CASTELLANOS & Co.
ABOGADOS
Calle 94 A No. 7 A - 09
Bogotá, D.C., COLOMBIA

Señor

Jefe de la División de Nuevas Creaciones

Superintendencia de Industria y Comercio

Ministerio de Comercio, Desarrollo, Industria y Turismo

E. S. D.

Re.: Expediente No. **06.087.361**
Solicitud del examen de patentabilidad correspondiente a la Patente PCT Entrada en Fase Nacional, para: **"INSECTICIDAS NUEVOS"**
Solicitante: **SYNGENTA LIMITED Y SYNGENTA PARTICIPATIONS AG**

RESPUESTA AL EXAMEN DE BUSQUEDA DE ANTERIORIDADES

MARGARITA CASTELLANOS ABONDANO, mayor de edad, identificada y domiciliada como aparece al pie de mi firma, en atención a su oficio No. **9315** notificado el 10 de junio de 2011, atentamente me permito dar repuesta al mismo de la siguiente manera:

Presento copia completa de los documentos requeridos por este Despacho como resultado de la búsqueda de anterioridades:

- DATABASE CAPLUS
  CHEMICAL ABSTRACTS SERVICE, COLUMBUS,
  OHIO, US;
  XP002342620
  retrieved from STN
  Database accession no. 1972:461937
  RN: 37849-60-8P; 37836-98-9P; 38008-98-9P
  Abstract
  & MEHTA, H. J. ET AL.: JOURNAL OF THE INDIAN CHEMICAL SOCIETY,
  vol 49, no. 4, 1972, pages 407-414

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- DATABASE CAPLUS
  CHEMICAL ABSTRACTS SERVICE, COLUMBUS,
  OHIO, US;
  XP002342621
  Retrieved from STN
  Database accession no. 1969:106471
  RN: 22440-28-4; 22440-19-3; 22440-30-8
  Abstract
  & MEHTA, V. K. ET AL.: INDIAN JOURNAL OF CHEMISTRY,
  Vol 6, no. 6, 1968, pages 294-296.

Cumplido así con lo dispuesto, atentamente solicito a Ud. se continúe con el trámite correspondiente a esta solicitud de Patente de Invención.

Del Señor Jefe,

Margarita Castellanos Abondano
C.C. No. **39.779.654** de Usaquén
T.P.A. No. **70.819** de **C.S.J.**
Calle 94 A No. 7 A-09 – Bogotá, D.C.
Tel.: 7560770

Bogotá, D.C. 29 AGO. 2011

Memorial Art 46/P1388

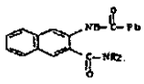
D 8

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1969:106471 CAPLUS <<LOGINID::20070903>>
DN 70:106471
TI Benzoquinazolines. II. Synthesis of 2-phenyl- and 2-benzyl-4-oxobenzoquinazolines and spectra studies on them
AU Mehta, V. K.; Patel, S. R.
CS Sardar Patel Univ., Vallabh Vidyanagar, India
SO Indian Journal of Chemistry (1968), 6(6), 294-6
CODEN: IJOCAP; ISSN: 0019-5103
DT Journal
LA English

AB 3-Benzamido-2-naphthoic acid (2 g.) and 6 ml. Ac2O refluxed 2 hrs. yielded 2-phenyl-4H-benzo[g]-3,1-benzoxazin-4-one (I), m. 222°. I was highly stable and did not react with liquid NH3 even at 100°. I (0.5 g.) heated 3 hrs. at 80° with 0.5 g. NH4Cl, 5 ml. liquid NH3 and 5 ml. EtOH yielded 3-benzamido-2-naphthamide (II), m. 239-40° (EtOH-HOAc), which when fused at 250° 20 min. yielded 2-phenylbenzo[g]quinazolin-4(3H)-one (III), m. 294-6°. III was not formed directly in one step in the reaction. Aminolysis of I with 30% MeNH2 at 50° 5 hrs. afforded 3-benzamido-N-methyl-2-naphthamide (IV), m. 212° (EtOH), which on fusion at 230° yielded 2-phenyl-3-methylbenzo[g]-quinazolin-4(3H)-one (V), m. 126° (EtOH-HOAc). V was also obtained by the reaction of III in alc. KOH with MeI when kept overnight and acidified. I did not react with PhNH2 at room temperature, but at 100° in 3 hrs. it yielded 3-benzamido-2-naphthanilide (VI), m. 208° (HOAc), which on fusion at 250° afforded 2,3-diphenylbenzo[g]quinazolin-4(3H)-one (VII), m. 208° (EtOH). VII was also prepared by heating 2 hrs. at 130-5°, a mixture of 0.5 g. 3-benzamido-2-naphthoic acid, 0.5 ml. PhNH2, 0.5 ml. PCl3, and 5 ml. PhMe. PhMe was removed (steam-distillation), and the reaction mixture rendered alkaline (NaHCO3) to yield VII. 3-Phenylacetamido-2-naphthoic acid (VIII), m. 212-13° (HOAc), (prepared from 3-amino-2-naphthoic acid heated 3 hrs. at 100° with PhCH2COCl in EtOAc) was refluxed with Ac2O to give 2-benzyl-4H-benzo[g]-3,1-benzoxazin-4-one (IX), m. 157-8°. IX kept 5 hrs. at room temperature with liquid NH3 afforded 3-phenylacetamido-2-naphthamide, m. 207-8° (EtOH-HOAc), which on fusion at 230° yielded 2-benzylbenzo[g]quinazolin-4(3H)-one (X), m. 271° (HOAc). X was also obtained by heating IX with liquid NH3 2 hrs. at 100°. IX heated 2 hrs. at 50° with 30% MeNH2 solution yielded 2-benzyl-3-methylbenzo[g]quinazolin-4(3H)-one (XI), m. 180-1° (EtOH). XI was also obtained when X was allowed to react with MeI in alc. KOH at room temperature IX when heated 3 hrs. at 100° with PhNH2 yielded 3-phenylacetamido-2-naphthanilide, m. 161-2° (EtOH), which when heated 1 hr. at 180° afforded 2-benzyl-3-phenylbenzo[g]quinazolin-4(3H)-one (XII), m. 192-3° (EtOH). XII was also formed by condensation of VIII with PhNH2 in presence of PCl3 in PhMe. The product, 3-phenylbenzo[f]quinazolin-1(2H)-one (XIII), m. 295-8°, reported to have been obtained (Shah and Ichoporia, CA 30: 48356) by the action of the imidochloride of N-naphthylbenzamide (formed on treating N-naphthylbenzamide with PCl5) with urethane and subsequent cyclization was III, m. 294-6°. On repetition of Shah and Ichoporia's synthesis (loc. cit.), the product obtained m. 325°, and not at 295-8°. XIII has now been prepared A

mixture of 0.6 g. N-naphthylbenzamide and 0.6 g. PCl5 in 5 ml. PhMe was refluxed 1 hr., excess PhMe removed by distillation, the residue washed with dry petroleum ether and heated 3 hrs. at 130-5° with 5 ml. PhMe and 2.2 g. urethane, and PhMe steam-distilled to give XIII, m. 326° (EtOH). XIII was also formed when N-naphthylbenzamide was condensed with urethane in the presence P2O5. XIII showed green fluorescence in alc. solution Condensation of N-naphthylphenylacetamide with urethane in the presence of P2O5 yielded 2-benzylbenzo[f]quinazolin-1(2H)-one (XIV), m. 278°. XIV was also synthesized by the imidochloride method. A comparison of the uv spectral data of 2-phenyl-(and 2-benzyl)quinazolin-4(3H)-ones and their benzo[g] and benzo[f] homologs has been made. The data provided conclusive evidence for the structures assigned to XIII and XIV.

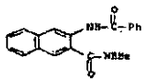
L7 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2007 ACS on STN
RN 22440-30-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Naphthamide, 3-benzamido- (8CI) (CA INDEX NAME)
MF C18 H14 N2 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

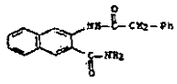
L7 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2007 ACS on STN
RN 22440-28-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Naphthamide, 3-benzamido-N-methyl- (8CI) (CA INDEX NAME)
MF C19 H16 N2 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

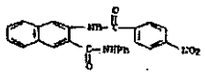
L7 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2007 ACS on STN
RN 22440-29-5 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Naphthamide, 3-[(2-phenylacetamido)- (8CI) (CA INDEX NAME)
MF C19 H16 N2 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



D7

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1972:461937 CAPLUS <<LOGINID::20070903>>
DN 77:61937
TI Niementowski 4-oxoquinazoline synthesis. IV. Application to 3-amino-2-naphthoic acid derivatives
AU Mehta, H. J.; Patel, B. M.; Patel, S. R.
CS Dep. Chem., Sardar Patel Univ., Vallabh Vidyanagar, India
SO Journal of the Indian Chemical Society (1972), 49(4), 407-14
CODEN: JICSAH; ISSN: 0019-4522
DT Journal
LA English
GI For diagram(s), see printed CA Issue.
AB Benzo[g]quinazolin-4(3H)-ones (I) (R = Ph, p-O2NC6H4, -MeOC6H4, -ClC6H4, Me, CH2Ph, p-MeOC6H4) were prepared by condensing, via the Niementowski 4-oxoquinazoline synthesis, 3-amino-2-naphthoic acid (II) with amides or 3-(acylamino)-2-naphthoic acids with NCONH2. Thus, 2 g II was heated with 3.5 g -ClC6H3CONH2 at 200° for 2 hr to give 0.2 g I (R = -ClC6H3). The uv spectra for all compds. prepared were given. The reaction mechanism proposed for the Niementowski 4-oxoquinazoline synthesis (B. M. Patel and S. R. Patel, 1965, 1968) is supported.

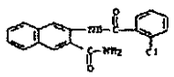
L6 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2007 ACS on STN
RN 38008-98-9 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Naphthalenecarboxamide, 3-[(4-nitrobenzoyl)amino]-N-phenyl- (9CI) (CA INDEX NAME)
MF C24 H17 N3 O4
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2007 ACS on STN
RN 37849-50-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Naphthalenecarboxamide, 3-[(2-chlorobenzoyl)amino]- (9CI) (CA INDEX NAME)
MF C18 H13 Cl N2 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2007 ACS on STN
RN 37816-90-6 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Naphthalenecarboxamide, 3-[(4-methoxybenzoyl)amino]- (9CI) (CA INDEX NAME)
MF C19 H16 N2 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)