# ABSTRACT

2-*N*-(3-methyl)piperidinoquinoline **(25)**, 2-*N*-(4-methyl)piperidinoquinoline **(26)**, 2-*N*-anilinoquinoline **(28)**, 2-*N*- (*m*-methyl)anilinoquinoline **(30)**, 2-*N*-(*p*-methyl)anilinoquinoline **(32)**, 2-*N*-(*m*-ethyl)anilinoquinoline **(34)**, 2-*N*-(*p*-ethyl)anilinoquinoline **(36)**, 2-*N*-methylanilinoquinoline **(38),** 2-*N*-ethylanilinoquinoline **(40)**, 2-*N*-(*m*-methoxy)anilinoquinoline **(42)**, 2-*N*-(*p*-methoxy)anilinoquinoline **(44**), 2-*N*-(*m*-chloro)anilinoquinoline **(46)**, and 2-*N*-(*p*-chloro)anilinoquinoline **(48)** were prepared by reacting 2-chloroquinoline **(22)** with 3-methylpiperidine **(23)**, 4-methylpiperidine **(24)**, aniline **(27)**, *m*-toluidine **(29)**, *p*-toluidine **(31)**, *m*-ethylaniline **(33)**, *p*-ethylaniline **(35)**, *N*-methylaniline **(37)**, *N*-ethylaniline **(39)**, *m*-anisidine **(41)**, *p*-anisidine **(43)**, *m*-chloroaniline **(45)** and *p*-chloroaniline **(47)** respectively. The structure of these compounds were confirmed using $^{1}$H NMR, $^{13}$C NMR, infra-red and GCMS. The fluorescence properties were recorded using Luminescence Spectrophotometer. Almost all compounds prepared showed highest fluorescence intensity in less polar solvents and lowest fluorescence intensity in polar protic solvents. Compound **30**, **34** and **48** showed higher fluorescence intensity in alkaline and neutral conditions while lower fluorescence intensity was recorded in acidic condition.

# ABSTRAK

2-*N*-(3-metil)piperidinoquinolina **(25)**, 2-*N*-(4-metil)piperidinoquinolina **(26)**, 2-*N*-anilinoquinolina **(28)**, 2-*N*- (*m*-metil)anilinoquinolina **(30)**, 2-*N*-(*p*-metil)anilinoquinolina **(32)**, 2-*N*-(*m*-etil)anilinoquinolina **(34)**, 2-*N*-(*p*-etil)anilinoquinolina **(36)**, 2-*N*-metilanilinoquinolina **(38),** 2-*N*-etilanilinoquinolina **(40)**, 2-*N*-(*m*-metoksi)anilinoquinolina **(42)**, 2-*N*-(*p*-metoksi)anilinoquinolina **(44**), 2-*N*-(*m*-kloro)anilinoquinolina **(46)**, dan 2-*N*-(*p*-kloro)anilinoquinolina **(48)** disediakan melalui tindakbalas 2-kloroquinolina **(22)** dengan 3-metilpiperidina **(23)**, 4-metilpiperidina **(24)**, anilina **(27)**, *m*-toluidina **(29)**, *p*-toluidina **(31)**, *m*-etilanilina **(33)**, *p*-etilanilina **(35)**, *N*-metilanilina **(37)**, *N*-etilanilina **(39)**, *m*-anisidina **(41)**, *p*-anisidina **(43)**, *m*-kloroanilina **(45)** and *p*-kloroanilina **(47)**. Struktur sebatian ini ditentukan menggunakan $^{1}$H NMR, $^{13}$C NMR, infra-merah and GCMS. Ciri pendafluoran telah direkod menggunakan Spektrometer Pendafluoran. Hampir semua sebatian yang disediakan menunjukkan keamatan pendafluoran paling tinggi dalam pelarut kurang berkutub dan keamatan pendafluoran yang rendah dalam pelarut protik berkutub. Sebatian **30**, **34** dan **48** menunjukkan keamatan pendafluoran tinggi dalam keadaan berbes dan neutral dan keamatan pendafluoran yang rendah direkodkan dalam keadaan berasid.

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# LIST OF SYMBOLS AND ABBREVIATIONS

The following symbols and abbreviations have been used throughout this thesis.

| | |
|---|---|
| $CDCl_3$ | deuterated chloroform |
| $CH_3CN$ | acetonitrile |
| d | doublet |
| dd | doublet of doublets |
| EtOAc | ethyl acetate |
| EtOH | ethanol |
| IR | infrared |
| *J* | coupling constant |
| M | mole per liter |
| m | multiplet |
| m.p | melting point |
| min. | minute |
| MW | molecular weight |
| NMR | nuclear magnetic resonance |
| q | quartet |
| s | singlet |
| t | triplet |
| td | triplet of doublets |
| THF | tetrahydrofuran |
| TLC | thin layer chromatography |
| δ | chemical shift |
| λ | wavelength |
| ν | stretching vibration |