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CONTENT

REVIEW ARTICLE

Bioengineering Techniques for the Efficacy Studies of Herbal Cosmetics

Sneha Sahu and Swarnalata Saraf.....1

ABSTRACT:

Bioengineering techniques have turned the way of cosmetics evaluation towards the non-invasive direction. The numerical assessment of skin properties improvement sounds interesting to the consumers. Bioengineering techniques have attracted the minds of many researchers and beliefs of consumers towards cosmetic. Instruments developed under these techniques are harmless. These techniques are fruitful not only for the cosmetics evaluation but also for comparative studies and for treatment of diseases. In efficacy studies of cosmetics, of particular importance is the epidermis, its water content, its composition, and its barrier function. It facilitates the quantitative evaluation of moisturizers, fairness creams, sun protection creams, anti-aging products, scrubbers etc.

KEYWORDS: bioengineering techniques, instrumentations, skin firmness, skin hydration, skin color, barrier function, wrinkles, sebum level, and microcirculation.

A Review on Herbal Plants used in Skin and Hair Treatment

AK Meena, Ayushy Sachan, Brijendra Singh, Ramanjeet Kaur, Bhavana Pal, AK Yadav, Uttam Singh, Kiran and MM Rao.....13

ABSTRACT:

The present paper deals with the medicinal plants used by the people for curing different skin ailments and for cosmetics. Cosmetic have become part of our routine. Their used has increased significantly in recent years however the continuous use of cosmetics over prolonged time may result into various undesirable effects, which may be serious at time. This review is an attempt to trace out the different cosmetic plants used over centuries.

KEYWORDS: Cosmetic, skin, medicinal plants, people

RESEARCH ARTICLE

Development and evaluation of Cosmeceutical Nanolipogel

Shahi S and Athawale RB.....18

ABSTRACT:

Ageing is one of the major problems and the telltale sign of ageing is increased wrinkling of the face along with loss of moisture from the skin, making skin dry and scaly. Exposure of the skin to UV light also causes degenerative effects; this can be minimized by using antioxidants like vitamins A, C or E. Thus the problem of wrinkle and dry skin can be solved using antiwrinkle agent along with vitamins. However, barrier properties of the skin limit their use. Therefore in the present study, BoNT-L-Peptide (INCI name- palmitoyl hexapeptide, 50 ppm solution) and

vitamin E acetate was encapsulated into liposome for improving its topical delivery. Liposomes were prepared ethanol injection method and optimized by factorial design approach. Liposomes were characterized for pH, vesicle size, zeta potential, drug content and drug release. Further gels were prepared by using stable liposomal dispersion using carbopol (carbomer) U21, this gel was called as lipogel and were characterized for pH, spreadability, viscosity, drug content and drug release. Stability of liposomal dispersion and lipogel was studied at 25°C/60% RH, 30°C/65% RH & 40 °C/75% RH as per ICH guidelines. Stable and homogeneous liposomal dispersion and lipogel were developed. The drug content was found in the range of 97 % – 101 %, with the particle size distribution between 159.6 (±0.22) nm to 239.5 (±0.33) nm. Controlled drug release was found to be upto 24 hours at pH 6.8.

KEYWORDS: Palmitoyl hexapeptide, Vitamin E acetate, Liposomes, Gel.

A Stability-indicating HPTLC method for estimation of Nadifloxacin in topical cream

Rabindra K Nanda, Amol A Kulkarni, Meenal N Ranjane and Poonam N. Ranjane.....25

ABSTRACT:

The present work describes a stability-indicating HPTLC method for analysis of nadifloxacin in topical cream. The separation was carried out on Merck precoated silica gel aluminium plate 60 F₂₅₄ using Chloroform: Methanol: Ammonia (4.3: 4.3: 1.4 v/v/v) as mobile phase. The densitometric scanning was carried out at 296 nm. Response was found to be linear in the concentration range of 50–300 ng /band with correlation coefficients ($r^2 = 0.9979$). The method was validated as per ICH guidelines. The method was successfully applied for the analysis of drugs in pharmaceutical formulation. Nadifloxacin was subjected to forced degradation by acid, alkali, neutral, oxidation, dry heat, wet heat, sunlight, UV light. The degradation products were well resolved from the pure drug with significantly different RF values.

KEYWORDS: Nadifloxacin, HPTLC, Validation, Stability Studies.

Pre-Formulation and Evaluation of Herbo-Mineral Ointment and Cream

Pruthviraj S Pawar, Prajakta P Karpe, Prabhakar Jadhav, Atul Alkunte, Patil SM30

ABSTRACT

The herbo-mineral formulations are developed by the combination of Shat-dhaut-ghrit and ointment or cream base. In this combinations, medicaments such as shendur, camphor, muddar-sing and pale catechu are incorporated . The herbo-mineral ointment is prepared by fusion method. Bees wax, White soft paraffin, Wool fat, Cetostearyl alcohol these are used as oily base. These formulations are used for treatment of bacterial, viral, fungal infection. The result obtained after evaluation were complies with I.P standard. The formulations of herbo-mineral have high tendency to treat the various skin diseases such as wound, ulcer, Erythema multiformae, acne vulgaris and chronic infection of skin.

KEYWORDS: Herbo-mineral formulations, Anti bacterial, Anti Viral, Anti Fungal.

Studies on Topical Gel Formulations of Flurbiprofen Containing Different Penetration Enhancers

Dattatreya B Udgirkar and Hiremath Doddappa33

ABSTRACT

Topical non-steroidal anti-inflammatory drug (NSIAD) formulations are designed to deliver therapeutic levels of the active ingredients to the inflamed tissue without elevating serum levels after application on the skin. This route is an attractive alternative to the oral administration of NSAIDS which is associated with high incidence of gastrointestinal tract (GIT) complications and other systemic toxic effects. Flurbiprofen is a potent non-steroidal anti-inflammatory agent usually well tolerated as compared to other NSAIDS product. It has analgesic and antipyretic properties. It is used in the treatment of rheumatic disorders such as ankylosing spondilites, oosteoarthritis and intraoperative miosis. It suffers from major GIT disturbances. Percutaneous absorption of flurbiprofen has been documented. These properties make it an ideal candidate for transdermal delivery of flurbiprofen. An attempt has been made to investigate the effect of different penetration enhancers namely Dimethyl Sulfoxide (DMSO) and Sodium Lauryl Sulphate (SLS) on the release of

Flurbiprofen using Carbopol 934 as gelling agent. Gels were evaluated for appearance, drug content, viscosity, pH, extrudability, skin irritation test, In-vitro release through rat abdominal skin, stability study and anti-inflammatory activity. Formulation C-II containing 15% w/w DMSO was found to be the best. The carbopol gel with 15% DMSO was found significant ($p < 0.05$) anti-inflammatory activity.

KEYWORDS: Flurbiprofen, Topical gels, Penetration enhancers.

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