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(71)Name of Applicant :

**1)CHITKARA UNIVERSITY**

Address of Applicant :Chitkara University Chandigarh-Patiala  
National Highway (NH-64) Tehsil Rajpura, Distt. Patiala Punjab  
Punjab India

(72)Name of Inventor :

**1)DR. SINGH INDERBIR**

**2)DR. ODEKU ADEPEJU OLUWATOYIN**

**3)ALABI OLUWAPONMILE CECILIA**

(57) Abstract :

The present invention discloses modified coarse grain starch from natural sources, for pharmaceutical use. Starch from millet, sorghum and cocoyam was modified by thermal treatment (pre-gelatinization) and showed following characteristics viz. particle size between 50-300 micrometres; absence of crystalline peaks in XRD spectra; bulk density between 0.5 to 0.7 g/cm<sup>3</sup>; tapped density between 0.6 to 0.8 g/cm<sup>3</sup>; Carr<sup>TM</sup>s index (%) between 14 to 20%; Hausner<sup>TM</sup>s ratio between 1 to 1.20 and swelling ratio (%) between 4 to 6. The modified starch provided a better drug dissolution profile when compared to the native form of the same starch. The method of preparing the modified starch was simple involving preparing a 20% w/v aqueous slurry and heating at 100 degree Celsius for 45 minutes, followed by drying and sieving using 60 mesh sieve to obtain final product.

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