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Anti Oxidant Activity of Annabethi Chendharam by Hydroxyl Radical Scavenging Activity

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Abstract

Annabethi chendharam is a classical siddha drug. It is used for mainly in anaemia and cancer disease. This assay is based on the qualification of the degradation product of 2 deoxy ribose by condensation with TBA (Elizabeth and Rao, 1990). Hydroxyl radical was generated by the Fe^{3+} - ascorbate- EDTA - H_2O_2 system (The Fenton reaction).

Keywords: Annabethi chendharam, anti oxidant, classical siddha drug

Introduction

Annabethi chendharam is a classical siddha drug. It is used for anaemia, edema, ascites and cancer disease. It has a good anti oxidant property because in presence of iron and *Semecarpus anacardium*. All over the world traditional systems of medicine have become significantly more popular because of the curative property. This type of medicines having some advantages like better stability, lower dosage and sustained availability.

Materials and Methods

Different concentration of extracts 12.5-200 μ L from the stock solution mixed with 500 μ L reaction mixture((2 deoxy 2 ribose (2.8mM), $FeCl_3$

(100 μ m), EDTA (100 μ m), H_2O_2 (1.0mM), ascorbic acid (100 μ m) in KH_2PO_4 - KOH buffer (20 mM pH 7.4))was made up to a final volume of 1 ml .A control without the test compound, but an equivalent amount of distilled water was taken. After incubation for 1hour at 37°C, add 1ml of 2.8% TCA, then 1ml 1% aqueous TBA was added and the mixture was incubated at 90°C for 15 minutes to develop the colour. After cooling the absorbance was measured at 532nm against an appropriate blank solution.

Calculation

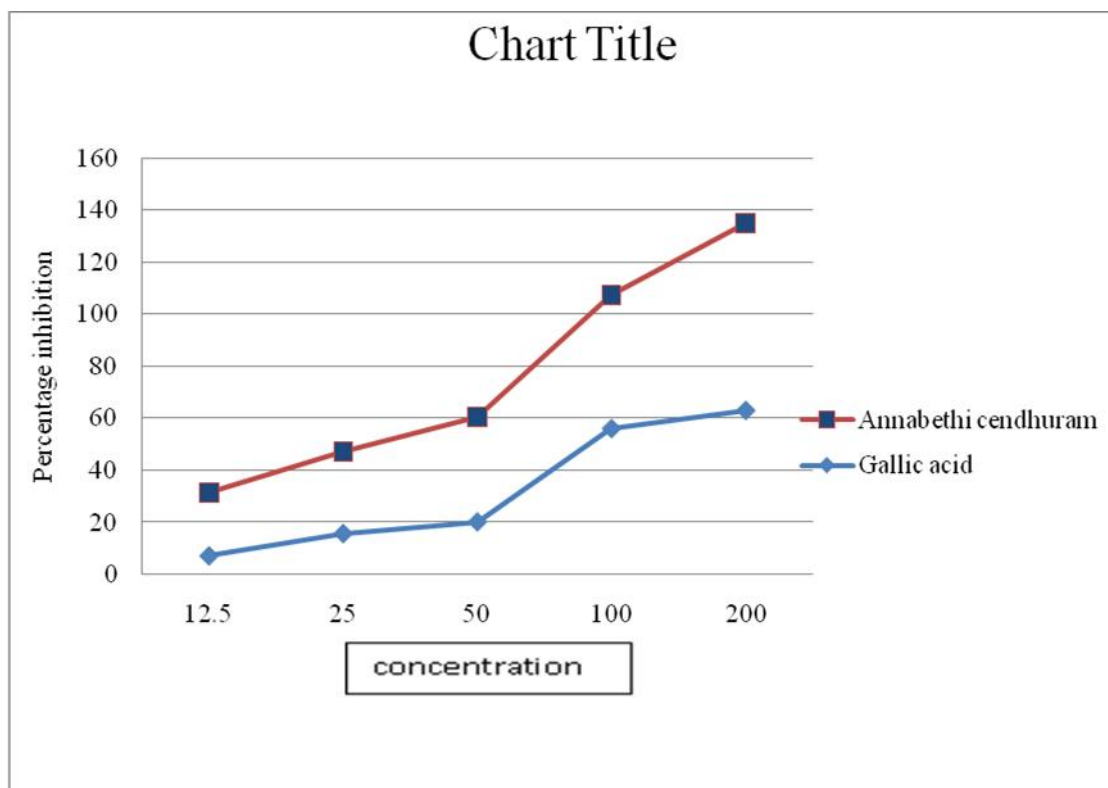
$$\% \text{ inhibition} = \frac{\text{control-test}}{\text{control}} \times 100$$

Gallic acid standard

Concentration($\mu\text{g/ml}$)	Absorbance	Percentage of inhibition
Control	0.562	
125	0.521	7.29
250	0.473	15.83
500	0.448	20.28
1000	0.247	56.04
2000	0.208	62.98

Results

Concentration($\mu\text{g/mL}$)	Absorbance	Percentage of inhibition
Control	0.5497	0
Sample code: AC		
12.5	0.4175	24.05
25	0.3775	31.33
50	0.3291	40.13
100	0.2685	51.16
200	0.1548	71.84



IC 50 Value – AC- 1034.63 $\mu\text{g/mL}$ (Calculated using ED50 PLUS V1.0 Software)

Discussion

Annabethi chendhuram is a herbo mineral preparation composed of Annabethi, vediuppu, serankottai (*Semecarpus anacardium*) which are all known to exert rejuvenator immunomodulator, anti oxidant and free radical scavenging activities. Many drugs are said to protect against oxidative damage but they have adverse drug reactions. An alternative solution to the problem is to consume antioxidants from this type of classical siddha drug.

Conclusion

The results obtained in this study it can be concluded that the Annabethi chendhuram possess convincing anti oxidant property.

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