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A reliable characterisation of Eugenol an anti-diabetic constituents from plant *Myristica Fragrans* by analytical technique

Mohamad Taleuzzaman¹, Sadaf Jamal Gilani¹ and Mohd. Aamir Mirza²¹Glocal University, India²Fulvic Limited, New Zealand

Today, there is a so many demand of herbal medicine in the global market but due to scarcity of authentic data regarding the parameters and methods employed for assessing the quality of medicines *Myristica fragrans* Houtt. Eugenol is present in many aromatic plants. It is reported 320 ppm is present in the seed of *Myristica fragrans*. It contains an active principle of drug identified and quantifies by chromatography method, and its structure was established by spectroscopic methods. To assess the quality of raw materials, proximate parameters like ash values (total ash, acid insoluble ash and water soluble ash), loss on drying and foreign matter were determined using standard pharmacopoeial methods as per WHO guidelines. A stock solution of Eugenol (1000µg/ml) was prepared by dissolving 10 mg accurately weighed Eugenol in methanol and diluting it to 10 ml of methanol. From this stock solution, a calibration curve is developed with a dilution series in range of concentration 0.2µg/ml -10µg/ml. From UV-Spectroscopy λ_{max} determined and it is found to be 278-280 nm by scanning 200-400 nm. For method development study prepared three quality control dilutions, samples of 2, 6 and 8µg/ml were prepared for studying precision, accuracy and ruggedness. Eugenol belongs to a class of phenyl propanoids (C₁₀H₁₂O₂). The IUPAC name of the compound is 4-Allyl-2-methoxyphenol having molecular mass 164.2g/mol with pKa=10.19 at 25°C. Apart from anti-diabetic properties, reported other pharmacological properties like hypocholesteremic, anti-inflammatory, anti-diarrheal, chemo preventive action, etc. and hence there is a great need to determine the amount of eugenol present in the different extracts. *In vivo* diabetic mice model studies with eugenol showed reduction in blood glucose levels by 38% likely due to inhibition of α -glucosidase while insulin and glycated hemoglobin levels remain unchanged. Diabetes Mellitus (DM) is a metabolic disorder of multiple etiologies characterized by elevated levels of blood glucose resulting from defects in insulin production. The proposed characterisation is helpful for further study in instrument like HPLC and LC-MS/MS.

zzaman007@gmail.com

Study of some medicinal plants of Rajasthan used by tribes for different diseases

Rekha Vijayvergia

University of Rajasthan, India

Around seven percent of tribal population of India lives in Rajasthan. Rajasthan has rich cultural diversity and biodiversity. Ethno botany can be defined as the total natural and traditional relationship and the interactions between man and his surrounding plant wealth from times immemorial, due to sheer, necessity, intuition, observation and experimentation. Medicinal plants are valuable and are used for the production of various drugs. These plants produce a high diversity of natural products or secondary metabolites like Mahanimbicine, Andrographine, murrayaline, lupeol and limonin, etc., with a prominent function in the protection against diseases like diabetes, kidney stones, osteoporosis, tumors, ophthalmia, leucorrhoea, bronchial asthma, diarrhea, cancer, etc. The present report gives a count of traditional medicinal uses of common medicinal plants of Rajasthan. A total of 18 plant species belonging to 13 families are reported, that are being used for various purposes. For each plant necessary information like botanical name, family of plant species, local name and medicinal uses are given.

rekhavijay1367@gmail.com