



Gas Chromatographic-Mass Spectrometric (GC-MS) Analysis of Marigold (*Tagetes erecta* L.) Flower Oil

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Abstract: The essential oil of the marigold (*Tagetes erecta* L.) flower petals was obtained from the local flower market, Moradabad, U.P. These flower petals were hydro distilled in a Clevenger apparatus to obtain the yellow coloured essential oil. The oil yield was 0.1% (w/w). This oil was collected and dried in a desiccator over calcium chloride. The dried oil was injected to a GC-MS. The results of GC-MS analysis revealed the presence of 27 chemical constituents in M-1 variety and 27 constituents in M-2 variety including monoterpenes, sesquiterpenes and triterpenes. Amongst all chemical constituents in M-1 variety Caryophyllene (56.79) was found in highest proportion followed by 1, 6-Cyclodecadiene, 1-methyl-5-methylene-8-(10.11) and in M-2 variety Caryophyllene (57.69) was found in highest proportion followed by 1, 6-Cyclodecadiene, 1-methyl-5-methylene-8-(9.19). The presence of such a variety of phytoconstituents might have attributed to the medicinal characteristics of this plant.

Keywords: Marigold, GC-MS, *Tagetes erecta* L, Caryophyllene

INTRODUCTION

About 75-80% of the world populace, mainly developed countries, relies upon home adult or herbal medicine for major health care as they are safer and have better suitability and compatibility with the human body. [1] The active principles of many drugs found in plants are secondary metabolites. The reason for choosing herbs as antibacterial sources is the development of a drug resistance in human pathogens against commonly used antibiotics. [2] *Tagetes* (Asteraceae) is a medicinal and ornamental plant. It is used for its nematocide, cosmetic and medicinal properties. The infusion of the plant has been used against rheumatism, cold and bronchitis, juice of leaves for ear-ache, leaves, etc. Its florets have been used for the treatment of eye diseases and ulcers and an extract of the roots credited as laxative. [3] According to the