



## Method development of extraction and identification of Nitidine, (Benzophenanthridine alkaloid) from the barks of *Fagara chalybea*.

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Original submitted in on 6<sup>th</sup> May 2016. Published online at [www.m.elewa.org](http://www.m.elewa.org) on 30<sup>th</sup> June 2016  
<http://dx.doi.org/10.4314/jab.v102i1.10>

### ABSTRACT

**Objective:** *Fagara chalybea* is an important medicinal plant belonging to the family Rutaceae. The plant is well known for its anti-malarial, anti-microbial and anti-cancerous activity, which has been attributed to the presence of benzophenanthridine alkaloid nitidine in the plants. The present work aims to develop a method of Nitidine extraction and Identification from the bark of *Fagara chalybea* Engl.

**Methodology and results:** A simple, rapid and sensitive HPLC method has been developed for the qualitative determination of nitidine in the dried bark of *Fagara chalybea* after extraction. The calculated yield is 2.28%. The retention time of nitidine in the methanol was 27.639 min, and then this time was 27.393 min in dichloromethane. The limit of detection and limit of quantization were found to be 2.18 and 7.29 µg/mL respectively, the correlation coefficient was 0.998.

**Conclusion and application of results:** The application of this method to the analyses of nitidine after extraction proved that the method is sensitive enough to detect low levels of analyses. To value traditional medicine, this method can be used as a tool for quality control of botanicals herbal formulations.

**Key words:** Nitidine, HPLC, *Fagara chalybea*, Malaria.