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retention time. The major compounds identified are 1,2- Benzenedicarboxylic acid (70.69%), Hexadecanoic acid, methyl ester (9.42%), Octadecenoic Acid, methyl ester (5.70%),Di-isobutyl Phthalate (4.46%), Neophytadiene (3.71%), Hexadecenoic acid, methyl ester, (Z)- (1.84%), Phytol(1.60%).The antimicrobial and anti-malarial activity of 1,2- Benzenedicarboxylicacid,dibutyl ester was reported by ElijaKhatiworaet *al.*(2012). Hemaet *al*(2011) reported the antioxidant and anti-inflammatory activity of Hexadecanoic acid, methyl ester in ethanol extract of *Murrayakoenigii*. Octadecenoic Acid, Methyl ester is reported to have antimicrobial activity in the marine natural products (Gehanet *al*, 2009). Recent studies on Phytolexhibited cytotoxic, antioxidant, autophagy- and apoptosis-inducing, anti-inflammatory, immune-modulating, and antimicrobial effects. Neophytadiene is a good analgesic, anti-inflammatory, antimicrobial, and antioxidant compound. Majority of the compounds identified from this plant were medicinally valuable and can be used for the treatment of various human disorders.

KEYWORDS: *Memecylon randerianum*, Phytochemicals, GC-MS Chromatogram

REFERENCES

Ambasta SP., The Useful Plants of India, (National Institute of Science Communication, New Delhi) 2000, 365-366.

Hullatti KK, Ravi VR. Antimicrobial activity of Memecylonmalabaricum leaves. Fitoterapia. 2004, 75: 409-11.

Elija K., Vaishali B., Adsul MK., Deshpande NR and Kashalkar RV. Antibacterial activity of Dibutyl Phthalate :A secondary metabolite isolated from Ipomoea carnea stem. Phar. Res. 5 (2012)

Hema, R, Kumaravel, S and Alagusundaram. GC/MS Determination of Bioactive Components of MurrayakoenigiiJ. Am. Sci. 7 (2011) 27

Gehan MA, Hanan AE, Hassan AHI and OkbahMA. Marine Natural Products and Their Potential Applications as Anti-Infective Agents World Sci. J. 7 (2009) 872.

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PHARMACOGNOSTICAND PHYTOCHEMICAL EVALUATION OF ASHTACHOORNAM, AN AYURVEDIC FORMULATION

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INTRODUCTION

Standardization of herbal formulation is essential for the quality, purity, safety and efficiency of ayurvedic products. The study aims to analyse the quality of AshtaChoornum, a common ayurvedic formulation used against indigestion, bloating and flatulence using pharmacognostic and phytochemical methods.

METHODOLOGY

Marketed samples of AshtaChoornum were purchased from NagarjunaHerbal Concentrates, Thodupuzha, Idukki district. Control sample were prepared by powdering the ingredients separately and mixing them in proportion mentioned in the market sample. Pharmacognostic analysis and phytochemical screening for

secondary metabolites were carried out using standard procedures (Harborne, 1973; Wallis, 1985).

RESULTS AND CONCLUSION

Organoleptic evaluation showed fine textured yellowish –brown choornum with odour of Asafoetida and salty taste indicating their presence. The percentage of alcohol soluble extractive were 24.06% and 29.08% in market sample (MS) and control sample (CS) respectively. The water soluble extractive were 38.26% and 41.63% in MS and CS respectively. Percentage total ash were 15.35 and 17.96 in MS and CS respectively. Acid insoluble ash were 0.52% and 0.67% in MS and CS respectively. Moisture content were 13% in MS and 13.4% in CS. TLC of both samples showed the same banding pattern and UV fluorescence at 366nm. Bands with Rf 0.03 (red), 0.09 (blue), 0.54 (blue) and 0.72 (red) were obtained. Microscopic evaluation of market sample showed the presence of all ingredients *viz.*, *Cuminumcyminum, Piper nigrum, Piper longum, Zingiberofficinale, Trachyspermumroxburghianum*and*Carumcarvi* each with characteristic anatomical features. Phytochemical evaluation showed the presence of saponin,phenolic acids,flavonoids and alkaloids in both MS and CS while tannin and anthocyanins were absent in both. Paper Chromatogram of samples showed 6 bands in MS and 4 bands in CS. The bands with Rf 0.32(Spectral peaks 227nm and 270nm), Rf0.36 (Spectral peak 222nm) and Rf0.80 (Spectral peak 256nm) were common to both with same UV fluorescence and colour in 10% Sodium carbonate. The PC for phenolic acids showed the presence of vanillic acid and syringic acid in both samples. The results on the pharmacognostic and phytochemical evaluation of MS and CS of Ashtachoornum showed that the MS contained all ingredients as in CS and did not contain any adulterants or substitutes. The change inbanding patterns between the samples may be the result of degradation ortransformation during storage of the market sample.Similar works werebeing carried out since Thomas and Thaker(1986). The work finds relevance in the field of standardisation of Ayurvedic products and their acceptanceworldwide.

KEYWORDS: Pharmacognosy, Phytochemistry, AshtaChoornum, Ayurveda

REFERENCES

Harborne, J. B. (1973). Phytochemical Methods: A guide to modern techniques of plant analysis. Chapman and Hall Ltd. London.

Thomas, P.J. and H.J. Thaker (1986). Identification of ingredients of Hingivastakchurna. Indian Drugs. 23 (2): 585 – 589.

Wallis, T.E. (1985). Textbook of Pharmacognosy (5th ed). CBS Publishers and Distributors, New Delhi.