

(54) Title of the invention : BANANA BLOSSOM EXTRACT-LOADED NANOEMULGEL FOR ENHANCED SKIN REJUVENATION AND ANTIOXIDANT DELIVERY

(51) International classification	:A61P17/02, A61K8/34, B82Y30/00, A61K9/51, A61K9/107, A61K36/88, A61P39/06, A61K31/7048	(71)Name of Applicant : 1)Dr. Manoj Vijaysing Girase Address of Applicant :R.C. Patel Institute of Pharmacy, Shirpur, Maharashtra, India, R. C. Patel Institute of Pharmaceutical Education and Research, Shirpur, Dist. Dhule, Maharashtra- 425405 Maharashtra India 2)Ms. Ruchira M. Gajbhiye 3)Ms. Akshita Anil Bari 4)Ms. Kalyani Pradip Bhavsar 5)Ms. Pratiksha Krushna Meshram 6)Ms. Sonali Kishor Shambharkar 7)Ms. Pratiksha Bhaskar Marwadkar
(31) Priority Document No	:NA	(72)Name of Inventor : 1)Dr. Manoj Vijaysing Girase 2)Ms. Ruchira M. Gajbhiye 3)Ms. Akshita Anil Bari 4)Ms. Kalyani Pradip Bhavsar 5)Ms. Pratiksha Krushna Meshram 6)Ms. Sonali Kishor Shambharkar 7)Ms. Pratiksha Bhaskar Marwadkar
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:	
Filing Date	:01/01/1900	
(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	

(57) Abstract :

1. A nanoemulgel formulation comprising banana blossom (*Musa acuminata*) extract incorporated into a nanoemulsion-based gel matrix for topical application to promote skin rejuvenation. 2. The formulation of claim 1, wherein the banana blossom extract is obtained through ethanolic Soxhlet extraction to yield polyphenol and flavonoid-rich phytochemical content. 3. The formulation of claim 1, wherein the nanoemulsion comprises an oil phase, surfactant, and co-surfactant system optimized to produce nanoscale droplets with particle size below 200 nm. 4. The formulation of claim 1, wherein the nanoemulgel maintains a pH range of 5.0 to 6.3 suitable for maintaining compatibility with human skin. 5. The formulation of claim 1, wherein the nanoemulgel exhibits enhanced antioxidant activity demonstrated through free radical scavenging assays. 6. The formulation of claim 1, wherein the nanoemulgel provides improved dermal penetration and prolonged retention time on the skin compared to conventional herbal creams. 7. The formulation of claim 1, wherein the nanoemulgel exhibits physical stability without phase separation under accelerated storage conditions. 8. The formulation of claim 1, wherein the nanoemulgel is non-irritant and suitable for daily use on sensitive or aging skin. 9. The formulation of claim 1, wherein the nanoemulgel improves skin elasticity, reduces fine lines, and enhances collagen regeneration through sustained release of the active extract

No. of Pages : 18 No. of Claims : 9