

PATENT NO. 353566

A SUSTAINED RELEASE AND LONG RESIDING OPHTHALMIC FORMULATION

APPLICATION NO. 871/DEL/2000

APPLICANT

University of Delhi, Delhi

ABSTRACT

The present invent relates to sustained release and long residing ophthalmic formulation having thermosensitivity, mucoadhesiveness, hydro gel properties and small particle size. The said formulation comprises of micelle solution of block co-polymer having a hydrophobic component and the hydrophilic component of general formula $\{X-Y-Z\}_m$, wherein m is an integer greater than 2 X is a compound having hydrogel formation properties selected from vinyl group of compounds Y is a compound having thermosensitivity properties having a general formula $R_1-R_2N-(C=O)-CH=CH_2$, $R_1 =$ a proton or C_nH_{2n+1} in which n may have the value from 3 to 6 and $R_2 =$ alkyl group having chain length of C3 to C6 Z is a compound having mucoadhesive and pH-sensitivity properties and is selected form acrylate based monomers and at least one hydrophobic drug with the said block co-polymer solution.

INVENTOR

Maitra Amarnath
Gupta Ajay Kumar
Mujumdar Dipak
Madan Sumit
University of Delhi, Delhi

CLAIM 1

A sustained release and long residing ophthalmic formulation comprising A micelle solution of block co-polymer having a hydrophobic component and a hydrophilic component of general formula $\{X+Y+Z\}_m$, wherein m is an integer greater than 2 X is a monomer which will provide hydrogel formulation properties of the co-polymer to reduce the irritability of the eye and is selected from vinyl group of compounds, Y is a is a monomer which will provide thermo-sensitivity properties of the co-polymer having a general formula $R_1-R_2N-(CO)-CH=CH_2$, where R_1 a proton or C_nH_{2n+1} in which n may have the value from 3 to 6 and $R_2 =$ alkyl group having chain length of C3 to C6, and. Z is a monomer which will provide mucoadhesiveness and pH-sensitivity properties to the co-polymer and is selected form acrylate based monomers. And at least one hydrophobic drug entrapped within the micelles.