

2006 -

-4

*

Bulk

-4

393.8

50 - 5

2.4 ± %98

*

A new Spectrophotometric Method for the Determination of Lisinopril in Bulk and Tablets after Derivatization with 4-Nitrobenzene Diazonium Tetra Fluoro Borate

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Abstract

A new colorimetric analytical method was developed for determination of Lisinopril in bulk and tablets .

The method is depended on derivatization chemical reaction between Lisinopril and 4- nitrobenzene diazonium tetra fluoro borate in non aqueous medium to give color derivatives with max. absorption at 293.8 nm

The resulting color was measured spectrophotometrically . The absorbance concentration plots were recti linear over the range 5-50 µg /ml.

The method applied for determination the Lisinopril in Tablet, The percentage recoveries was 98% ± 2.4.

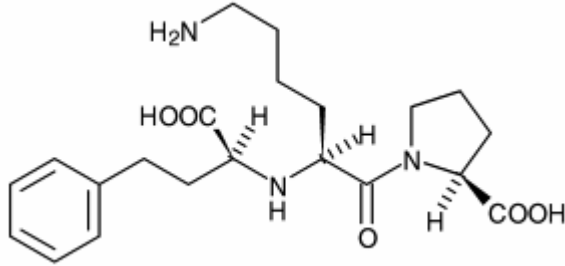
The results obtained were in accordance with those found using the HPLC standard method in Pharmacopoeia .

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:Introduction

Lisinopril

Angiotensin Converting Enzyme Inhibitor

 $C_{21}H_{31}N_3 O_5 \cdot 2H_2O$

441.5

83915-83-7

[3]

20 10 5

80 40

HPLC

[15,3]

[13,12]

[10,7,5,4,2]

Materials and :

Method

Standard : -1 [14,2]
Substances [11,8,5,1]
Lisinopril [6] HPTLC
Farmahi (CEP)
.582500625,d
Dosage : -2 [9] Capillary electrophoresis
Form HPLC
Lisoten®
10 5 2.5
40 30 20
() Diamondpharm
:Chemicals -3
4-Nitrobenzene diazonium tetra - CEF
 $C_6H_4BF_4N_3O_2$ fluoroborate
73025 Fluka UV
Aceton , analytical grad -
Scharlau
.70929

100 -

Cu(CH₃COO)₂.H₂O

: Instruments -5 Copper(II)acetate monohydrate

: 1-5 Scharlau

Cecil CE 7200 .52670

Methanol -

CECIL .10600902511

INSTRUMENTS LIMITED -4

,ENGLAND

. 1 :Solution and Reagent

: 2-5 :1-4

Crest Ultrasonics :Standard Solution

SDN.BHD 5750AE

.Malaysia Lisinopril dehydrate

HPLC : HPLC : 3-5 1 / 1

L-2450 Merck Hitachi (Elite la chrom) 5

:Procedure

: -1

: 2-4

Standard Solution :Reagent

) 1.5-0.25 -4 0.1

(0.020

25

100

1

5

393.8

. (1)

Results and

Discussion :

.Regression Equation

Lisinopril

:

-2

160

20

. [15])

100

0.1

246•253•258•264•267

50

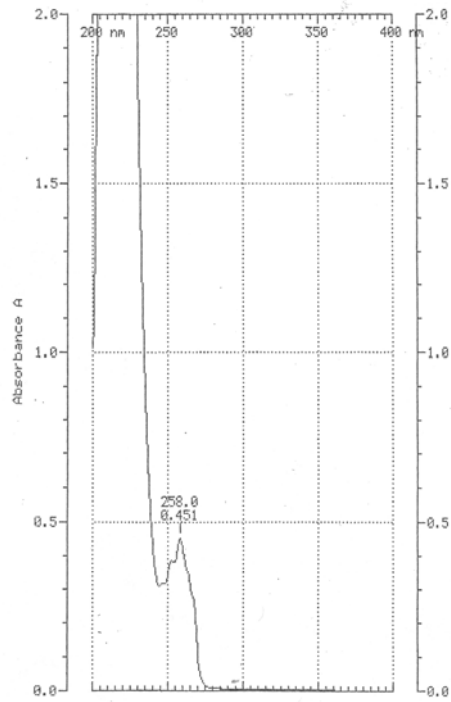
(
100

258

4.5 = A(1%,1cm)

10

.(1)



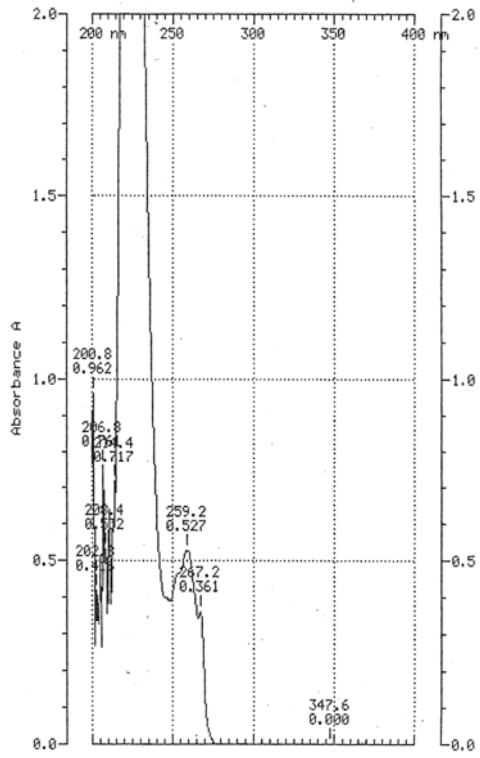
: (1)

. HCl 0.1

267 , 261 , 258 , 254)

(0.1

.(2) 2.8 A(1%,1cm) , 246 UV



NaOH 0.1 : (2)

UV

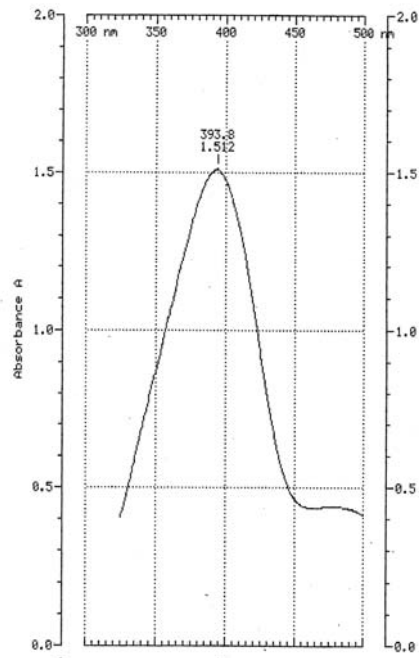
[2] Bonazzi

[14] Stainz

UV

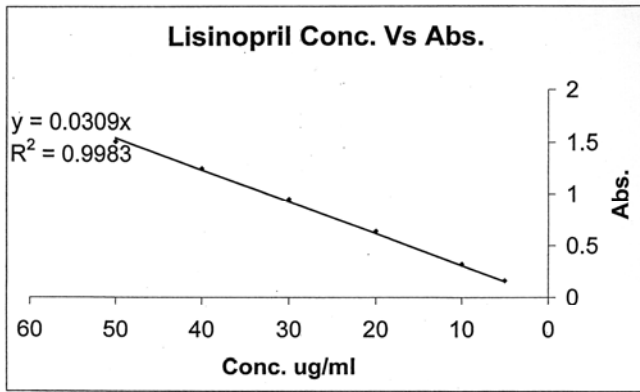
(3)

-4



(3)

) 50-5 393.8
 (4 302.4 A(1%,1cm)
 .(1)



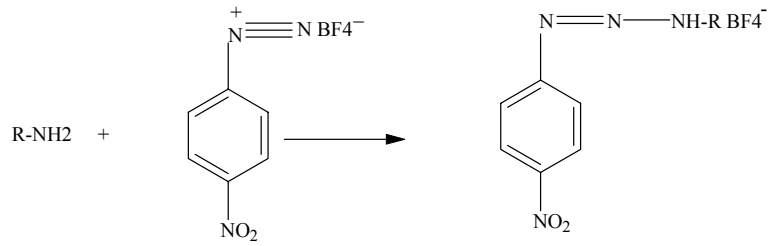
:(4)

:

: 1

393.8	()
302.4	A(1%,1cm)
/ 50 -5	Concentration Range
0.0309 ÷ = (/)	Regression Equation
0.9983	Correlation Coefficient
	Application

(1.5.8.11)



Accuracy ()

1

5

T

(T-Test)

Authentic

.3

2

2

: (2)

.(15)

HPLC

%				
98.2	100.6	5.03	0.163	5
97.4	99.19	9.919	0.321	10
96.8	98.55	19.71	0.638	20
100.3	97.83	29.35	0.95	30
99.4	96.5	38.6	1.25	40
96.7	94	47	1.512	50
1.24 ± 98.13	1.7 ± % 97.77			n= 10 T= 2.933 (3.182)*

. % 95

T

*

: (3)

%		
± 98.10	2.4 ± % 98	Lisoten® 10 mg
2.1		n=5

:Acknowledgements

:Conclusions

HPLC

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