INTRODUCTION

Ultra violet radiation (UVR) exposure to skin causes skin disorder such as squamous cell aging immune depression of skin and photodermatose. In recent year herbs have been used in the medicines to treat different skin disease. When skin surface absorb ultraviolet radiations free radicals or reactive oxygen species are produced having adverse effect such as sunburns, wrinkles, lower immunity against infection premature aging and cancer hence protective and preventions are required from ultra violet radiation. 1-4. The UV radiations are categories in the three categories as such UV-C(200-280nm), UV-B(280-320nm), UV-A(320-400nm) from above three categories of UV radiation , UV-C radiation can cause severe biological damage to skin as compared to UV-B and UV-A radiation. But UV-C radiations are filtered by the ozone layer, so UV-B and UV-A radiation is currently the reason for causing skin cancer, so as to avoid this sunscreen agents are used which act as a protective agents against harmful UV radiations 5-12. Cassia fistula L. (Caesalpinioideae), a very common plant known for its medicinal properties is a semi wild Indian Labernum Known as the golden shower tree. It has great therapeutic implication in India system of medicine. The extracts derived from different parts of this plant have anti-bacterial, antipyretics, analgesic, anti-inflammatory and hypoglycemic properties and are used in the treatment of various disorders such as haematemesis, rheumatism, skin diseases , eye and liver ailments It is also one of the ingredients of the preparations known as pilex, Purian for piles and detoxifier respectively5. Phytochemical investigation of crude plant extracts shown the presences of bioactive principles in the plant parts like flowers, roots, fruits, seeds, leaves and barks etc. Phytochemical are non-nutritive plant chemicals that have protective or disease preventive properties. Various parts of these plants are known to be important sources of secondary metabolites mainly phenolic
compounds such as epicatechin, procyanidin, biflavonoids, rhein glycosides, from the leaves.\textsuperscript{13-18}

\textbf{Figure 1: Whole Plant of Cassia Fistula}

\textbf{MATERIAL AND METHODS}

The leave \textit{Cassia Fistula} L. was collected from satara, Maharashtra, washed properly and shade dried. The dried leaves powdered and used for the extraction purpose. The specimens were identified by in the department of botany Y.C. college satara.

\textbf{Extraction Method:}

The pulverized dried leaves \textit{Cassia Fistula} L. were extracted with ethanol using soxhlet Apparatus. Ethanol extract were filtered & evaporated to dryness.\textsuperscript{19-21}

\textbf{Photochemical Examination:}

The general flavonoid identification tests were performed on the extract.

Test 1: To dry extract, add 5ml of 95% ethanol, few drop of concentrated hydrochloric acid and 0.5 g of magnesium turning. The finally pink color observed. (Shinoda test)

Test 2: To a small quantity of extract, add lead acetate solution, it shows yellow colored Precipitate is formed.

\textbf{Anti-solar activity:}

\textbf{Preparation of sample:}

The sample preparations were carried out by 10 mg % w/v concentration dissolving into the 100 ml of distilled water (10 mg/100ml). Evaluation of anti-solar activity the UV absorption spectrum for extract was obtained in range of 200-400 nm using Double beam UV-Vis Spectrophotometer Model Shimadzu-1700.

\textbf{RESULTS}

The UV scanning absorption spectra of the extract showed very strong absorption at 0.265 A with \(\lambda\) max at 268 nm. The graph extract also showed a plateau in range of 300-400 nm with moderate absorbance of \(~0.35-0.13\)

\textbf{DISCUSSION}

Quantitative investigation showed the presence of flavonoids in the extract. Flavonoids are well known for their pharmacological activities. It absorbs light and helps to protect photosensitive substances in leaves. Absorption of UV radiation is the main characteristics feature of the flavonoids. The results showed strong to moderate absorption of UV radiation and this ability is due to the presence of flavonoids.

\textbf{CONCLUSION}

The ethanolic extract of leaves have ability to absorb UV radiation. The proved anti -solar activity of the plant shows its importance and prophylactic utility in anti-solar formulation. This will be a better cheaper and safe alternative to harmful chemical sunscreens that used nowadays in the industry.
REFERENCES


