

पेटेंट कार्यालय  
शासकीय जर्नल

**OFFICIAL JOURNAL  
OF  
THE PATENT OFFICE**

---

---

निर्गमन सं. 47/2020  
ISSUE NO. 47/2020

शुक्रवार  
FRIDAY

दिनांक: 20/11/2020  
DATE: 20/11/2020

---

---

पेटेंट कार्यालय का एक प्रकाशन  
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202041049601 A

(19) INDIA

(22) Date of filing of Application :13/11/2020

(43) Publication Date : 20/11/2020

(54) Title of the invention : A PROCESS OF SYNTHESIS OF POLY (NEEM TRIGLYCERIDE OIL FUMARATE)  
â€“MONOMER-NANO METAL OXIDE BASED POLYESTER AND PRODUCTS THEREOF

(51) International classification :A61K9/4816  
(31) Priority Document No :NA  
(32) Priority Date :NA  
(33) Name of priority country :NA  
(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. JUSTUS SHAKINA**  
Address of Applicant :ASSISTANT PROFESSOR  
RESEARCH CENTRE AND P.G DEPARTMENT OF  
CHEMISTRY SARAH TUCKER COLLEGE  
PALAYAMKOTTAI TAMILNADU INDIA 627007 Tamil Nadu  
India  
(72)Name of Inventor :  
**1)DR. JUSTUS SHAKINA**  
**2)DR.PAUL MONEY THARMARAJ**

(57) Abstract :

APPLICANT: DR.JUSTUS SHAKINA TITLE: A PROCESS OF SYNTHESIS OF POLY (NEEM TRIGLYCERIDE OIL FUMARATE) â€“MONOMER-NANO METAL OXIDE BASED POLYESTER AND PRODUCTS THEREOF ABSTRACT The present invention disclose a process of synthesis of poly (neem triglyceride oil fumarate) â€“monomer-nano metal oxide based polyester and products thereof. The process comprises of following reaction steps; â€“ preparation of hydroxylatedneem oil comprising of mixing 100 mL of Triglyceride oil of neem oil and 100 mL of formic acid in a 1:1 ratio under vigorous stirring at 0 Â°C followed by slowly adding 30 %, 55 mL of hydrogen peroxide under continues stirring for 24 hours with temperature maintained below 35 Â°C to form a residue in which the residue is extracted thrice with 3 x 40 mL diethylether solvent and organic layer was separated and dried over anhydrous sodium sulphate and solvent was filtered and evaporated using rotaevaporator to isolate hydroxylated triglyceride oil; â€“ preparation of poly (Neem triglyceride oil fumarate) polyester resin comprising of blending 100mL of the hydroxylated triglyceride oil with 49 gm, 0.5 mol of maleic anhydride in ambient temperature using overhead stirrer and heated to 70oC for 2 hrs followed by adding catalytic amount of morpholine base (3-4 drops) upon vigorous blending to form poly (Neem triglyceride oil fumarate) polyester resin; â€“ preparation of poly (neem triglyceride oil fumarate) â€“monomer-nano metal oxide based polyester comprising of adding 10mL of the poly (Neem triglyceride oil fumarate) polyester resin with 10 mL of monomer and nano metal oxide in 1:0.5: 0.4ratio and treated with catalytic amount of benzoyl peroxide (60mg) as a free radical initiator and N,N-dimethylaniline (2-3 drops) as an accelerator followed by vigorous stirring for 10 min using over-head stirrer and poured in glass plate mold pre-coatedwith silicone oil in the size of 10 x 10 cm and after 5 hours, transparent polymer sheet comprising of poly (neem triglyceride oil fumarate) â€“monomer-nano metal oxide based polyester was peeled off from the glass plate.

No. of Pages : 20 No. of Claims : 8