



DEVELOPMENT OF QUALITY CONTROL PARAMETERS OF AN AYURVEDIC FORMULATION: TALISADI CHURNA

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ABSTRACT

Ayurveda is known as the oldest healing science. Talisadi Churna is important in management of digestive and respiratory disturbances of all body types. It is having different ingredient which are having a wide range of uses in health maintenance. The quality control of Talisadi churna which will assist the regulatory authorities, scientific organizations and manufacturer in developing standards.

Talisadi churna (TC1) is consist of the fine powders of Talisapatra, Dalchini, Ela, Pippali, Shunthi, Vamsa lochna in the ratio of 1:1. It is best remedy in acute, chronic and allergic bronchitis. It is very useful in acute exacerbation of asthma. In chronic asthma it reduces the frequency and severity of asthmatic attack. Talisadi churna sample was prepared in laboratory according to Ayurvedic formulary.

This was evaluated by comparative analysis with the marketed formulations (TC2&TC3) for their extractive values (ethanol and distilled water), Micromeretic parameters (bulk density, true density, angle of repose and Carr's Index) and Phytochemical evaluation. The extractive values of Talisadi churna (TC1, TC2 and TC3) in water and ethanol is (12.15,11.33,11.18 and 12.92,11.54,11.35) respectively indicating the presence of almost polar and semi polar constituents in Talisadi churna. These analytical findings and data analysis reveals that parameters like Extractive values, Presence of Phytoconstituents and micromeretic parameters all remains in close proximity for each batch of the Talisadi churna.

KEY WORD: Quality control, Ayurvedic formulation, Talisadi churna.

INTRODUCTION

Ayurveda, the health care system indigenous to India, has an impressive evolutionary history that spans a period of many thousands of years. With the advent of biomedicine, Ayurveda was relegated to the background and there was a time when it looked as though the final word had been said about it. Recently, Ayurveda is getting worldwide attention albeit the nature of the role it can play in contemporary health care scenario is not well defined.¹

Talisadi Churna is an Ayurvedic medicine, in herbal powder form, used in the Ayurvedic treatment of respiratory and digestive conditions. Talisadi churna is a classical preparation from the text Astanga Hridaya-Rajayakshma Chikitsa. It is best remedy in acute, chronic and allergic bronchitis. It is very useful in acute exacerbation of asthma. In chronic asthma it reduces the frequency and severity of asthmatic attacks.² Talisadi churna having ingredients of talisa patra (*Abies webbiana*), pippali (*Piper longum*), maricha (*Piper nigrum*), shunthi (*Zingiber officinale*), dalchini (*Cinnamomum zeylanicum*), ela (*Elettaria cardamomum*), vamsa lochna (*Bambusa arundinacea*).³

MATERIALS AND METHODS

Talisadi churna named TC1 (Lab Preparation) was prepared accordance with Ayurvedic Formulary of India. This was evaluated by comparative analysis with the marketed formulations of Baidyanath and Dhootapeshwar named as TC2 and TC3 respectively.

Organoleptic evaluation

Organoleptic evaluation was used for identification of sensory characteristics like colour, odour, taste, size, texture and fracture.⁴

Water-soluble Extractives

Talisadi churna was dispersed in 100 ml of water and allowed to stand for 24 hours with occasional shaking and filtered and water was evaporated. The above procedure was performed for each batch and the dried water extractive (Wext) of TC1, TC2 and TC3 were weighed.⁵

Ethanol Soluble Extractives

Talisadi churna was dispersed in 100 ml of ethanol and allowed to stand for 24 hours with occasional shaking and filtered and ethanol was evaporated. The above procedure was performed for each batch and the dried ethanol extractive (Eext) of TC1, TC2 and TC3 were weighted.^{6,7}

Micromeritics parameter

The physical characteristics of the formulation were determined for the true density, bulk density and angle of repose in accordance with method given in Pharmacopoeia of India.^{6,7}

Thin Layer Chromatography (TLC)

The adsorbents like silica gel G is coated to a thickness of 0.3mm on clean TLC plates which are than activated at 105°C for 30 min and used. The selection of mobile phase depends upon the type of constituents to be analysed. The resolved spots are revealed by spraying with suitable detecting agent.⁸

$$R_f = \frac{\text{Distance travelled by solute}}{\text{Distance travelled by solvent}}$$

Fluorescence analysis

Fluorescence characters of powdered plant material with different chemical reagents were determined under ordinary light. 9.1 mg of the Polyherbal sample was taken in a glass slide and treated with various reagents for the presence of their fluorescence characters.⁸

Fig1: Micromeretic evaluation parameters of Talisadi churna (TC1, TC2, TC3)

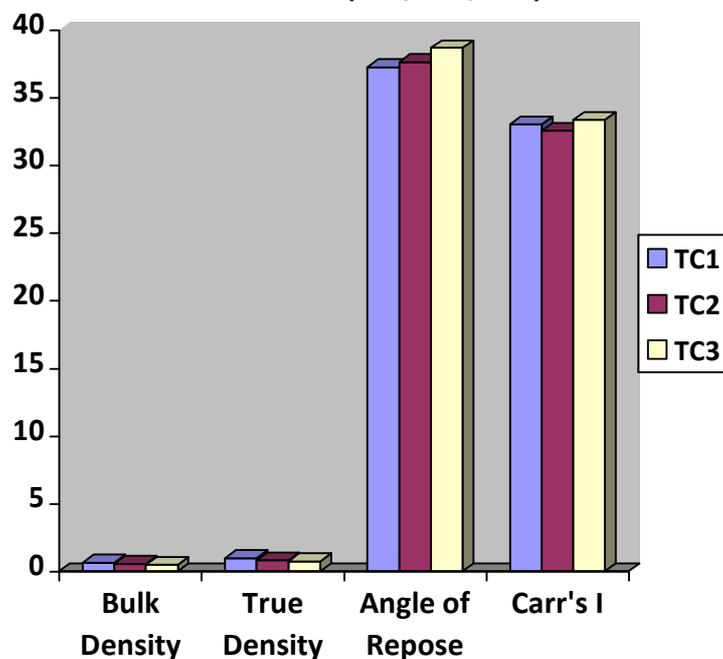
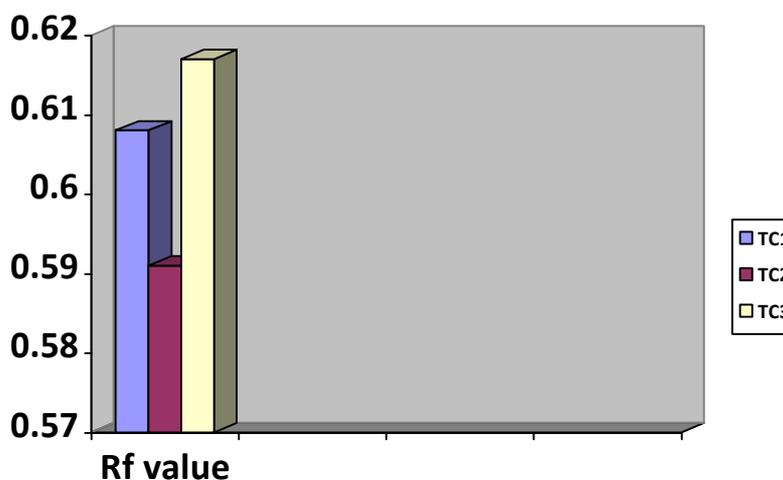


Fig2: Rf values of Talisadi churna



RESULT AND DESCUSION

The extractive values of Talisadi churna (TC1, TC2 and TC3) in water and ethanol was (12.15,11.33,11.18 and 12.92,11.54,11.35) respectively, indicating the presence of almost polar and semi polar constituents in Talisadi churna.

These analytical findings and data analysis shows in fig1 and fig2 reveals that parameters like Extractive values, Presence of Phytoconstituents and micromeretic parameters all remains in close proximity for each batch of the Talisadi churna. Hence these parameters and the developed methods for their determination considered as the tool for the quality control of Talisadi churna which will also assist the regulatory authorities, scientific organizations and manufacturer in developing standards.

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