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# FORMULATION OF VAGINAL CREAM CONTAINING EXTRACTS OF LINUM USITATISSIMUM, FOENICULUM VULGARE, AND SALVIA OFFICINALIS FOR THE TREATMENT OF ATROPHIC VAGINITIS IN POSTMENOPAUSAL

**Abbaspour M.[1], Hejazi Z.S.[2]*, Namjoyan F.[2], Azemi M.E.[3]**

[1] Department of Pharmaceutics, School of Pharmacy, Mashhad University of Medical Sciences, Mashhad, Iran.
[2] Department of Pharmacognosy and Biotechnology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.
[3] Department of Pharmacognosy, Medicinal Plant and Natural Product, Research Center, School of Pharmacy, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

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***Abstract***

***Introduction:*** *Postmenopausal women with atrophic vaginitis had thinner epithelium, a lower vaginal maturation index, and higher vaginal pH. We chose phytoestrogens as an alternate treatment for atrophic vaginitis because of the potentially substantial side effects of long-term hormone replacement therapy use documented in a large prospective trial.*

***Materials and methods:*** *In this research, Flax Seed, Foeniculum Vulgare, and Salvia officinalis were chosen as plants containing phytoestrogen. Three vaginal cream formulations (F1-F3) were prepared in this study. The physicochemical properties and stability of a vaginal lotion containing well-known phytoestrogen plants are investigated. This study evaluates Linum usitatissimum, Foeniculum vulgare seeds, and Salvia officinalis extract. Physical examination, stability, continuity, active ingredient release, and challenge test were the four key criteria for product evaluation.*

***Results:*** *The release test revealed that extracts from formulation 2 and formulation 3 were slower to release than formulation1. It is owing to F1's decreased viscosity and F2 and F3's higher hydrophilic properties. The polyethylene glycol in formulations F2 and F3 may increase the hydrophilicity of the formulation, resulting in a stronger inclination of hydrophilic flavonoid extracts to the base and a decrease in extract liberation from the formulation. The w/o nature of the formulations allows them to lubricate or moisturize the vaginal epithelium, reducing Atrophic vaginitis symptoms.*

***Conclusion:*** *Formulation 1 may be a viable alternative to the current treatments for atrophic vaginitis. To determine the efficacy of this herbal vaginal cream in treating the symptoms of atrophic vaginitis, however, additional scientific studies are necessary.*

***Keywords:*** *postmenopausal, atrophic vaginitis, vaginal cream, flax, foeniculum, salvia officinalis.*

## Introduction

Atrophic vaginitis (vaginal atrophy) is one of the consequences of menopause that is associated with decreasing vaginal epithelium thickness, vaginal pH, and drying vaginal walls. These happen because of reduced estrogen levels related to menopause and aging. [*Society NAM,*

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***Address for Correspondence:***

Zahra Sadat Hejazi
Ahvaz Jundishapur University of Medical Sciences
Golestan Street, Ahvaz 6135715794, Iran
Tel.: (+98 61) 33 36 15 14
E-mail: z.s.hejazi@gmail.com