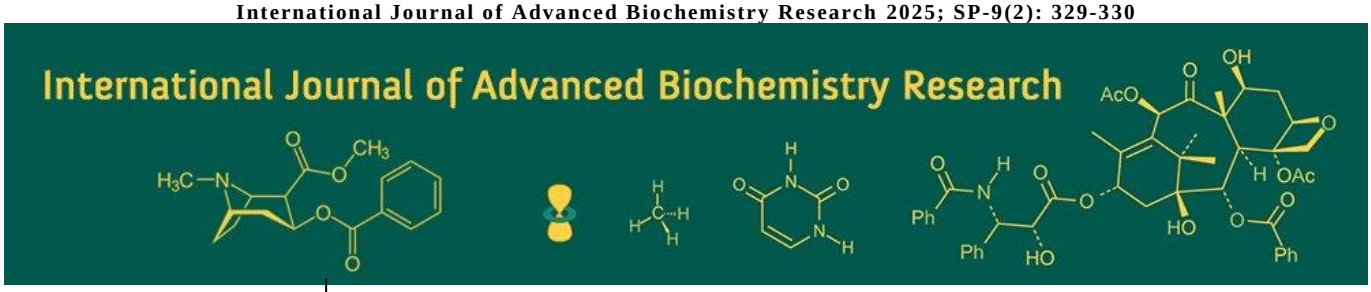

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Qualitative phytochemicals investigation of *Costus pictus* plant leaves extract

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Abstract
Natural products are an excellent source of complex chemicals, possessing a wide variety of biological activities and having a great potential therapeutic value. Phytochemical analysis method used to identified Alkaloid**,** Glycosides, Steroids, Flavonoids, Tanins and Saponin from leaf extract of *Costus pictus* plant. The plant is used in India as an herbal cure for diabetes hence commonly called as "Insulin plant". Phytochemical screening was performed with methanol, ethyl acetate and Water. Medicinal plant screened was found to be rich in secondary metabolites which are used in traditional medicine to combat and cure various diseases. The medicinal value of these plants lies in some chemical substances that produce a definite physiological action on the human body.

Keywords: Phytochemical, medicinal plant, *Costus pictus* and drug discovery

Introduction
Costus pictus is a medicinal herb well known for its therapeutic properties commonly known as "Insulin plant," is a traditionally used medicinal herb. The Costus plants are a member of the family "Costaceae". Herbal therapies for diabetes mellitus are in high demand due to the increasing awareness of the risks associated with oral hypoglycemic medications. Traditional and folk medical practices use a broad range of plant based medications to treat and control diabetes mellitus [4]. Along with the identification of trace elements like K, Ca, Cr, Mn, Cu, and Zn. stimulates the antidiabetic property. Insulin plant contains a range of phytochemicals viz of steroids flavonoids, flavonoids, glycosides alkaloids, terpenoids, tannins, saponins, carbohydrates, and proteins. It is traditionally used in India to control diabetes [3, 5, 18]. Natural products derived from plants on a large scale and attracted by many researchers due to less or no side effects. *C. pictus* consists of various therapeutic properties, anti-diabetic mainly along with anti-bacterial, anticancerous, diuretic, anti-helminthic, anti-oxidant, anti-fertility, anti-glycation, etc Present investigation studied qualitative screening test of Phytochemical.

Materials and Methods
A. Collection of plant material: *C. pictus* plant were collected from the Botanical Garden, Agriculture College, Loni in Maharashtra.

B. Preparation of plant extract: 10 gm of Healthy C. *pictus* plant leaf powder was added to 150 ml of different solvents like methanol, ethyl acetate and Water. Stirred constantly for 48 hours on shaker. The extracts were then filtered using Whatman filter paper. The filtrate was then stored in refrigerator until use.

C. Phytochemical screening: The leaf of *C. pictus* for the detection of various phytochemical constituents. Plant material was extracted with solvents such as methanol, ethyl acetate and Water. Preliminary phytochemical screening was carried out to identify the secondary metabolites present in the various extracts of leaves with the analytical procedures.

Results and Discussions
Leaf of *Costus pictus* were extracted with different solvent such as methanol, ethyl acetate and Water. Leaf were screened qualitatively for various phytochemicals including Alkaloid**,** Glycosides, Steroids, Flavonoids, Tanins and Saponin.

Qualitative screening of *C. pictus* leaf extracts showed the presence of almost all the studied phytochemicals except Tanins. High concentration of Alkaloid and Flavanoid found in Methanol solvent**.** The methanol extract was found to contain the highest number of phytochemicals. Phytochemical Saponin test also presence result shown in Methanol and water solvent.

Table 1: Phytochemical Tests leaves extracts of *Costus pictus* plant

Sr. No	Phytochemicals Test	Solvent		
		Methanol	Ethyl Acetate	Water
1	Alkaloid	++	+	+
2	Glycoside	+	+	+
3	Steroid	+	+	+
4	Flavanoid	++	+	+
5	Tannin	-	-	-
6.	Saponin	+	-	+
Presence (+), high concentration (++), Absence (-) of phytochemicals				

Summary and Conclusions

Phytochemical analysis was done to investigate the major active phytochemical present in *Costus pictus*. Further research and efforts to utilize the phytochemicals present will help great significance in the herbal drug industry and also human welfare.

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