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Formulation and Evaluation of AAYUHERBO PRASH: A Herbal Nutritional Formulation for Supportive Management of PCOD and Women's Wellness

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Abstract**—**Polycystic Ovary Syndrome (PCOD) is one of the most common endocrine and metabolic disorders affecting women of reproductive age. It is often associated with hormonal imbalance, irregular menstrual cycles, insulin resistance, weight gain, stress, and reduced quality of life. Due to the increasing interest in natural healthcare approaches, herbal nutraceutical formulations have gained attention as supportive alternatives for managing PCOD-related symptoms. The present study focuses on the formulation and evaluation of AAYUHERBO PRASH, a herbal nutritional preparation developed to support women's wellness and hormonal health. The formulation was prepared using a blend of medicinal herbs and nutrient-rich ingredients including Amla, Fenugreek, Cinnamon, Spearmint, Shatavari, Ashwagandha, Turmeric, Flax Seed, Chia Seed, Pumpkin Seed, Fennel, Honey, and Dry Fruits. These ingredients were selected based on their traditional medicinal importance and potential benefits in supporting metabolism, hormonal balance, antioxidant activity, stress management, and overall nutritional health. The prepared formulation was evaluated for various physicochemical and quality control parameters such as organoleptic properties, pH, homogeneity, moisture content, ash value, extractive value, phytochemical screening, microbial quality, and stability. The formulation exhibited a pleasant herbal aroma, mildly sweet taste, smooth semi-solid consistency, and satisfactory stability under recommended storage conditions. The pH of the formulation was found to be 5.8, indicating its suitability as a herbal nutraceutical product. The results suggest that AAYUHERBO PRASH may serve as a promising herbal nutritional formulation for supporting women's health and the management of PCOD-related concerns. Further clinical studies are required to establish its therapeutic effectiveness and long-term safety.

Keywords**—**PCOD, Herbal Nutraceutical, Women's Wellness, Hormonal Balance, AAYUHERBO PRASH, Herbal Formulation, Phytochemicals.

I. INTRODUCTION

Polycystic Ovary Syndrome (PCOD) is one of the most prevalent hormonal disorders affecting women of reproductive age worldwide. It is characterized by hormonal imbalance, irregular menstrual cycles, ovarian dysfunction, insulin resistance, weight gain, acne, and metabolic disturbances. The condition not only affects reproductive health but can also have a significant impact on the physical, emotional, and psychological well-being of affected individuals. The increasing prevalence of PCOD has made it a major health concern among young women.

Conventional treatment approaches for PCOD mainly focus on symptom management through hormonal therapy, insulin-sensitizing agents, and lifestyle modifications. Although these therapies can provide relief, long-term use may be associated with certain limitations and adverse effects. As a result, there has been growing interest in herbal and nutraceutical products that may provide supportive benefits while promoting overall health and wellness.

Traditional medicinal systems have utilized various herbs and natural ingredients for maintaining hormonal balance, improving metabolism, reducing oxidative stress, and supporting female reproductive health. Herbs such as Ashwagandha, Shatavari, Fenugreek, Spearmint, Amla, Cinnamon, and Turmeric have been reported to possess antioxidant, anti-inflammatory, adaptogenic, and metabolic regulatory properties. Similarly, nutrient-rich ingredients such as Flax Seed, Chia Seed, Pumpkin Seed, Honey, Fennel, and Dry Fruits contribute essential nutrients that support general health and well-being.

Considering the potential health benefits of these herbal and nutritional ingredients, the present study was undertaken to formulate and evaluate AAYUHERBO PRASH, a polyherbal nutraceutical preparation developed in a chyawanprash-like semi-solid dosage form. The formulation was designed to provide nutritional support and promote women's wellness, particularly in individuals experiencing PCOD-related concerns.

The prepared formulation was evaluated for its physicochemical characteristics, quality attributes, stability, and phytochemical profile to assess its suitability as a herbal nutraceutical product. The study aims to provide a scientific basis for the development of a safe, acceptable, and nutritionally enriched herbal formulation for supportive healthcare management.

II. MATERIALS AND METHODS

A. Materials

The herbal nutraceutical formulation, AAYUHERBO PRASH, was prepared using a combination of medicinal herbs and nutrient-rich ingredients selected on the basis of their traditional use and reported health benefits. The ingredients included Amla (40 g), Fenugreek (15 g), Cinnamon (8 g), Spearmint (10 g), Shatavari (20 g), Ashwagandha (15 g), Turmeric (5 g), Flax Seed (20 g), Chia Seed (10 g), Pumpkin Seed (15 g), Honey (55 g), Dry Fruits (25 g), and Fennel (7 g). All ingredients were procured from local herbal suppliers and were examined for quality before use.

B. Method of Preparation

The formulation was prepared using a standardized procedure. Fresh Amla fruits were thoroughly washed, boiled until soft, deseeded, and converted into a smooth pulp. The selected herbs and seeds were properly dried, and ingredients such as flax seed, pumpkin seed, and fennel were lightly roasted to improve flavor and aroma. All herbal ingredients were then finely powdered and sieved to obtain a uniform particle size.

Dry fruits including almonds, cashew nuts, and walnuts were soaked and processed into a smooth paste. The prepared amla pulp was transferred to a suitable vessel, followed by the gradual addition of the dry fruit paste. The herbal powders were incorporated slowly with continuous stirring to ensure uniform mixing. Honey was added as a natural sweetening and binding agent to improve palatability and texture.

The mixture was heated gently with constant stirring until a smooth semi-solid consistency resembling traditional chyawanprash was achieved. The final product was allowed to cool to room temperature and stored in clean, airtight glass containers for further evaluation and stability studies.

C. Evaluation of the Formulation

The prepared AAYUHERBO PRASH was evaluated for various quality control parameters including organoleptic properties, pH, homogeneity, moisture content, ash value, extractive value, phytochemical constituents, microbial quality, and stability. Organoleptic characteristics such as color, odor, taste, appearance, texture, and consistency were assessed through visual and sensory examination. The pH was determined using a digital pH meter, while moisture content was evaluated using a hot air oven method. Ash value and extractive value studies were performed to assess the purity and presence of active constituents.

Phytochemical screening was carried out using standard qualitative tests to identify important bioactive compounds. Microbial quality was evaluated to ensure the safety of the formulation. Stability studies were conducted under recommended storage conditions to monitor changes in physical characteristics and overall product quality.

D. Statistical and Observational Analysis

The observations obtained during evaluation were recorded systematically and analyzed to assess the quality, acceptability, and stability of the formulation. The collected data indicated satisfactory physicochemical properties and supported the suitability of the formulation as a herbal nutraceutical product intended for women's wellness and supportive management of PCOD-related concerns.

III. RESULTS AND DISCUSSION

The developed formulation, AAYUHERBO PRASH, was successfully prepared using selected herbal and nutritional ingredients known for their supportive role in women's health and wellness. The formulation exhibited acceptable physicochemical characteristics and satisfactory quality attributes.

A. Organoleptic Evaluation

The organoleptic properties of the prepared formulation were evaluated based on visual appearance and sensory characteristics. The product showed a pleasant herbal aroma, attractive brownish color, mildly sweet taste, smooth texture, and uniform semi-solid consistency. These characteristics indicate good consumer acceptability and product quality.

TABLE I
ORGANOLEPTIC EVALUATION OF AAYUHERBO PRASH

Parameter	Observation
Color	Brownish
Odor	Pleasant Herbal Odor
Taste	Mildly Sweet
Appearance	Smooth and Attractive
Texture	Smooth Semi-solid
Consistency	Uniform

B. Physicochemical Evaluation

Physicochemical parameters were evaluated to determine the quality and stability of the formulation. The pH value was found to be 5.8, indicating a mildly acidic nature suitable for herbal nutraceutical preparations. Moisture content was within acceptable limits, which may contribute to improved stability and reduced microbial growth. Ash value and extractive value results suggested the presence of adequate inorganic and extractable constituents within the formulation.

TABLE II
PHYSICOCHEMICAL EVALUATION OF AAYUHERBO PRASH

Parameter	Result
pH	5.8
Moisture Content	7.2%
Ash Value	3.5%
Extractive Value	18.4%

C. Quality Control Evaluation

The prepared formulation demonstrated satisfactory homogeneity and uniformity. Preliminary phytochemical screening confirmed the presence of important bioactive constituents that may contribute to the nutritional and health-supportive properties of the product. Microbial quality testing indicated that the formulation complied with acceptable limits, suggesting its safety for consumption.

TABLE III
QUALITY CONTROL PARAMETERS

Parameter	Observation
Homogeneity	Uniform
Phytochemical Screening	Positive

Microbial Limit Test	Within Acceptable Limit
Stability Study	Stable

D. Stability Study

The stability study revealed no significant changes in color, odor, texture, or consistency during the storage period. The formulation remained stable under recommended storage conditions, indicating good physical stability and shelf-life potential. These findings support the suitability of the formulation for further development as a herbal nutraceutical product intended for women's wellness and supportive management of PCOD-related concerns.

Overall, the evaluation results demonstrated that AAYUHERBO PRASH possesses satisfactory quality characteristics, acceptable stability, and desirable physicochemical properties, making it a promising herbal nutritional formulation.

IV. CONCLUSION

The present study successfully developed and evaluated AAYUHERBO PRASH, a polyherbal nutritional formulation intended to support women's wellness and assist in the management of PCOD-related concerns. The formulation was prepared using a combination of medicinal herbs and nutrient-rich ingredients that are traditionally recognized for their beneficial effects on hormonal health, metabolism, antioxidant protection, and overall well-being.

The evaluation studies demonstrated that the formulation possessed satisfactory organoleptic characteristics, acceptable physicochemical properties, good homogeneity, and desirable stability under recommended storage conditions. The pH, moisture content, ash value, extractive value, and microbial quality were found to be within acceptable limits, indicating the quality and safety of the prepared product.

Based on the findings of the study, AAYUHERBO PRASH may be considered a promising herbal nutraceutical formulation for promoting women's health and providing supportive care in PCOD management. However, further clinical investigations involving human subjects are required to establish its therapeutic efficacy, safety profile, and long-term health benefits. The formulation may serve as a foundation for the future development of evidence-based herbal nutritional products for women's wellness.

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