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### Formulation and Evaluation of Tablet From the Extract of *Persea Americana Mill.* for Nephrolithiasis

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**Abstract** : One of common kidney disease in Indonesia is nephrolithiasis or kidney stone. In the traditional systems of medicine, various type of plants and its species are used in the treatment of kidney stone. Avocado leaves (*Persea americana* Mill.) are the leaves of herbs that are useful to inhibit formation of calcium oxalate crystal in the rats' kidney. Objective of this study was to formulate a wet granulation method orally tablets of the vocado leaves (*Persea americana* Mill.) extract. All formulations met the requirements of the USP standard. Tablets were evaluated for weight variation, thickness, diameter of tablets, hardness, friability and disintegration time. The mass of the tablet in all formulas is has good flowability The difference in the amount of filler influence on hardness, friability and disintegration time of tablets. The friability increases with decreasing the concentration of Avicel PH101 and disintegration time of three formulas decrease with increasing concentration Amprotab.

**Keywords** : Nephrolithiasis, *Persea americana* Mill, formulation, tablet.

#### Introduction

Nephrolithiasis, or kidney stone, is the presence of renal calculi caused by a disruption in the balance between solubility and precipitation of salts in the urinary tract and in the kidneys. A kidney stone is a multifactorial disorder resulting from the combined influence of epidemiological, biochemical and genetic risk factor<sup>1,2</sup>. In General, kidney stones are composed of calcium, uric acid stones, stone struvit and cystine stones. About 75% of kidney stone are composed of calcium oxalate crystal<sup>3</sup>. The prevalence and incidence of kidney stone are reported to be increasing across the world<sup>4</sup>. According to Indonesian Primary Health Research in 2013, one of common kidney disease in Indonesia is a kidney stone. In the fact, the prevalence of the disease is estimated at 7% in women and 13% in the male<sup>5</sup>. The formation of kidney stones is affected by intrinsic and extrinsic factors. Intrinsic factors i.e age, sex, and heredity, while extrinsic factors, i.e the geographical condition, climate, eating habits, a substance contained in the urine, jobs, and more<sup>6</sup>.

The therapy in kidney stones is essential to remove stones, determine the type of stone, preventing damage nefron, control of infection, and reduce the obstruction. In comparison, there are alternative therapies are surgery through a conventional form of administering the drug and some step diet with certain medicinal plants<sup>7</sup>.

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