Vaginal atrophy occurs by gradual decline of ovarian function during menopause. The study of alternative therapies becomes interesting for women who refuse or have contraindications to hormonal treatment. Isoflavones have a phenolic ring with a similar structure to the estrogen and have Selective Receptor Modulators Estrogen activities. The vagina is lined by epithelium non-keratinized stratified squamous which varies in thickness and structure throughout life, being thinner in women after menopause. Objective: To study the effects of isoflavones gel on morphometry and estrogen receptors expression in vaginal epithelium of postmenopausal women. Methods: Prospective, controlled and randomized clinical trial in 55 postmenopausal women with vaginal atrophy, divided into two groups treated with vaginal gel for 90 days: G1 (Isoflavones gel) n=29 and G2 (placebo) n=36. We evaluated the thickness of the vaginal epithelium and the percentage of cells estrogen receptor positive (ER+) by immunohistochemistry at baseline (T0) and at the end (T1) of treatment. The samples were collected by biopsy of vaginal epithelium wall. For statistical analysis, we used the t student test. Results: The mean thickness of the vaginal epithelium (µm) were: G1 in T0 153.5+66.1 and T1 259.8+56.9 (p=0.000); G2 in T0 145.3+60.5 and in T2 191.9+83.7 (p=0.012). When comparing G1 to G2 in T1, there was a rise in the thickness of vaginal epithelium with significant difference (p=0.001). The mean percentages of ER+ cells in G1 in T0 and T1 were 58.5+33.9 and 82.6+17.4 (p=0.001); and in G2 73.4+24.5 and 83.7+8.8 (p=0.057). Conclusion: We have concluded that endovaginal isoflavones gel is a beneficial alternative to local hormone therapy in postmenopausal women. The isoflavones gel has a satisfactory effects on vaginal cells by increased the thickness of the vaginal epithelium and the percentage of ER+ cells.