



**INSTRUCTIONS TO AUTHORS**

**RAPID RP-HPLC METHOD FOR QUANTITATIVE DETERMINATION OF LORNOXICAM IN TABLETS (Font size-12, all caps & bold)**

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**Short Title: Rapid RP-HPLC Method for Determination of Lornoxicam (insert**

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Full location of Department, where work was performed. Complete contact details of the corresponding author must be highlighted

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**ABSTRACT (Font size-12, all caps & bold)**

The objective of the study was to develop a simple, rapid and high performance liquid chromatographic method for the analysis of lornoxicam in pharmaceutical preparations. Chromatographic separation was achieved on a reversed phase eclipse C18 column (150 mm x 4.6 mm, 5 µm) as stationary phase and mobile phase was methanol: 0.1% formic acid in water (80:20 v/v), with a flow rate of 0.8 ml/min and UV detection at 381 nm.

ABSTRACT: Not exceed 250 words and should state the rationale, objectives, findings, and conclusions of the manuscript.

Nonstandard abbreviations, references, and primary data should not be presented in abstracts

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**Key Words (Maximum of 5-key words)**

Lornoxicam, RP-HPLC, validation, pharmaceutical formulation.

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## INTRODUCTION (Font size-12, all caps & bold)

Lornoxicam, (6-chloro-4-hydroxy-2-methyl-N-2-pyridylcarboxamide 1,1-dioxide, C<sub>13</sub>H<sub>10</sub>ClN<sub>3</sub>O<sub>4</sub>S<sub>2</sub>, Figure 1) is a non-steroidal anti-inflammatory drug with analgesic and antipyretic properties that belongs to the class of oxicams. It acts by non-selective inhibition of cyclo-oxygenase-1 and -2. It is prescribed for osteoarthritis, rheumatoid arthritis, acute lumbar-sciatica conditions and postoperative pain management [1]. In the literatures, a voltammetric (2), polarographic [3], UV spectrophotometric [4], LC/MS/MS [5-6], TLC-densitometry [7], and high performance liquid chromatographic (HPLC) [7-11] methods were reported for the analysis of lornoxicam.

Manuscript should provide complete background for the present study and should provide a brief summary as well as purpose for research undertaken must be highlighted

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Indicate references by number(s) in square brackets in line with the text

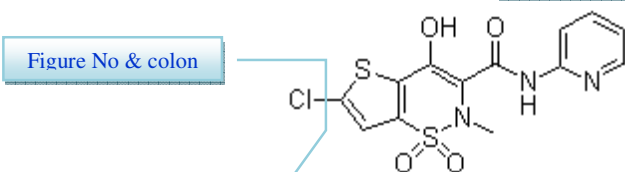


Figure 1 : Structure of Lornoxicam

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## EXPERIMENTAL (Font size-12, all caps & bold)

### Chemicals and reagents (Sub-heading: Font-12 & bold)

Bulk sample of lornoxicam was obtained from Hetero drugs, Hyderabad, India. The commercial samples of tablets containing 4 mg and 8 mg of lornoxicam were purchased from local market (T1 and T2). Milliq water (Millipore) water was used throughout the work. Methanol (HPLC grade) and Formic acid (HPLC grade) were procured from Sigma Aldrich (Switzerland).

Identify drugs and chemicals by generic name (wherever trademarks are mentioned, manufacturers name and city, name should be provided).

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Authors should use the International System of Units (SI)

### Chromatographic condition (Sub-heading: Font-12, bold & no caps)

A Agilent 1200, (Germany) HPLC instrument with a Zorbax eclipse XBD C-18 analytical column, (150 mm × 4.6 mm, 5 μm) was used for the study. The mobile phase used was methanol-water with 0.1% formic acid in water (80:20 v/v), with a flow rate of 0.8 ml/min.

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Manuscript should provide detailed description of all the experimental methods

### Preparation of standard stock solutions (Sub-heading: Font-12, bold & no caps)

The stock solution of lornoxicam (100 μg/ml) was prepared by dissolving 10 mg of Lornoxicam (99.8 %) in methanol in a standard 100 ml volumetric flask. Aliquots of 0.5 to 20 μg/ml were prepared from the stock solution.

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### **Statistical Analysis (Sub-heading: Font-12, bold & no caps)**

All the data are expressed as mean  $\pm$  S.E.M. (standard error of the mean). The significance level was determined using Student 't' test. A p-value of  $<0.05$  was considered statistically significant.

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### **RESULTS AND DISCUSSION (Sub-heading: Font-12, Caps & bold)**

To develop a suitable and robust LC method for the mobile phases and columns were employed to achieve. The criteria employed for selecting the mobile phase involved and time required for the analysis.

Discussion - Each of the findings should be discussed the reference to your own work with recently published papers from different laboratories with similar studies, different preparations etc and give the summarized view of the comparative data.

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Attempts with traditional reverse phase columns presented poor peak symmetry and tailing problem. Most of the separation methods in literature overcame these problems by use of buffers in mobile phase [14]. The proposed method was able to selectively separate lornoxicam in a short chromatographic run (less than 3 min) without the use of buffer mobile phase. The retention time is 2.63 min. The chromatogram is shown in Figure 2.

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### **CONCLUSION (Font size-12, all caps & bold)**

The proposed method for quantitative determination of lornoxicam in pharmaceutical formulation is efficient and sensitive. The excipients of the commercial sample analyzed did not interfere in the analysis, which proved the specificity of the method for these formulations. The HPLC method was found to be sensitive. Its advantages over other existing methods and less time consuming. This method can be used for in commercial samples.

It must summarize the salient findings of the study. Authors are strongly advised to emphasize the contributions made to the field by their study in this section

Disclosures - All authors must disclose any potential conflicts (financial, professional or personal) that are relevant to the manuscript. If the author(s) has nothing to disclose, this must be stated. Grant Support- List grant support and other assistance

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### **ACKNOWLEDGEMENT (Font size-12, all caps & bold)**

Authors are sincerely thanks to the funding agencies as DST, New Delhi, TNSCST, Chennai.

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### **REFERENCES (Font size-12, all caps & bold)**

List references numbered in the order in which they appear in the text.

1. Baifour JA, Fitton A, Barradell LB. Lornoxicam - A review of its pharmacology and therapeutic potential in the management of painful and inflammatory conditions. Drugs. 1996; 51(4): 639-57.

2. Phillips SJ, Whisnant JP. An introduction to gerontology. In: Gerontology and leadership skills for nurses. Ringsven MK, Bond D, eds. 2<sup>nd</sup> ed. Albany (NY): Delmar Publishers; 1996. p. 465–78.
3. Zhang JJ, Gao Y, Fan WM, et al. Development and validation of a sensitive and specific HPLC method for the estimation of lornoxicam in pharmaceutical formulations, 2004; available at <http://www.aapsj.org/abstracts/AAPS2004-000063.PDF>
4. Ghoneim MM, Beltagi AM, Radi A. Square wave Adsorptive Stripping Voltammetric Determination of the Anti-inflammatory drug Lornoxicam. *J Electroanal Chem* 2002; 18(2): 183-86.
5. Nemutlu E, Demircan S, Kir S. Determination of lornoxicam in pharmaceutical preparations by zero and first order derivative UV spectrophotometric methods. *Pharmazie*. 2005; 60(6): 421-25.
6. Phillips SJ, Whisnant JP. An introduction to gerontology. In: Gerontology and leadership skills for nurses. Ringsven MK, Bond D, eds. Proceedings of the 10<sup>th</sup> International Congress for Nurses; 1996 Oct 15-19; Kyoto, Japan: Delmar Publishers; 1996. p. 1561-65.

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Journal names should be abbreviated according to <http://www.nlm.nih.gov/tsd/serials/lji.html>

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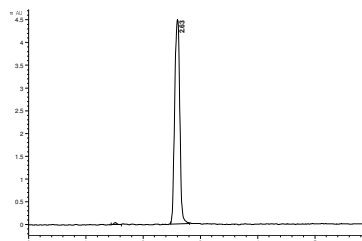


Figure No & colon

Figure 1: Representative chromatogram of Lornoxicam 4 µg/ml (R<sub>t</sub> 2.63 min).

measured at 381 nm.

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Units : Follow one format only i.e., µg/ml and ml/min etc.

Table 1: Summary of Regression analysis and validation parameters.

Parameters	Values
<b>Validation parameters</b>	
LOD (µg/ml)	0.013
LOQ (µg/ml)	0.465
Intra-day (n=3)	0.99-1.52

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Table 2: Recovery of lornoxicam standard solution added to sample.

Sl. No.	Std. lornoxicam conc. µg/ml	Sample conc. µg/ml	Recovery of standard Drug* µg/ml	% Recovery of Standard* ±RSD
1	2	4	1.97±0.23	98.50 ± 1.73 <sup>a</sup>
2	4	4	4.06±0.15	101.50 ± 0.38 <sup>b</sup>
3	8	4	8.11±0.09	101.38 ± 0.11 <sup>b</sup>

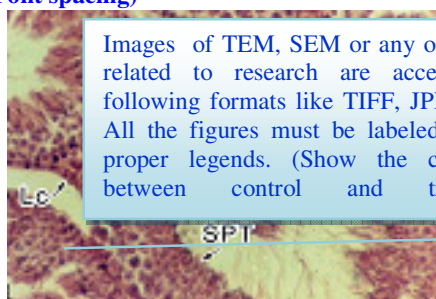
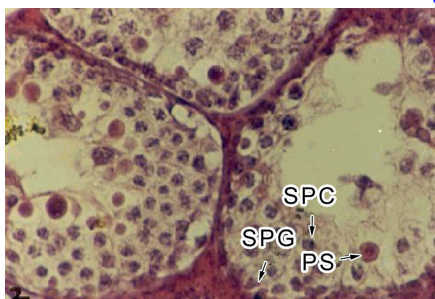
Tabulated data must be analyzed statistically & Expand the abbreviations wherever used

\*Mean value of three determinations.

<sup>a</sup>Data represent means±standard deviations of three measurements.

<sup>b</sup>Mean with the same letter within a row (following the values) are not significantly different ( $P < 0.05$ ).

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Images of TEM, SEM or any other photographs related to research are accepting with the following formats like TIFF, JPEG, BMP, PNG. All the figures must be labeled and also given proper legends. (Show the clear differences between control and treated group)

Figure 3: Transverse section of control mice testis showing normal seminiferous tubules with all types of spermatogenic elements and spermatozoa (400). Note the healthy Leydig cells (Lc). Spermatocytes (SPC); Spermatogonia (SPG); Spermatozoa (SZ); Spermatids (SPT).

Figure 4: Transverse section of Amalakyadi churna-treated mice testis showing shrinkage of seminiferous tubules and decreased Leydig cells. Note significant decreases in the spermatogonia (SPG), spermatocytes (SPC) and spermatids and absence of spermatozoa. In spermatocytes nuclear pyknosis (PS) is seen (400).

## REVIEWS AND MINI REVIEWS

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