

Development and Invitro Evaluation of Gel Based Anti-Dandruff Shampoo Containing Povidone Iodine

Jayaraj Kumar.K1*, Jayachandran.E, Jayakandan.M, Kathiravan.M,
Gridhar.B, Srinivas.GM, Rahul Nair

D.R.K College of Pharmacy, Hassan, Karnataka, India.
S.C.S College of Pharmacy, Harapanahalli, Karnataka, India.

Povidone iodine is an iodophor complex containing iodine and polyvinyl pyrrolidone introduced to pharmaceutical market as a powerful antiseptic agent possessing broad spectrum action against disease causing micro organism. Medicated shampoos are recommended for the control and correction of dandruff. The abnormal condition of the scalp by bacteria and fungi, the predominating species being staphylococcus aureus and pityrosporum ovale. Concentration range of povidone iodine between 66ppm-2500ppm, kills the staphylococcus strain between 15-180 seconds. Gel shampoos rank sales wise next to the clear shampoos. Thick gel shampoo may be advantageous in reducing spillage (or) loss during application. Antidandruff gel shampoo were formulated using different concentration of povidone iodine 4%(w/v),dioctyl sodium sulfo succinate 14%(w/v),sodium lauryl sulphate 4%(w/v),polyvinyl alcohol 10%(w/v),glycerin 53%(w/v),preparation were evaluated for foam stability, cleaning action, microbial test , p^H, visual appearance ,available iodine and eye irritancy test

Keyword: Povidone Iodine, Dioctyl Sulfo Succinate, Sls, Anti Dandruff, Gel Shampoo.

INTRODUCTION

There are also reports available stating that povidone iodine is effective as an antiviral too. Numerous in-vitro studies made over two decades indicate the efficiency of povidone iodine as therapeutic agents for both humans and animals; eleven products containing pvp-iodine were tested for their ability to inactivate HIV virus in cell culture system. All of the products completely inactivated the virus at PVP iodine concentration greater than 0.5 per cent. Usage PVP iodine has significantly reduced the irritancy and toxicity associated with iodine use its being used worldwide effectively

Povidone iodine solution in water or alcohol is better tolerated than iodine solution. Povidone iodine is suitable for hand disinfection, surgical hand disinfection, burns, scalp condition, vaginal infection, throat infection and leg ulcers.

Elemental iodine has very broad anti-microbial spectrum against bacteria and viruses. Bacterial endospore fungi and protozoa are destroyed through oxidative interaction and iodination of biological macromolecules; however there have been reports of certain resistant germs.

Medicated shampoos are recommended for the control and correction of dandruff. Today a number of medicated dandruff shampoos enjoy a

Corresponding Author

Jayaraj kumar.k, E-Mail: jayaraj2775@gmail.com

Reputation for appreciable effectiveness. One such product, obtainable only by prescription is a shampoo in the form of a 2.5% suspension of selenium sulphide in detergent base. Another contains (zinc pyridinethionezinc-2-pyridinethiol-1-oxide) as the antidandruff ingredient and sodium alkyl glyceryl ether sulfonate as the base detergent. A wide range and assortment of other antidandruff ingredient such as hexachlorophene, cadmium sulphite, tellurium oxide, hydroxyl quinolines, biphenamine Hcl, ketoconazole, biothionol, polythionates, allantoin and p-chloromethoxylenol are used in medicated dandruff shampoos.

Dandruff or scurf is the dry form of seborrhea capitis known as seborrhea sicca in which the epidermis is shed in dry flaky scales. It is generally considered that this is due to a functional disorder, which causes some alteration of the skin keratinization process. Cell division in the deeper layer of the epidermis being transformed into keratin. This results in the formation of an invisible film of dead cells which is continually being cast off at the surface of the skin. If for any reason the normal function do not synchronize properly and casting off of cells increase to an abnormal rate, the cells become visible and give the characteristic dry flaky scales of dandruff.

