

**PREPARATION AND CHARACTERIZATION OF NANOPARTICLES HERB
(CENTELLA ASIATICA/GOTU KOLA) FOR COSMETICS APPLICATION**

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ABSTRACT

PREPARATION AND CHARACTERIZATION OF NANOPARTICLES

HERB(CENTELLA ASIATICA/GOTU KOLA FOR COSMETICS

APPLICATION

Centella Asiatica also commonly known as Gotu Kola or Pegaga is a slender, creeping plant that grows commonly in swampy areas of India, Sri Lanka, Madagascar, South Africa and the tropics. Gotu Kola has marvelous effects on the health. It has been used as a tonic for purification of blood and for promoting healthy skin. It has also has been found to have significant results in healing of skin, other connective tissues. Gotu Kola(pegaga) was used in cosmetics industry in form of bigger particle but in this research the nanopowder of Gotukola (pegaga) will be used for cosmetics applications. With Nanoparticles being so tiny, they form a greater surface area, increases the efficiency of absorption and thus better utilization of the mineral in question. The smaller the particles of any substance, the easier it is to be absorbed. The sample of Gotu Kola from DK Cosmetic that refer from industry sample and sample that produced using ball miller and from laboratory will be compare. The characterization of the Nanopowder of Gotu Kola was analyzed by means of FESEM, FTIR and PSD throughout the whole experimental process.

CHAPTER 1

INTRODUCTION

1.1 What are Nanoparticles?

One of the newest discoveries is the advent of Nanoparticles. Nanoparticles are tiny particles much smaller than most people are used to talking about. Nano in scientific terms means 1 to the billionth. Much is being talked about concerning Nanoparticles and industry. But Nanoparticles are now being used in medicine, health and skin care.[16]

SPF, an abbreviation for sun-protection factor, is a number such as 15, 30, or 50 that indicates how long a topical sunscreen remains effective on the skin. A user can determine the duration of effectiveness simply by multiplying the SPF by the length of time it takes for him or her to suffer a burn without sunscreen. Now it is possible to create higher SPF sun block protection