



### GC-MS, FT-IR Analysis and Anti Bacterial Study of Bioactive Compounds of Chundaivatral Chooranam - A Siddha Poly Herbal Formulation

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**Abstract:** Natural product or natural product structures continued to play a highly significant role in the drug discovery and development process. Chundaivatral Chooranam (CVC) is a Siddha Polyherbal formulation. It consists of equal quantity of dried *Solanum torvum*, *Murraya koenigii*, *Mangifera indica*, *Carunrox burghianum*, *Phyllanthus embilica*, *Punica granatum*, *Trigonella foenumgraecum*. In the siddha system of medicine, CVC has been used in non-specific diarrhoea. In the present study, the anti-bacterial study was conducted according to the agar diffusion method. Chloramphenicol was used as standard drug. The biological activities of CVC was evaluated for antibacterial properties against pathogens. The chemical constituents and the qualitative analysis of CVC was carried out using GC-MS and FTIR analysis for the identification of bioactive components. Results. Were expressed as mean value  $\pm$  standard error of the mean (SEM). It was observed that Chundai vatral Chooranam herbal formulation (1mg/mL) exerted effective anti-bacterial activity against *Salmonella typhi* ( $20 \pm 0.05$  mm) and *Shigella flexneri* ( $21 \pm 0.06$  mm) when compared with other bacterial strains respectively. Two major compounds have been identified and the major chemical constituents were 2H-1-benzopyran-6-OL,3,4-dihydro-2,5,7,8-tetramethyl-2-(4-8-12-trimethyl tetradecyl)-2H- -6-yl (MW-410) (b) 1 2 benzenedicarboxylic acid, Mono(2-Ethyl hexyl)Ester (Mw-278). The results of A FTIR analysis confirmed the presence of amide, alkynes, alkanes, carboxylic acids, alkenes, aromatics, aliphatic amines and alkyl halides compounds which showed major. The result of GC-MS and FTIR analysis of CVC revealed the existence of few compounds with potent biological activity, but tended to be present in the formulation even at low concentration levels.

**Key words:** ChundaivatralChooranam, GC-MS, anti-bacterial activity,FTIR.

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