-Minyak	3,4403 gr	5,7032 gr
O/WM	4,88 %	1,31 %
O/DM	12,48 %	2,26 %
O/Nos	14,26 %	2,31 %
Nos	34,23 %	56,78 %

Sabtu, 29 November 2025	Tankos	Ampas Tankos
Wadah+Sampel Basah	64,6701 gr	63,5921 gr
Wadah	54,6152 gr	53,5389 gr
Sampel Basah	10,0549 gr	10,0532 gr
Wadah+Sampel Kering	58,6256 gr	59,5485 gr

Sampel Kering	4,0374 gr	6,0096 gr
Berat Air	6,0175 gr	4,0436 gr
Moisture	59,84 %	40,22 %
Bottom+Minyak	104,8441 gr	110,1251 gr
Bottom	104,5312 gr	110,0097 gr
Minyak	0,3129 gr	0,1154 gr
Sampel Kering-Minyak	3,7245 gr	5,8942 gr
O/WM	3,11 %	1,14 %
O/DM	7,75 %	1,92 %
O/Nos	8,40 %	1,95 %
Nos	37,04 %	58,63 %

Lampiran 1.2 Data Laporan Harian Produksi.

Hari	TBS Olah (ton/hari)	Tankos (ton/hari)	Jam Olah (jam/hari)	Persentase Tankos (%)
1.	1.254,333	213,237	21	17,00
2.	1.176,476	200,001	19	17,00
3.	1.348,142	242,666	22	18,00
4.	1.414,760	282,952	24	20
5.	1.391,757	250,516	23	17,99
6.	1.368,156	232,587	23	17,00
7.	1.172,015	210,963	20	18,00
8.	1.014,779	182,660	17	17,99
9.	1.090,190	185,332	18	16,99
10.	1.301,781	234,321	22	18,00
11.	1.323,148	224,935	22	16,99
12.	1.413,676	254,462	24	18,00
13.	1.283,038	230,947	21	18,00
14.	1.289,489	219,213	21	16,99
15.	1.054,397	189,791	17	17,99

16.	1.358,787	230,994	22	17,00
17.	1.260,317	214,254	21	17,00
18.	1.453,382	247,075	24	17,00
19.	1.449,851	260,973	23	17,99
20.	1.464,796	249,015	24	16,99
21.	1.486,574	267,583	24	17,99
22.	1.377,049	234,098	22	16,99
23.	1.070,016	181,903	18	17,00
24.	936,327	168,539	15	18,00
25.	1.159,836	197,172	19	16,99
26.	1.160,165	197,228	19	16,99
27.	1.239,695	247,939	20	20
28.	1.207,371	241,474	20	19,99
29.	1.254,238	250,848	21	20,00
30.	1.300,732	260,146	21	19,99
31.	1.213,550	242,710	20	20
32.	1.353,691	270,738	22	19,99
33.	1.277,894	255,579	21	20,00
34.	1.044,405	208,881	17	20
Jumlah	42.897,633	7.740,104	708	611,86
Rata-rata	1.261,695	227,650	21	18,00

Lampiran 1.3 Data *Input & Output Empty Bunch Press/Jam*.

Hari	Kapasitas Mesin/Tankos Olah (ton/jam)	<i>Crude Oil Bunch Press</i> (ton/jam)
1.	10,154	0,0021
2.	10,526	0,0022
3.	11,030	0,0023
4.	11,789	0,0024

5.	10,892	0,0022
6.	10,112	0,0021
7.	10,548	0,0022
8.	10,744	0,0022
9.	10,296	0,0021
10.	10,650	0,0022
11.	10,224	0,0021
12.	10,602	0,0022
13.	10,997	0,0021
14.	10,438	0,0021
15.	11,164	0,0022
16.	10,499	0,0022
17.	10,202	0,0021
18.	10,294	0,0021
19.	11,346	0,0023
20.	10,375	0,0021
21.	11,149	0,0023
22.	10,640	0,0022
23.	10,105	0,0020
24.	11,235	0,0022
25.	10,377	0,0020
26.	10,380	0,0020
27.	12,396	0,0024
28.	12,073	0,0025
29.	11,945	0,0025
30.	12,387	0,0026
31.	12,135	0,0025
32.	12,306	0,0025
33.	12,170	0,0025
34.	12,287	0,0025

Lampiran 1.4 Data Minyak Jam, Hari, dan *Rendemen Empty Bunch Press*.

Hari	Minyak BP (ton/jam)	Minyak BP (ton/hari)	Rendemen BP (%)
1.	0,0008	0,0168	0,0079
2.	0,0007	0,0133	0,0066
3.	0,0008	0,0176	0,0073
4.	0,0007	0,0168	0,0059
5.	0,0006	0,0138	0,0055
6.	0,0010	0,0230	0,0099
7.	0,0009	0,0180	0,0085
8.	0,0005	0,0085	0,0047
9.	0,0007	0,0126	0,0068
10.	0,0006	0,0132	0,0056
11.	0,0003	0,0066	0,0029
12.	0,0012	0,0288	0,0113
13.	0,0007	0,0147	0,0064
14.	0,0005	0,0105	0,0048
15.	0,0002	0,0034	0,0018
16.	0,0011	0,0242	0,0105
17.	0,0006	0,0126	0,0059
18.	0,0005	0,0120	0,0049
19.	0,0003	0,0069	0,0026
20.	0,0003	0,0072	0,0029
21.	0,0006	0,0144	0,0054
22.	0,0008	0,0176	0,0075
23.	0,0004	0,0072	0,0040
24.	0,0007	0,0105	0,0062
25.	0,0008	0,0152	0,0077
26.	0,0010	0,0190	0,0096
27.	0,0007	0,0140	0,0056

28.	0,0007	0,0140	0,0058
29.	0,0006	0,0126	0,0050
30.	0,0007	0,0147	0,0057
31.	0,0008	0,0160	0,0066
32.	0,0007	0,0154	0,0057
33.	0,0009	0,0189	0,0074
34.	0,0005	0,0085	0,0041
Jumlah	0,0229	0,4875	0,2090

Lampiran 1.5 Data Kualitas TBS Olah.

Hari	Matang (%)	Lewat Matang (%)	Kurang Matang (%)	Mentah (%)	Janjang Kosong (%)
1.	71,77	-	-	23,91	4,32
2.	69,91	-	-	24,58	5,52
3.	64,71	-	-	28,67	6,62
4.	70,12	-	-	24,87	5,01
5.	67,47	-	-	26,59	5,94
6.	66,47	-	-	26,90	6,63
7.	69,93	-	-	22,60	7,47
8.	74,71	-	-	18,27	7,02
9.	76,71	-	-	17,26	6,03
10.	62,58	8,66	10,09	15,42	3,25
11.	68,88	9,13	10,53	8,41	3,06
12.	70,65	8,20	8,90	8,42	3,83
13.	66,09	9,33	10,62	9,67	4,28
14.	66,71	11,58	9,70	7,17	4,83
15.	66,86	8,26	9,67	10,29	4,92
16.	65,05	8,35	9,40	14,23	2,98
17.	68,21	7,27	7,41	12,08	5,03
18.	63,09	6,43	6,87	18,60	5,00
19.	61,38	8,37	8,06	19,18	3,01
20.	66,01	7,99	8,90	13,42	3,68
21.	66,03	7,22	7,30	15,63	3,82
22.	64,04	6,43	8,09	16,68	4,76
23.	76,73	-	-	18,83	4,43
24.	74,64	-	-	19,48	5,87
25.	73,24	-	-	21,15	5,61
26.	75,61	-	-	19,86	4,54
27.	66,75	-	-	26,23	7,02

28.	74,01	-	-	20,75	5,24
29.	74,80	-	-	19,23	5,97
30.	70,52	-	-	25,39	4,10
31.	78,07	-	-	18,52	3,41
32.	79,36	-	-	16,66	3,98
33.	77,02	-	-	18,33	4,65
34.	81,81	-	-	14,39	3,79
Jumlah	2.389,94	107,22	115,54	621,67	165,62
Rata-rata	70,29	8,25	8,89	18,28	4,87

Lampiran 1.6 Data *Oil Losses Sterilizer* dan *Tresher*.

Hari	Kondensat <i>Sterilizer</i> (%)	Brondolan JJK <i>Tresher</i> (%)
1.	0,80	-
2.	0,78	-
3.	0,80	-
4.	0,78	-
5.	0,77	-
6.	0,80	-
7.	0,80	-
8.	0,77	-
9.	0,80	-
10.	0,80	-
11.	0,80	-
12.	0,78	-
13.	0,80	-
14.	0,78	-
15.	0,80	-
16.	0,80	-
17.	0,79	-
18.	0,77	-
19.	0,80	-
20.	0,80	-
21.	0,80	-
22.	0,80	-
23.	0,80	-
24.	0,80	-
25.	0,78	-
26.	0,80	-
27.	0,78	-
28.	0,78	-
29.	0,74	-
30.	0,80	-
31.	0,76	-

32.	0,78	-
33.	0,80	-
34.	0,74	-
Jumlah	26,78	-
Rata-rata	0,79	-
Standar	0,80	-

Lampiran 1.7 Dokumentasi Pelaksanaan Penelitian.

