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Development and evaluation of liquid oral phytoformulation of *Phyllanthus amarus*

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Background: The leaves of *Phyllanthus amarus* (family: Euphorbiaceae) is reported to have good medicinal values such as antitussive properties. However the extract of the plant is very bitter, this constitutes a challenge in formulating an acceptable oral liquid dosage form. Therefore, the aim of this study is to develop a pleasant tasting liquid preparation of the extract by a taste masking technique as well as evaluate some physicochemical properties of the formulation that relate to its stability.

Methods: Six formulations (A - F) of the extract were prepared. To obtain the most stable and acceptable taste of the herbal syrup the physicochemical properties such as: Colour, taste, pH, specific gravity, as well as its antioxidant activity were evaluated.

Results and discussion: Formulation C which contains ethanol, citric acid, glycerin and syrup BP as the taste masking agents was adjudged to have the most acceptable taste and stability. Generally formulations C showed a pH of 6.61 ± 0.02 and 6.62 ± 0.04 , specific gravity of 1.24 ± 0.02 g/ml and 1.28 ± 0.01 g/ml immediately after formulation and after storage for 10 weeks respectively.

Conclusion: Formulating *P. amarus* extract with ethanol, citric acid, glycerin and syrup BP produced palatable and stable herbal syrup.

Biography

John A Avbunudiogba holds Masters of Philosophy degree in Pharmaceutics and Pharmaceutical Technology, 2013 (University of Benin, Nigeria); Doctor of Pharmacy degree (Clinical), 2005, (University of Benin, Nigeria); Master in Business Administration (MBA), 2003 (Delta State University, Abraka, Nigeria) and Bachelor of Pharmacy degree (BPharm), 1995 (University of Benin, Nigeria). Currently, he is a Lecturer with Delta State University, Abraka, Nigeria, Faculty of Pharmacy, Department of Pharmaceutics and Industrial Pharmacy. He is also pursuing academic PhD program in Pharmaceutics and Pharmaceutical Technology at University of Benin, Benin City, Nigeria. He has published more than 15 papers in Pharmaceutics and Phytomedicine in reputed journals.

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