**TITLE: TITLE SHOULD BE INFORMATIVE, CONCISE AND CLEAR WITH NO ABBREVIATIONS TYPED IN UPPERCASE**

Department/Faculty, University, City, Postal Code, Province, Country

\*Email: Corresponding author email

**Abstract.** Abstract should be written in one paragraph, informative, and completely self-explanatory. The abstract should be between 150 and 200 words consist of objective(s), materials and method, important results or, major findings and conclusions. No literature should be cited.

**Keywords:** About 5 keywords that provide index references should be listed, separated by comma

1. **Introduction**

Introduction should provide a clear statement of the problem including background with relevant literature. The objective of the research should be clearly and expressively written. The introduction should be understandable to colleagues from a broad range of scientific disciplines.

Not less than 80% of the total cited literature should be in the form of papers published in national and international scientific journals. The suggested references are the most recent publications (within the last 10 years). Articles in preparation, unpublished observations and personal communication should not be included in the reference list but should only be mentioned in the article text.

The other references can come from textbooks, proceedings, or other valid scientific sources. Information sources that come from online sites (internet) are allowed if the sources are trustful and accountable, such as research institution sites, universities, and governments. Private sites (blogs or the likes) are not allowed as references.

1. **Methods**

Should be described in short but complete enough to allow experiments to be reproduced or verified. This should include materials and instruments/tools, protocol of research, research/experimental design, observed variables, technique for data collection and analysis. Procedures and analysis methods should also be concise, and methods in general use need not detail description. Previously published procedures should be cited and important modifications (if any) should be mentioned briefly.

1. **Results And Discussion**
   1. Description

The description of research results should be clearly and precisely written. Results should be sufficiently explained and can be supported by tables, graphics or figures. Discussion must concise and appropriately interpret the results. It should explain the meaning and usefulness of the finding as an answer to the research problem.

* 1. Figures and Tables

Figures, graphs and tables contain successive numbers and explanations (codes, abbreviations, and symbols) and are self-explanatory without reference to the text. Figure, graphs and tables are placed directly within the related paragraph. The titles should be in clear short statements, using valid international metric systems (e.g. m, kg, mol). Graphs should be original (not from photocopy or scan), using Microsoft Excel or Sigma Plot with maximum width of 8.5 cm. The number and letters within graphs and figures should be in 10-size font. Figures in photos (black-white or colors) should be printed on glossy post-card size paper submitted electronically in JPEG/TIFF format.

A close-up of a black and white photo

Description automatically generated

Figure 3. Morphology of B. gymnorhiza leaf extract nanoparticles

Table 1. Nutritional composition of experimental diet (100% DM)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Feed Ingredients | Composition | CP | Ash | CF | EE | NFE | TDN | NDF | ADF | Zn |
| % | | | | | | | | | Ppm |
| *P.*  *purpureum* | 7.61 | 1.27 | 1.11 | 2.89 | 0.31 | 2.03 | 3.93 | 4.55 | 2.92 | 1.12 |
| *Indigofera tinctoria* | 1.56 | 0.39 | 0.17 | 0.15 | 0.03 | 0.81 | 1.19 | 0.29 | 0.24 | ND |
| *Calliandra* | 2.52 | 0.49 | 0.14 | 0.27 | 0.01 | 1.61 | 1.89 | 0.59 | 0.50 | 0.18 |
| Soybean husk | 31.20 | 5.07 | 2.02 | 13.46 | 1.90 | 8.76 | 15.49 | 18.96 | 13.12 | 1.58 |
| Dried Kale | 29.64 | 2.46 | 3.47 | 6,44 | 0.57 | 16.70 | 18.70 | 12.45 | 11.17 | ND |
| Concentrate | 27.47 | 6.01 | 2.58 | 5.41 | 1.70 | 11.78 | 19.41 | 10.78 | 5.06 | 9.44 |
| Total | 100 | 15.69 | 9.49 | 28.62 | 4.52 | 41.69 | 60.61 | 46.23 | 33.01 | 12.32 |

Notes: *P. purpureum: Pennisetum purpureum cv. Mott*; Calliandra: Calliandra calothyrsus CP = crude protein, CF = crude fiber, EE = ether extract, NFE = nitrogen free extract dan TDN = *total digestible nutrient*, DDGS = distiller’s dried grain with soluble, ND = not detected.

This template provides writing styles that can be accessed from the styles gallery in the Toolbar. Authors can apply those styles to their paper by clicking on the style names.

1. **Conclusion**

This should represent a concise conclusion of the research and must answer the objective of the study.

1. **Acknowledgement**

**References**

It contains only a list of related literature cited by the authors in the paper. The reference list should be written in Vancouver styles.

1. Chali, B.U., Hasho, A. & Koricha, N.B. (2021) ‘Preference and Practice of Traditional Medicine and Associated Factors in Jimma Town, Southwest Ethiopia’, *Evidence-based Complementary and Alternative Medicine*, vol. 2021.
2. Dia, S.P.S., Nurjanah & Jacoeb, A.M. (2015) ‘Chemical Composition, Bioactive Components and Antioxidant Activities from Root, Bark and Leaf Lindur’, *Jurnal Pengolahan Hasil Perikanan Indonesia*, vol. 18, no. 2, pp. 205–19.
3. Hasnaeni, Wisdawati & Usman, S. (2019) ‘The Effect of Extraction Method on Yield Value and Phenolic Content of Beta-Beta (Lunasia amara Blanco) Bark Extract’, *Jurnal Farmasi Galenika* , vol. 5, no. 2, pp. 175–82.
4. Haq, M., Sani, W., Hossain, A.B.M.S., Taha, R.M. & Monneruzzaman K.M. (2011) ‘Total phenolic contents, antioxidant and antimicrobial activities of Bruguiera gymnorrhiza’, *Journal of Medicinal Plants Research*, vol. 5, no. 17, pp. 4112–8.
5. Saad, A.H.,dan Kadhim, R.D. 2011. Formulation and Evaluation of Herbal Mangroveo from Zizhipus spina Leaves Extract. International Journal of Reseach in Ayurveda & Pharmacy. 2(6): 1802-1806.
6. Mahataranti, N., Astuti, I.Y., dan Asriningdhiani, B. 2012. Formulasi Mangrove Antiketombe Ekstrak Etanol Seledri (Apium graveolens L) dan Aktivitasnya terhadap Jamur Pytirosporum ovale. Pharmacy. 2 (09):128-139
7. Handayani, S. (2021) ‘Aktivitas Antioksidan Ekstrak Hipokotil Bruguiera gymnorhiza Pada Pelarut Dan Fase Kematangan Yang Berbeda’, *Agrointek : Jurnal Teknologi Industri Pertanian*, 15(3), pp. 685–694. Available at: <https://doi.org/10.21107/agrointek>. v15i3.8477.
8. Seepana, R., Perumal, K., Kada, N.M., Chatragadda, R., Raju, M. & Annamalai, V. (2016) ‘Evaluation of antimicrobial properties from the mangrove Rhizophora apiculata and Bruguiera gymnorrhiza of Burmanallah coast, South Andaman, India’, *Journal of Coastal Life*
9. Verma, A., Gautam, S., Bansal, K., Prabhakar, N. & Rosenholm, J. (2019) ‘Green Nanotechnology: Advancement in Phytoformulation Research’, *Medicines*, vol. 6, no. 1, p. 39.
10. Suhesti, T.S., Fudholi, A., Martien, R. and Martono, S., 2017, Pharmaceutical nanoparticle technologies: An approach to improve drug solubility and dissolution rate of Piroxicam, *Research J. Pharm. and Tech.,* **10**(4), 7 p. https://doi.org/ 10.5958/0974-360X.2017.00176.7
11. Suhesti, T.S., Fudholi, A., Martien, R., 2016, Application of Simplex Lattice Design for the Optimization of the Piroxicam Nanosupensions Formulation using Evaporative Antisolvent Technique, *IJPCR*, **8**(5)Suppl: p.433-439.
12. Rizvi, S.A.A. and Saleh, A.M. (2018)‘Applications of nanoparticle systems in drug delivery technology’, *Saudi Pharmaceutical Journal*, 26(1), pp. 64–70. Available at:<https://doi.org/10.1016/j.jsps.2017.10.012>.
13. Laili, H.N. and Winarti, L. (2014) ‘Preparasi dan Karakterisasi Nanopartikel Kitosan-Naringenin dengan Variasi Rasio Massa Kitosan-Natrium Tripolifosfat’, *e-Jurnal Pustaka Kesehatan*, 2(2), pp. 308–313.
14. Sardoiwala, M.N., Kaundal, B. and Roy Choudhury, S. (2018) ‘Development of Engineered Nanoparticles Expediting Diagnostic and Therapeutic Applications Across Blood–Brain Barrier’, in *Handbook of Nanomaterials for Industrial Applications*. Elsevier, pp. 696– 709. Available at: <https://doi.org/10.1016/B978-0-12-813351-4.00038-9>.
15. Hoang, N.H., Thanh, T. Le, Sangpueak, R., Treekoon, J., Saengchan, C., Thepbandit, W., Papathoti, N.K., Kamkaew, A. & Buensanteai, N. 2022, ‘Chitosan Nanoparticles-Based Ionic Gelation Method: A Promising Candidate for Plant Disease Management’, *Polymers*, vol. 14, no. 4.
16. Sari, R., Paramanandana, A., Isadiartuti, D. & Rahayyu, A.M. (2020) ‘Pengaruh Jumlah Polimer terhadap Karakteristik Fisik dan Pelepasan Nanopartikel Fraksi Diterpen Lakton Sambiloto-Kitosan, *Jurnal Sains Farmasi & Klinis*, vol.7, no.2, p. 99.
17. Jain, A.K. and Thareja, S. (2019) ‘*In vitro* and *in vivo* characterization of pharmaceutical nanocarriers used for drug delivery’, *Artificial Cells, Nanomedicine, and Biotechnology*, 47(1), pp. 524–539. Available at: <https://doi.org/10.1080/21691401.2018.1561457>.
18. Danaei, M., Dehghankhold, M., Ataei, S., Hasanzadeh Davarani, F., Javanmard, R., Dokhani, A., Khorasani, S. & Mozafari, M.R. (2018) ‘Impact of particle size and polydispersity index on the clinical applications of lipidic nanocarrier systems’, *Pharmaceutics*, MDPI AG.
19. Rahat, I., Imam, S.S., Rizwanullah, Md., Alshehri, S., Asif, M., Kala, C. and Taleuzzaman, M. (2021) ‘Thymoquinone-entrapped chitosan-modified nanoparticles: formulation optimization to preclinical bioavailability assessments’, *Drug Delivery*, 28(1), pp. 973–984. Available at: <https://doi.org/10.1080/10717544.2021.1927245>.
20. Dewi, M.K., Chaerunisaa, A.Y., Muhaimin, M. & Joni, I.M. (2022) ‘Improved Activity of Herbal Medicines through Nanotechnology’, *Nanomaterials*, MDPI, *12*(22), 4073;  <https://doi.org/10.3390/nano12224073>
21. Mourdikoudis, S., Pallares, R.M. & Thanh, N.T.K. (2018) ‘Characterization techniques for nanoparticles: Comparison and complementarity upon studying nanoparticle properties’, *Nanoscale*, vol. 10, no. 27, pp. 12871–934.
22. Mahbubul, I.M. (2019) ‘Stability and Dispersion Characterization of Nanofluid’, *Preparation, Characterization, Properties and Application of Nanofluid*, Elsevier, pp. 47–112.
23. Modena, M.M., Rühle, B., Burg, T.P. & Wuttke, S. (2019) ‘Nanoparticle Characterization: What to Measure?’, *Advanced Materials*, Wiley-VCH Verlag.
24. Vogel, R., Pal, A.K., Jambhrunkar, S., Patel, P., Thakur, S.S., Reátegui, E., Parekh, H.S., Saá, P., Stassinopoulos, A. & Broom, M.F. (2017) ‘High-Resolution Single Particle Zeta Potential Characterisation of Biological Nanoparticles using Tunable Resistive Pulse Sensing’, *Scientific Reports*, vol. 7, no. 1.
25. Dian, L., Yang, Z., Li, F., Wang, Z., Pan, X., Peng, X., Huang, X., Guo, Z., Quan, G., Shi, X., Chen, B., Li, G. & Wu, C. (2013) ‘Cubic phase nanoparticles for sustained release of ibuprofen: Formulation, characterization, and enhanced bioavailability study’, *International Journal of Nanomedicine*, vol. 8, pp. 845–54.
26. Takechi-Haraya, Y., Ohgita, T., Demizu, Y., Saito, H., Izutsu, K. and Sakai-Kato, K. (2022) ‘Current Status and Challenges of Analytical Methods for Evaluation of Size and Surface Modification of Nanoparticle-Based Drug Formulations’, *AAPS PharmSciTech*,23(5), p.150. Available at: <https://doi.org/10.1208/s12249-022-02303-y>.
27. Martien, R., Adhyatmika, A., Irianto, I. D., Farida, V., & Sari, D. P. 2012. ‘Perkembangan Teknologi Nanopartikel Sebagai Sistem Penghantaran Obat’. Majalah Farmaseutik, 8(1), 133-144.