

PHYSICAL CHARACTERIZATION OF THE TINCTURES OF *FICUS RACEMOSA* L.

SUBHASH C. MANDAL PULOK K. MUKHERJEE, M. PAL and B.P. SAHA

Department of Pharmaceutical Technology, Faculty of Engineering & Technology,
Jadavpur University, Calcutta – 700 032

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ABSTRACT: *Tinctures of Ficus racemosa Linn leaves were prepared by maceration process. 70% alcohol of 21 days maceration showed maximum total solid 2.07% deep greenish brown colour and of 7.1 pH.*

INTRODUCTION

Ficus racemosa, is a well known tree, distributed throughout the India. The root of Ficus racemosa is used in dysentery and diabetes, leaf is used in dysentery bilious affection and as a mouth wash in spongy gum¹⁻⁴. Bark is used in dysentery menorrhagia, as a mouth wash in spongy gum and in haemoptysis, fruit is used as stomachic, carminative, also used in dysentery, diarrhea and in diabetes. It's milky juice is used in piles and diarrhea¹⁻⁴. The aim of present investigation is to find out the exact strength of alcohol require to get maximum soluble constituents in the extractive, to study the possible changes of pH during the maceration process and maximum days required for proper extraction.

MATERIAL AND METHODS

The leaves of *Ficus racemosa* were collected from hetyasole, Bankura district, West Bengal and identified by botanical survey of India shibpur, Howrah. The voucher specimen is kept in our laboratory for futher reference. After collection they were dried under shade and crushed by grinder and passed through 40 mesh sieve

and stored in well closed container for further use Thirty amber colour bottles of 200 ml capacity were taken. 100 ml of alcohol of different strength: 10,20 ,30 40,50,60,70,80,90 percent and dehydrated alcohol were proured in different three sets of eight bottles each containing 10 g of crude powdered drug.

Ten bottles of each set containing the crude drug with ten different strengths of alcohol were kept for maceration for 7,14 and 21 days respectively, After requisite time all the materials were filtered through G-4 sinter glass crucible under reduced pressure.

The total soild, pH and colour of the prepared tinctures macerated for 7, 14 and 21 days respectively were studied.

RESULT

The three sets of prepared tincture showed different colouration with 7, 14 and 21 days of maceration in shown in Table 1. The pH of prepared tinctures by different strength of alcohol were noted and shown in Table 2.

The total solid contents of prepared tincture were determined and are shown in table 3.

DISCUSSION

The colour of tinctures changes with changing the strength of alcohol. This is due to the variation of the soluble constituent extracted by the particular strength of alcohol and shown in table 1.

The variation of pH of the prepared tincture and different days of maceration were quite distinct. This change may be due to the variation of the total solid and the presence of chemical constituents in the tincture.

The total solid content is maximum at 70 percent v/v of alcohol after 21 days of maceration and the solid content decreased on increasing the alcohol strength

The objective of this investigation was to find out the appropriate strength of alcohol required to isolate the maximum amount of

soluble constituents present in the crude drug.

Firstly it is seen from table 3 that 70 percent alcohol shows yield of 2.07 percent (w/w) of total solid but dehydrated alcohol shows yield of only 1/39 percent (w/v) of total solid where as duration of maceration are same for each batch.

Secondly it is seen from table 3 that the highest percent of total solid was obtained in all the alcohol strength of the third set of 70 percent content when allowed to macerated for 21 days. The lowest total solid content is in the tincture of 10 percent v/v alcohol and on 7,14 and 21 days of maceration.

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Table 1: Colour description of the tinctures

Strength of alcohol (%v/v)	Colour obtained during (07/14/21) days
10	Brownish
20	Brownish
30	Dark brown
40	Brownish black
50	Light brownish green
60	Greenish brown
70	Deep greenish green
80	Deep green
90	Greenish black
Dehydrated	greenish

Table 2: pH of the tinctures of different alcohol strength

Alcohol Strength (% v/v)	PH		
	07 days	14 days	21 days
10	7.8	7.8	7.9
20	7.6	7.7	7.7
30	7.5	7.6	7.6
40	7.5	7.4	7.4
50	7.4	7.3	7.3
60	7.4	7.5	7.2
70	7.1	7.2	7.2
80	6.8	6.8	6.7
90	6.5	6.4	6.3
Dehydrated	6.2	6.1	6.0

Table 3: Total solid content of the tinctures at different alcohol strength

Alcohol Strength (% v/v)	Total solid* (% w/v)		
	07 days	14 days	21 days
10	0.60	0.78	0.91
20	0.72	0.81	0.97
30	0.89	0.94	1.02
40	0.99	1.09	1.12
50	1.03	1.25	1.31
60	1.19	1.40	1.55
70	1.41	1.61	2.07
80	1.38	1.47	1.81
90	1.22	1.31	1.58
Dehydrated	1.17	1.25	1.39

* Each data of total solid content is an average of three readings.

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