

पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
OF
THE PATENT OFFICE**

निर्गमन सं. 04/2026
ISSUE NO. 04/2026

शुक्रवार
FRIDAY

दिनांक: 23/01/2026
DATE: 23/01/2026

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511125225 A

(19) INDIA

(22) Date of filing of Application :11/12/2025

(43) Publication Date : 23/01/2026

(54) Title of the invention : FORMULATION AND DEVELOPMENT OF FAST DISSOLVING TABLET ETODOLAC BY USING DESIGN OF EXPERIMENTS

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|---|--|---|
| (51) International classification | :A61K9/20, A61K9/28, A61P29/00, A61K47/38, A61K47/34, A61K47/36, A61K47/26, A61K47/12 | (71)Name of Applicant : 1)Ms. Amisha Varshney Address of Applicant :Assistant Professor, School of Pharmaceutical Sciences, Faculty of Pharmacy, IFTM University, Moradabad, Uttar Pradesh, Pin Code: 244102 Uttar Pradesh India |
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| (32) Priority Date | :NA | 3)Dr.Vandana Arora Sethi |
| (33) Name of priority country | :NA | 4)Dr. Lalit Kumar Tyagi |
| (86) International Application No | : | 5)Mr. Himanshu Gupta |
| Filing Date | :01/01/1900 | (72)Name of Inventor : |
| (87) International Publication No | : NA | 1)Ms. Amisha Varshney |
| (61) Patent of Addition to Application Number | :NA | 2)Dr. Sushil Kumar |
| Filing Date | :NA | 3)Dr.Vandana Arora Sethi |
| (62) Divisional to Application Number | :NA | 4)Dr. Lalit Kumar Tyagi |
| Filing Date | :NA | 5)Mr. Himanshu Gupta |

(57) Abstract :

The present invention relates to fast dissolving tablets of etodolac formulated through direct compression method utilizing superdisintegrants for rapid oral disintegration. The tablets comprise etodolac as active pharmaceutical ingredient combined with croscarmellose sodium and crospovidone as superdisintegrants in varying concentrations of 8%, 12%, and 24%. Design of Experiments methodology using design expert software was employed for systematic optimization of the formulation parameters. The optimized formulation F9 demonstrated superior characteristics with wetting time of 14.85±1.66 seconds, disintegration time of 23.98±1.62 seconds, and drug release of 98.28±2.51% within specified timeframe. The developed fast dissolving tablets eliminate the need for water administration, enhance patient compliance particularly in geriatric and pediatric populations, and provide rapid onset of action through improved bioavailability. The invention addresses the challenges associated with conventional tablet formulations by offering immediate drug release and absorption, thereby improving therapeutic efficacy of etodolac in pain and inflammatory conditions.

No. of Pages : 20 No. of Claims : 10