



Controlled Release Society Indian Chapter

One Day National Seminar on

Translational Research: From Bench to Bedside

Sunday, 17th November, 2019

SOUVENIR & ABSTRACT BOOK

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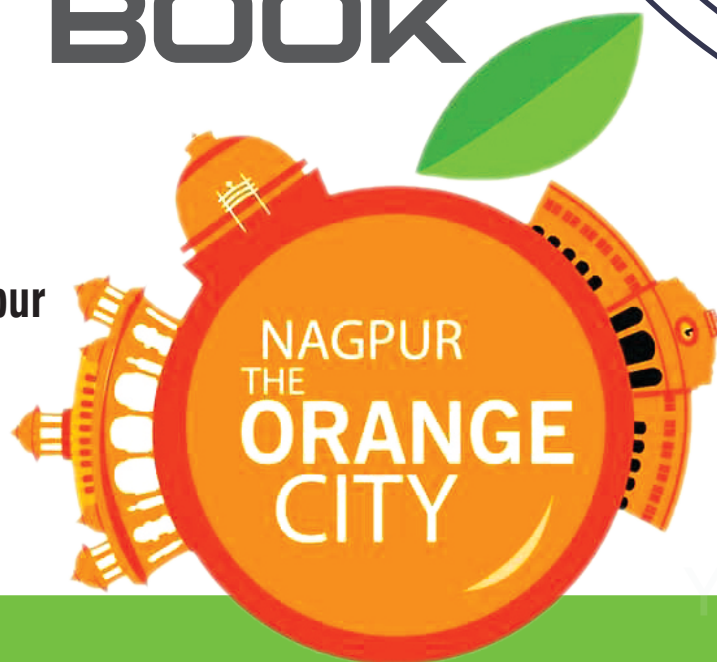
Affiliated to R.T.M. Nagpur University, Nagpur

Venue :

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SOUVENIR

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FORMULATION OPTIMIZATION AND EVALUATION OF ANTI-ACNE GEL CONTAINING CLINDAMYCIN PHOSPHATE AND BENZOYL PEROXIDE

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Abstract:

and objective: The present study aimed at formulation and optimisation of anti-acne gel containing Clindamycin phosphate and Benzoyl peroxide with improved user compliance and avoidance of undesirable side effect. Methodology: The anti acne gel was prepared using carbopol 980 with different concentration such as T1, T2, T3, T4, and T4 was selected as optimized batch (F1). F1 formulation was then evaluated for, appearance, pH, viscosity, spreadability, tube extrudability, assay and invitro release test. FTIR was performed to identify the physicochemical interaction between drug and excipients in physical mixture. F1 formulation was stored at $25^{\circ}\text{C} \pm 0.2^{\circ}\text{C} / 60 \pm 5\% \text{RH}$ in stability chamber for 3 months. Results and Discussion: The optimised formulation F1 was selected based on the appearance and viscosity. The appearance of the gel was found to be white to off-white homogenous gel. The pH of the gel was found to be 6.78 ± 0.01 . The viscosity was found to be 700.25 ± 39.54 . The Clindamycin phosphate showed more antibacterial property as compared with reference listed drug. The F1 assay and IVRT results matched to the reference listed drug. The antibacterial study (zone of inhibition) of Clindamycin phosphate shows more antibacterial property as compared to reference listed drug. Gel readily spreads on the application to the skin or affected part. The stability study proved the stability of formulation. Conclusion: Gel of Clindamycin phosphate and Benzoyl peroxide was found to be more effective against Propionibacterium acne and it reduces acne count. Hence it is concluded that it can effectively be used in the treatment of acne.

Keywords

, Carbopol 980, Invitro release test (IVRT).

