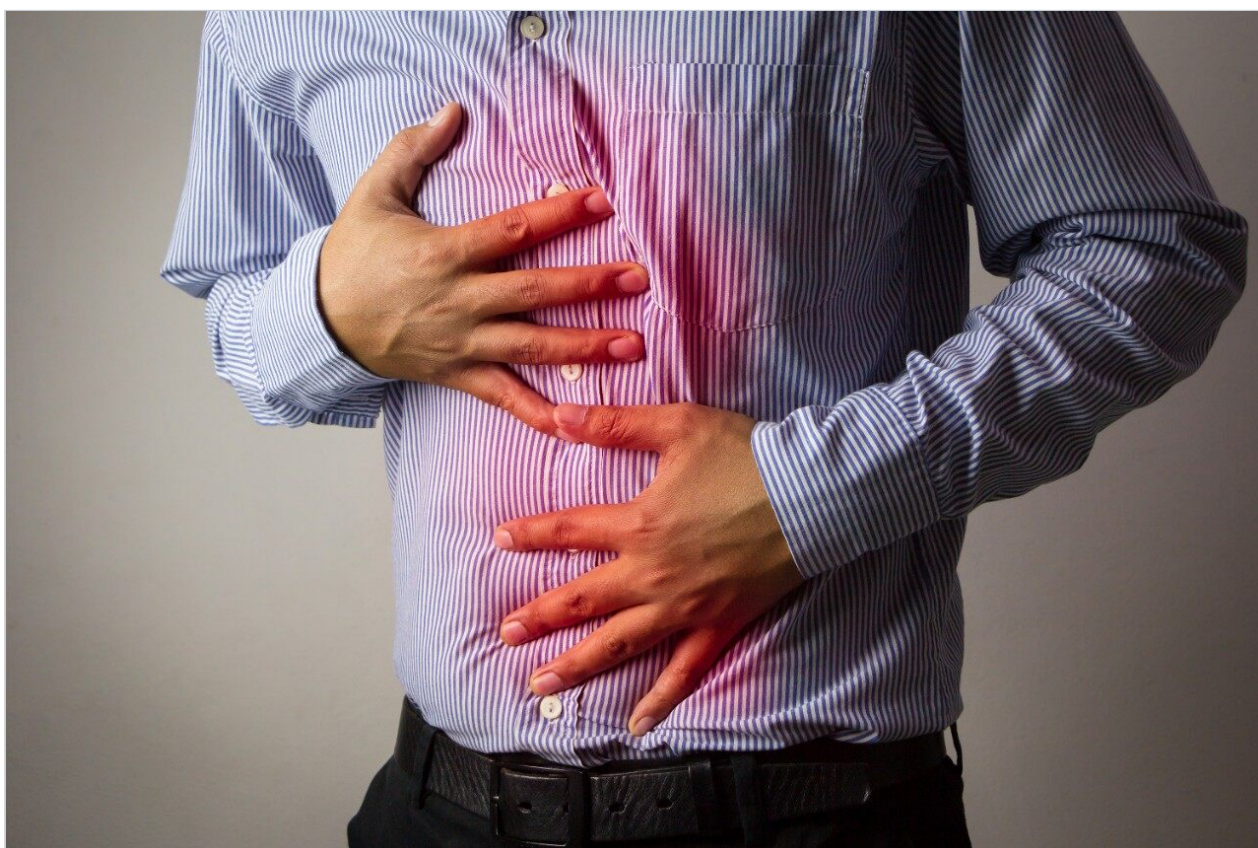


# Lansoprazole: Isocratic Separation and Degradation by 0.4 N HCl

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Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

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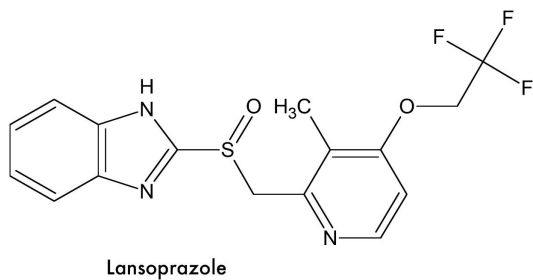
## Abstract

This application brief highlights the isocratic separation and degradation of lansoprazole.

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## Introduction

Lansoprazole is used to treat ulcers, gastroesophageal reflux disease (GERD), and conditions where the stomach produces too much acid.



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## Experimental

### Conditions

Column:	SunFire C <sub>18</sub> 4.6 x 150 mm, 5.0 μm (p/n: 186002559)
Mobile phase A:	20 mM HCOO-NH <sub>4</sub> <sup>+</sup> , pH 3.0
Mobile phase B:	Acetonitrile
Isocratic:	as indicated
Flow rate:	1.4 mL/min
Injection volume:	2 μL
Sample Diluent:	75:25 H <sub>2</sub> O:ACN
Sample concentration:	350 μg/mL

Temperature:	30 °C
Detection:	UV @ 254 nm
Sampling rate:	10 pts/sec
Time Constant:	0.1
Instrument:	Waters Alliance HT 2795, with 2996

## Conditions

Column:	SunFire C <sub>18</sub> 4.6 x 150 mm, 5.0 µm (p/n: 186002559)  SunFire C <sub>8</sub> 4.6 x 150 mm, 5.0 µm (p/n: 186002737)
Mobile phase A:	20 mM HCOO-NH <sub>4</sub> <sup>+</sup> , pH 3.0
Mobile phase B:	Acetonitrile
Isocratic:	as indicated
Flow rate:	1.4 mL/min
Injection volume:	5 µL
Sample Diluent:	50:50 H <sub>2</sub> O:ACN
Sample concentration:	2.63 mg/mL
Temperature:	30 °C
Detection:	UV @ 254 nm
Sampling rate:	5 pts/sec

Time Constant:

1

Instrument:

Waters Alliance HT 2795, with 2996

### Degradation Conditions:

Temperature: ambient

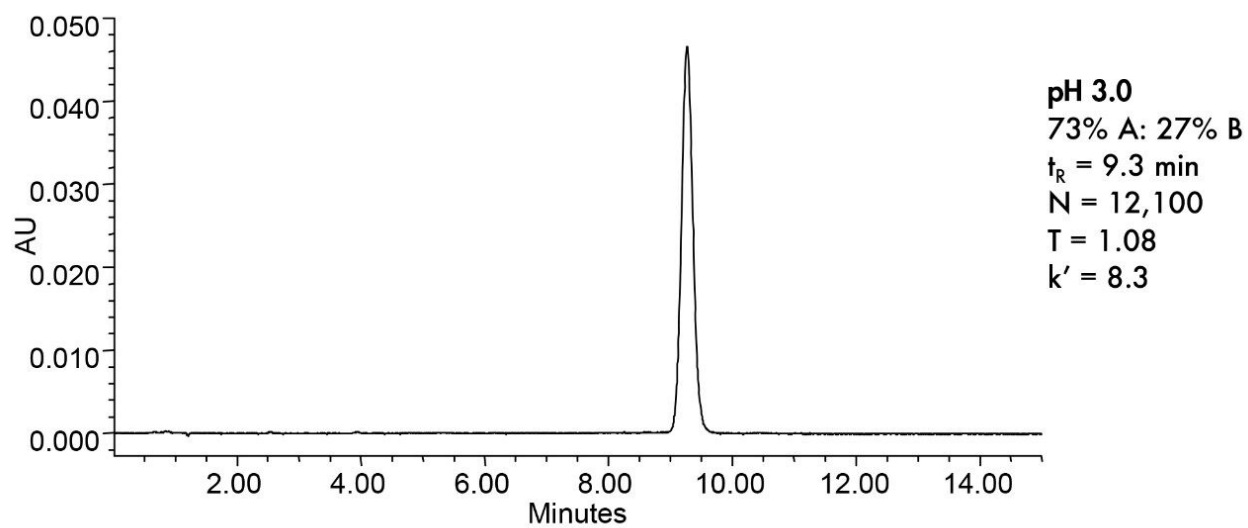
50 mg of Lansoprazole + 5 mL of 0.4N HCl stirred for ~ 30 seconds

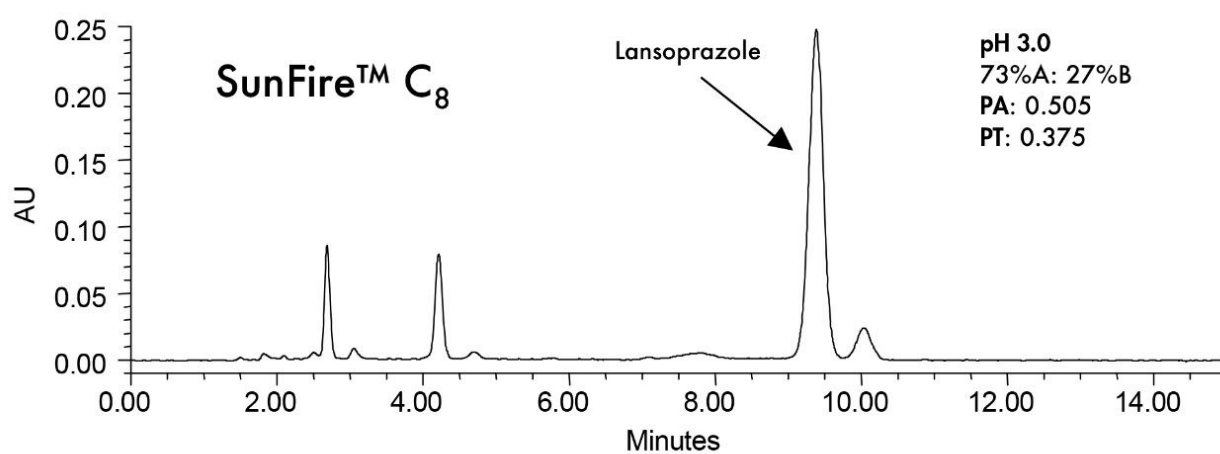
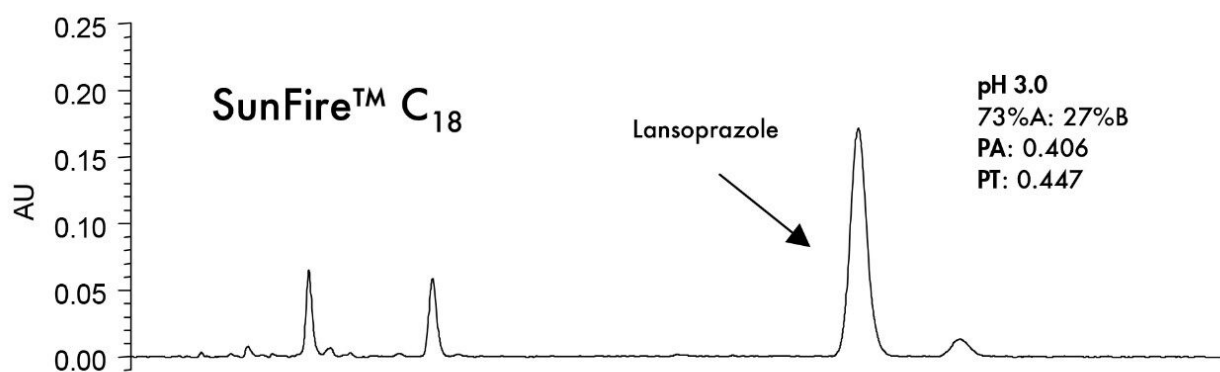
Stop reaction by add 0.9 mL of 0.4N NaOH, then dilute with 1.9 mL ACN

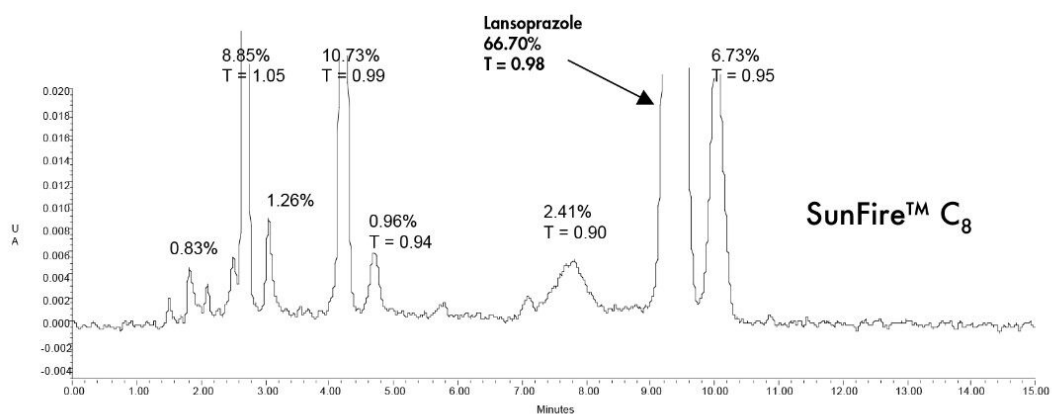
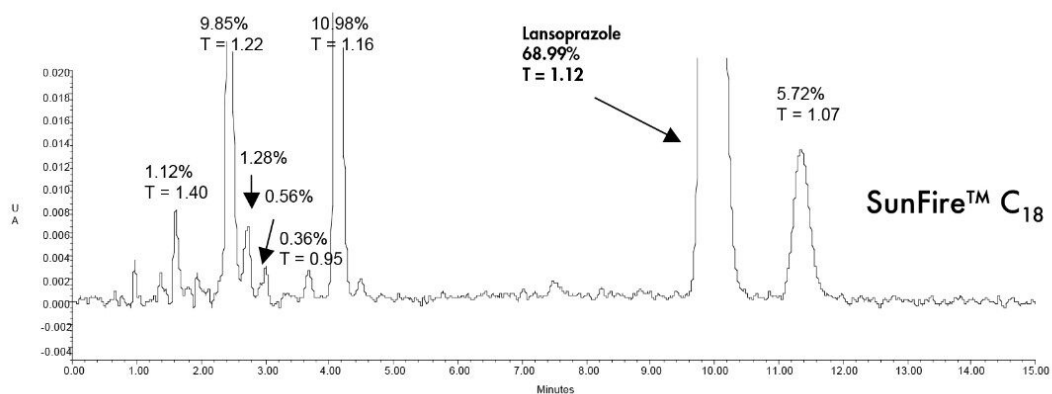
Lansoprazole degraded ~ 32%

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## Results and Discussion







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WA41893, March 2005