

B1A111

Analytical Study on Some Skeletal Muscle Relaxants and Anti-spastic Drugs

Thesis

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master degree

In

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" Analytical Chemistry "

By

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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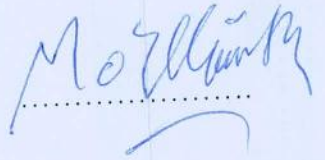
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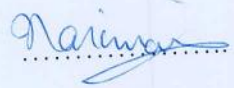
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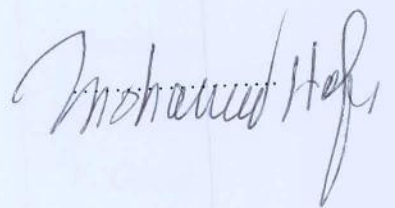
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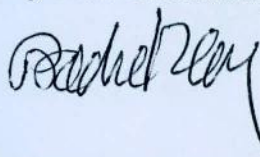
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List of Abbreviations

SMR	Skeletal muscle relaxants
NSAIDs	Non-steroidal anti-inflammatory drugs
Mol.Wt	Molecular weight
HPLC	High performance liquid chromatography
RP-HPLC	Reversed phase high performance liquid chromatography
UV	Ultraviolet
nm	Nanometer = 10^{-9} meter
DMF	Dimethylformamide
GC	Gas chromatography
GC-MS	Gas chromatography mass spectrometry
TLC	Thin layer chromatography
HP-TLC	High performance thin layer chromatography
SD	Standard deviation
S^2	Variance ($S^2 = (SD)^2$)
RSD	Relative standard deviation ($RSD = 100 \times SD / \text{mean}$)
MLR	Multiple linear regression
CLS	Classical least squares
ILS	Inverse least squares
PCR	Principal component regression
PLS	Partial least squares
DD ¹	First derivative of difference spectrophotometry
DD ²	Second derivative of difference spectrophotometry
K-Matrix	Calibration matrix in CLS
P-Matrix	Calibration matrix in ILS
r	Correlation coefficient
PC	Principal component
PCA	Principal component analysis

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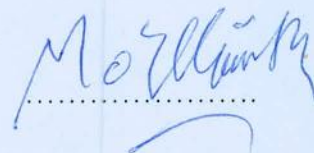
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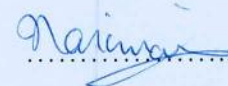


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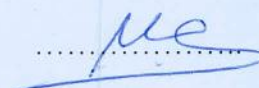


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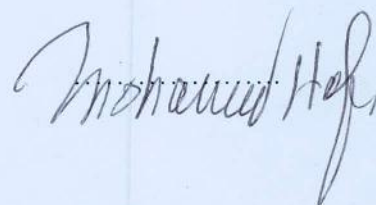


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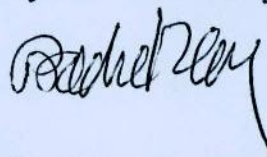


Note

Besides the work carried out in this thesis, the candidate has attended and successfully passed the postgraduate courses examination with the grades mentioned in the following:

<u>Subject</u>	<u>Grade</u>
◆ <i>Quality Control</i>	<i>Excellent</i>
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◆ <i>Bioavailability</i>	<i>Excellent</i>
◆ <i>Instrumental Analysis</i>	<i>V. Good</i>
◆ <i>Computer and Its Applications</i>	<i>Excellent</i>
◆ <i>Searching Literature</i>	<i>Excellent</i>
◆ <i>Statistics</i>	<i>Pass</i>
◆ <i>Higher Mathematics</i>	<i>Excellent</i>
◆ <i>General Grade</i>	<i>Excellent</i>

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P-Matrix	Calibration matrix in ILS
r	Correlation coefficient
PC	Principal component
PCA	Principal component analysis

PRESS	Prediction residual error sum of squares
SEP	Standard error of prediction
RMSECV	Root mean square error of cross validation
RMSEC	Root mean square error of calibration
CV-LOO	Cross validation leave out one method
ANOVA	Analysis of variance
SS	Sum of squares
MS	Mean square
n	Number of samples
df	Degree of freedom ($df = n-1$)
$\Delta\lambda$	Difference in wavelengths across which derivative is calculated
F	Scaling factor
K	Reaction rate constant
T	Absolute temperature ($T = t\text{ }^{\circ}\text{C} + 273$)
Ea	Activation energy
A	Frequency factor
DR ¹	First derivative of ratio spectra
$t_{0.5}$	Half life (The time required for the drug to decrease to 50% of its original concentration)
IR	Infrared
μg	Microgram = 10^{-6} gram

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