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Development of antimalaria capsules of *Artemisia annua* L., a plant grown in Cameroon

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For several decades, the tea from *Artemisia annua* has been used as an antimalarial drug. Previous studies indicate that its activity is associated with the presence of a large number of active chemical substances including artemisinin, flavonoids, and essential oils. The use of tea is effective in clinical trials, although it is inconvenient for patients because of its bitter taste, chemical instability and the large volume required to be taken. This study aims at addressing organoleptic problems of herbal tea to enhance compliance, acceptability and stability of antimalarial drug. First, the ways of producing encapsulated forms from the plant were found out. Many tests were performed on the dry powder of leaves and stems. These included studying organoleptic characteristics, residual moist, ability to hydrate and to compact, the fluidity and the granulometric profile. Artemisinin was determined by thin layer chromatography/densitometry. Total flavonoids were assessed through a spectrophotometer. The capsules were produced in alignment with user acceptability. Other additional control tests were performed on the final product. The powder from these plant parts is grey-green with a characteristic of attractive odor, bitter taste, homogenous, fine and hygroscopic. The residual moisture (5.07%); the artemisinin content (0.5%(m/m)) and the flavonoids (0.43mg) are equivalent of quercetin/g of dry matter. The resulting capsules (250mg of active principle and 7.5 mg of magnesium stearate as the lubricant) are shiny and of a white-blue color. The average weight was 253.7±2.53 g and the decomposition time < 5 minutes. The water and artemisinin contents kept intact for 30 days after manufacturing. The artemisia annua-based antimalarial capsules developed met the requirements of the European Pharmacopoeia. The dosage form solves the organoleptic problems of herbal tea, thus improving compliance, acceptability and stability of artemisinin.

Biography

Chougouo Kengne R D has completed her PhD; she is a Pharmacist Officer and Researcher (CER) at the University Mountain Cameroon. She has published more than 20 papers in reputed journals.

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