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SOCIETY FOR RESEARCH DEVELOPMENT IN HEALTH SCIENCE

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Sponsored

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Theme:
"Invigorating Research in Pharmaceuticals: Reasonable Industrial Approach"

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Souvenir and Abstract Book

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FORMULATION AND EVALUATION OF DOMPERIDONE MALEATE EFFERVESCENT TABLET

Elizabeth J. Suresh[1],Sagar S Bari [2], Vinod Thakare[1], Ujwala Mahajan[1]

[1] DadasahebBalpande College of Pharmacy, Besa, Nagpur, Maharashtra-440037

[2] TVES HLMC College of Pharmacy, Faizpur. elizabethjsuresh333@gmail.com

ABSTRACT

This research scheme focuses on formulation development of effervescent tablets by using various disintegrating agent and to evaluate its disintegration and dissolution profile. In the study total eight formulations were prepared from total 25 trial batches using direct compression technique, each containing 10 mg of Domperidone maleate. All formulations (A1-A8) were prepared by using 35 % of Beta-cyclodextrin, 2 % & 6% of Cross carmellose sodium and Sodium starch glycolate to the total weight of pharmaceutical ingredients. Magnesium stearate was added as 2 % and Mannitol was added as quantity sufficient to the total weight of tablet upto100 mg. This is then evaluate for disintegration and dissolution. From the data it was found that A3 formulation showed maximum drug release of 98.542 %. The release of A2, A6, and A7 was 97.204 %, 92.829 %, 91.792 and marketed 92.495 % respectively. From the present study it can be concluded that Effervescent tablet for Domperidone Maleate was successfully prepared by conventional direct compression method using superdisintegrants and the objective of this study was achieved.

Keywords Domperidone Maleate, Effervescent Tablet, Direct compression, Disintegrants, β-Cyclodextrin.

FORMULATION AND DEVELOPMENT OF EXTENDED RELEASE MATRIX TABLET FOR ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) BY APPLYING QbD APPROACH

Pathak R. V, Gangane P.S.

Dadasaheb Balpande College of Pharmacy, Dpt. of Pharmaceutics. Besa, Nagpur, Maharashtra, India. -4410037

Pathakvaishnavi67@gmail.com

ABSTRACT

The aim of present study is the formulation and development of extended release matrix tablet for attention deficit hyperactive disorder by applying QbD approaches. The major objective of this study was to extend the release of model drug by matrix formulation by selecting suitable type of pH dependent polymer and to apply the QbD approach for minimizing the batch trials of formulation. The formulation was carried out by wet granulation method and dissolution test was carried out by comparing with Kapvay. The stability studies were carried out along with the other parameters. The drug excipient compatible study carried out by HPLC was found to be compatible at temperature condition from 10°C to 25°C. 100% HPMC showed comparative similar dissolution profile to Kapvay® & was found to be more than 50. Test product shows similar drug release profile as compared to Kapvay®. In 0.1N HCl drug release was slightly more as compared to pH 4.5 acetate buffer & pH 6.8 phosphate buffer. Related substances, and physical parameters were found satisfactory and no significant difference was observed in 3 M 40°C/75% RH Accelerated stability condition. From the above result it can be concluded that batch F1with HPMC: HPC-CL formula showed similar results by optimizing the ratio of polymer by applying QbD approach in which the F6 and F7 formula was optimized with different concentration ratio of excipient magnesium silicate and povidone k 30. Above ratio of different polymer and gelling agent level was formulated as stable, efficacious and robust dosage form.

Keywords QbD, matrix tablet, extended release, deficit hyperactive disorder.