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A Chemical Composition Obtained from some Estract of Cassia Angustifolia and its Chemical Study

Pramod Kumar Singh* Pushkar Pratap Tiwari**
Associate professor Department of Chemistry Kamla Nehru Institute of Physical & Social Sciences Sultanpur. U.P., India

ABSTRACT
The antioxidant and activity of essential oils, methanolic and chloroform extracts from different parts of Cassia angustifolia of study on activity of Antioxidant activities were measured employing free radical[2], and 2-diphenyl- 1-picrylhydrazy[1] (DPPH), scavenging ability of the samples. Total phenolic substance was measured for only methanol extracts. The extracts showed moderate free radical scavenging activity. Methanolic leaf extracts showed stronger inhibitory activity against DPPH redical with an SC_{50} values (the antioxidant concentration to achieve 50% radical scavenging) of 29 ug/mL

Keywords : DPPH, Cassia angustifolia, Methanolic leaf

I. INTRODUCTION
Cassia angustifolia represented with eight native species of India[1] They are all rhizomatous and their rhizomes are exported by the local plant collectors. Flowers together with the upper part of L. are used in Anatolian folk medicine against wound . Cassia angustifolia not L., is a poisonous plant, is used in India. Its non poisonous effect reduces after drying[4]. is a rhizomatous perennial herb, distributed in India has two subspecies, A. *Cassia angustifolia* and (Boiss.) Davis[5]. Several Anemone spieces are naturally distributed in Rize, India where the most famous and the most expensive honey type. Cassia spieces are found in and are expected to be an important floral source South India.

Extraction of antioxidants, which can inhibit or delay the oxidation of an oxidizable substrate in a chain reaction, therefore, appear to be very important in the protection of many diseases[1,6] Several antioxidants compounds synthesized by plants as secondary products, especially phenolics, could play a major role in enhancing the antioxidant system, since they behave as reactive oxygen species scavengers, metal chelators and enzyme modulators[7]. Several antioxidant methods have been developed to evaluate the antioxidant capacity of the biological samples, the most widely used antioxidant methods involve the generation free radicals and their concentration is monitored as the present antioxidants scavenge them. Radical formation and the following scavenging are applied in DPPH measurements.
The aim of this study was to determine biological activities of the essential oils, methanolic and chloroform extracts of the flowers, stems and leaves of the plant to elaborate and evaluate their potential medicinal use.

II. MATERIALS AND METHODS
Plant Material
A *Cassia angustifolia* plants at flowering stage were collected from sultanpur, alpine meadows of Nanital.

Isolation of the Essential Oil- The essential oil of air-dried powders was obtained though hydro-distillation (15g of powdered plant material in 1 L pure water, 3 j) by using a Clevenger-type apparatus with ice bath for cooling system. The oils were taken by dissolving in high performance liquid chromatography (HPLC)-grade n-hexane (0.5mL) and kept at 4 ^{0}C at CDRI Lucknow in a sealed brown vial until tested for biological activities.

Preparation of the Methanol and chloroform Extracts- Dried and powdered samples (25 g) were extracted successively with 250 mL of methanol and chloroform by using a Soxhlet extractor for 6 h at a temperature not exceeding the normal boiling point of the solvent. The extracts were filtered using Whatman No 1 filter paper and then evaporated to dryness at 40 ^{0}C using a rotary evaporator. The methanolic extracts were dissolved in dimethy1 sulfoxide (DMSO) and the chloroform extracts were dissolved in chloroform: DMSO solvent mixture (9:1) for antioxidant tests.

Antioxidant activity- The DPPH Free redical scavenging activity of all the extracts and essential oils was measured according to the well-Known DPPH. Test with a slight modification[7]. Briefly, 750 uL sample of various concentrations (0.3, 0.15, 0.075, 0.0375, and 0.01875 mg/mL) was added to 750 uL 50 uM ethanolic DPPH solution. Foolwing a 50 min incubation period, at room tempereature for methanolic extracts and in an ice bath for chloroform extrats nad essential iol solutions, absorbance was read at 517 nm. Two different blanks, solvent blank being a mixture of hexane-ethanol (1:1) and sample-blank containing 750 uL extrct and 750 uL solovent, were used. Buty lated hydroxytoluene (BHT) and quercetin, both stable antioxidants, were used as synthetic reference. Lower absorbance of the reaction mixture indicates higher freee radical scavenging activity. SC $_5$ (ug/mL), the antioxidant concentration to achieve 50% radical scavenging, which was calculate from the curves drawn by plotting absorbance valuses for corresponding sample concentrations, was used to evaluate radical scavenging activities of the sample.

The results can be considered as the first detailed document on the in vitro and antimicrobial activity and chemical composition of A. *narcissiflora* subsp. *narcissiflora.* Particularly, the methanolic extracts of A. *narcissiflora* subsp. *narcissiflora* can be potentially useful source of natural antimicrobial agents and antioxidant principles to be used as nutraceuticals as well as in herbal medicine.

III. REFERENCES

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