(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :03/07/2022

(21) Application No.202221038243 A
(43) Publication Date : 22/07/2022

(54) Title of the invention : ALENDRONATE NANOPARTICLES AND PREPARATION THEREOF FOR TREATMENT OF OSTEOPOROSIS

(51) International classification :A61K0009510000, A61K0031663000, A61K0009160000, A61K0009000000, C07F0009380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
1)Dr. Sandhya Pathak
Address of Applicant :Department of Chemistry, Dr. Hari Singh Gour Central University, Sagar, Madhya Pradesh-470003, India ---------- ----------
2)Dr. Sanjay Kumar Pathak
3)Dr. Sandeep Kumar Shukla
4)Mrs. Archana Pandey
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr. Sandhya Pathak
Address of Applicant :Department of Chemistry, Dr. Hari Singh Gour Central University, Sagar, Madhya Pradesh-470003, India ---------- ----------
2)Dr. Sanjay Kumar Pathak
Address of Applicant :Department of Physics, Dr. Hari Singh Gour Central University, Sagar, Madhya Pradesh-470003, India ---------- ----------
3)Dr. Sandeep Kumar Shukla
Address of Applicant :Department of Chemistry, Dr. Hari Singh Gour Central University, Sagar, Madhya Pradesh-470003, India ---------- ----------
4)Mrs. Archana Pandey
Address of Applicant :Professor, Department of Chemistry, Dr. Hari Singh Gour Central University, Sagar, Madhya Pradesh-470003, India ---------- ----------

(57) Abstract :
Porous and fragile bones are major characteristics found in the osteoporosis patients. Alendronate drug is known to improve the bone conditions of the patients. The present invention relates to a composition of alendronate nanoparticles. The main objective of the present invention is to provide a process for the preparation of alendronate nanoparticles. Alendronate nanoparticles comprising of alendronate; poly(lactide-co-glycolide); and poly vinyl alcohol. Alendronate nanoparticles, wherein the drug and polymer are in the ratio of 1:1, 1:2 and 1:4. The present invention provides the alendronate nanoparticles size of 175.3 nm. The present invention provides the alendronate nanoparticles, wherein the maximum drug entrapment efficiency is 65.23%. The present invention provides the alendronate nanoparticles, wherein polydispersity index of nanoparticles is 0.143. The present invention provides the alendronate nanoparticles, wherein zeta potential of nanoparticles is -13.98 mV.

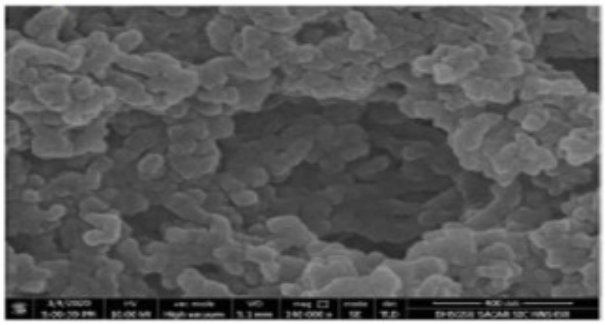

Figure 1

No. of Pages : 20 No. of Claims : 9