PHILIPPINE PATENT [19]

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[54] **Title:** HETEROCYCLIC N-ACYLSULFONAMIDES AND THEIR USE AS HERBICIDES AND PLANT GROWTH REGULATORS

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None

[57]

ABSTRACT see attached sheet

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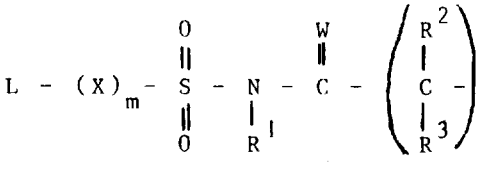
ABSTRACT OF THE DISCLOSURE

Heterocyclic N-acylsulfonamides, processes for their preparation, agents containing them, and their use as herbicides or growth regulators

Compounds of the formula I or salts thereof



where R^1 is H or an aliphatic radical; R^2 and R^3 are H, alkyl or phenyl; W is Ø, S, NR^4 or NOR^4, X is CHR^2, Ø or NR^4; L is a (substituted) phenyl, naphthyl or monocyclic heteroaryl radical, A is a (substituted) pyrimidyl, triazinyl, triazolyl or bicyclic heteroaryl radical, and m and n are Ø or 1, have advantageously herbicidal or plant growth-regulating properties.

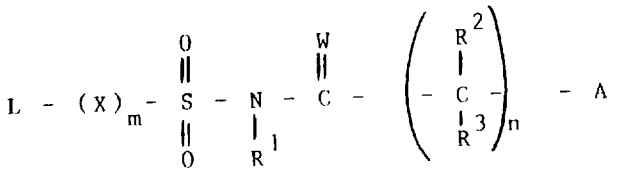
Description

Heterocyclic N-acylsulfonamides, processes for their preparation, agents containing them, and their use as herbicides or growth regulators

It is already known that certain sulfonylated bi- or tricyclic heteroaromatic carboxamides have herbicidal and growth-regulating properties (EP-A-244,166). Sulfonylated monocyclic pyridinecarboxamides are described as fungicides and microbiocides in agriculture (Chem. Abstr. 108 (18): 167298p; Chem. Abstr. 108 (15): 131590p). A herbicidal action of these compounds has not been disclosed.

It has been found that heterocyclic N-acylsulfonamides have advantageous herbicidal and growth-regulating properties.

The present invention therefore relates to compounds of the formula I or their salts



where

R^1 is hydrogen, (C_1-C_4)-alkyl, (C_2-C_6)-alkenyl or (C_2-C_6)-alkynyl;

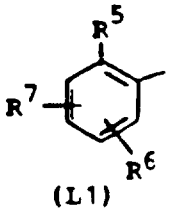
R^2 and R^3 independently of one another are hydrogen, (C_1-C_3)-alkyl or phenyl;

W is Ø, S, NR^4 or NOR^4,

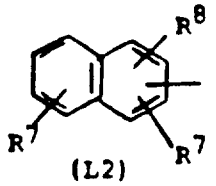
R^4 is hydrogen, (C_1-C_3)-alkyl, (C_1-C_3)-haloalkyl or phenyl;

X is CHR^2, Ø, NR^4 or NOR^4,

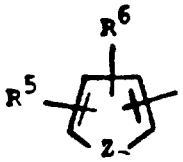
L is a heterocyclic or isocyclic radical of the formulae (L1) - (L5),



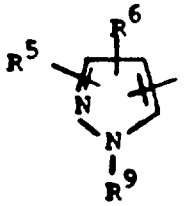
(L1)



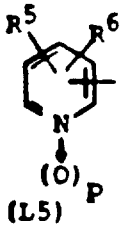
(L2)



(L3)

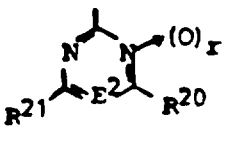


(L4)

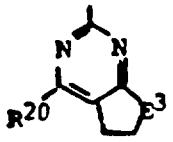


(L5)

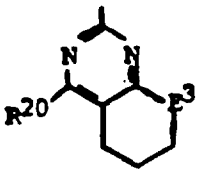
A is a heterocyclic radical of the formulae (A1) - (A8)



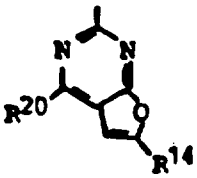
(A1)



(A2)



(A3)



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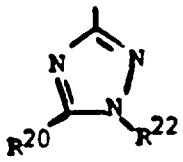
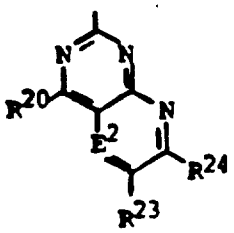
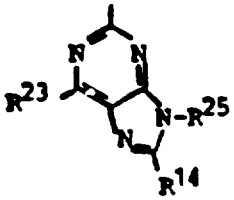


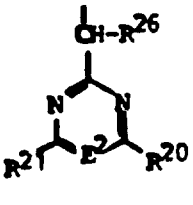
(A5)



(A6)



(A7)



(A8)

Z is O or $S(O)_q$,

E^1 is O or $S(O)_b$,

E^2 is CH or N,

E^3 is O or CH_2,

a, m, n, p, r and s independently of one another are 0 or 1,

b and q independently of one another are 0, 1 or 2,

R^5 is hydrogen, halogen, NO_2, CN, (C_1-C_4)-alkyl which is unsubstituted or monosubstituted or polysubstituted by F, Cl or Br or monosubstituted by CN, OCH_3 or SCH_3, or is (C_2-C_4)-alkenyl which is unsubstituted or monosubstituted or polysubstitu-

ted by F, Cl or Br or monosubstituted by OCH_3; or is (C_2-C_4)-alkynyl which is unsubstituted or monosubstituted or polysubstituted by F, Cl or Br or monosubstituted by OCH_3 or $Si(CH_3)_3$; or is (C_3-C_6)-cycloalkyl which is unsubstituted or monosubstituted or polysubstituted by F, Cl or CH_3; or is $-C(Ø)R^{1Ø}$, $-ØCH_2CH_2OR^{1Ø}$, $-OH$, $-C(R^{1Ø})-(OR^{11})(OR^{12})$; $-CO_2R^{13}$, $-C(Ø)NR^{14}R^{15}$, $-N_3$, $-SO_2NR^{14}R^{15}$, $-SO_3R^{16}$, $-OSO_2R^{17}$, phenyl which is unsubstituted or monosubstituted or polysubstituted by F, Cl, Br, CH_3 or OCH_3; or is $-E^1R^{18}$ or $-(CH_2)_6G$,

R^6 is hydrogen or halogen; CN; NO_2; (C_1-C_4)-alkyl which is unsubstituted or monosubstituted or polysubstituted by halogen or monosubstituted to disubstituted by $-CO_2R^{13}$, $-SO_2NR^{14}R^{15}$, $-NR^{14}R^{15}$, (C_1-C_2)-alkoxy, $-E^1R^{19}$, (C_1-C_2)--haloalkoxy, (C_1-C_2)-alkylthio, $(C_1-$

C_2)-haloalkylthio, CN, OH or SH; or is $-CO_2R^{13}$, $-SO_2NR^{14}R^{15}$, $-NR^{14}R^{15}$ or or $-E^1R^{19}$;

R^7 radicals independently of one another are hydrogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_2-C_4)-alkenyl, phenyl or phenyl which is monosubstituted or polysubstituted by halogen or $-E^1R^{19}$; or is $-E^1R^{19}$ or halogen,

R^8 is hydrogen, (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, halogen, $-CO_2R^{13}$, $-SO_2NR^{14}R^{15}$, $-OSO_2R^{17}$, $-S(O)_bR^{18}$, CN or NO_2,

R^9 is hydrogen, (C_1-C_4)-alkyl which is unsubstituted or monosubstituted or polysubstituted by halogen or monosubstituted by phenyl; or is (C_2-C_4)-alkenyl; or is phenyl or phenyl which is monosubstituted or polysubstitüted by halogen, (C_1-C_4)-alkyl, NO_2, CN or (C_1-C_4)-alkoxy,

R^{10} is hydrogen, (C_1-C_4)-alkyl, (C_1-C_4)-alkyl which is monosubstittued or

polysubstituted by F, Cl, Br or OCH_3; or is (C_3-C_6)-cycloalkyl which is unsubstituted or monosubstituted or polysubstituted by F, Cl, Br or CH_3; or is (C_2-C_4)-alkenyl or (C_2-C_4)-alkynyl;

R^{11} and R^{12} independently of one another are (C_1-C_4)-alkyl, or R^{11} and R^{12} together are $-CH_2CH_2$ $-CH_2OCH_2-$ or $-CH_2C(CH_3)_2CH_2-$;

R^{13} is hydrogen, (C_1-C_4)-alkyl which is unsubstituted or monosubstituted or polysubstituted by halogen or monosubstituted to disubstituted by CN, CO_2R^{10}, $NR^{14}R^{15}$, OR^{10} or $Si(CH_3)_3$; or is (C_3-C_4)-alkynyl which is unsubstituted or substituted by CH_3 or $Si(CH_3)_3$; or is (C_3-C_6)-cycloalkyl, (C_3-C_6)-cycloalkyl-(C_1-C_4)-alkyl, (C_1-C_4)-alkoxy or $Si(CH_3)_3$;

R^{14} is hydrogen or (C_1-C_4)-alkyl, or R^{14} and R^{15} together are $-(CH_2)_2(CH_2)_a(CH_2)_2-$ or

$-(CH_2)_2Ø(CH_2)_2-$,

R^{15} is hydrogen, (C_1-C_4)-alkyl, (C_1-C_4)-alkoxy, (C_2-C_4)-alkenyl, or R^{14} and R^{15} together are $-(CH_2)_2(CH_2)_a(CH_2)_2-$ or $-(CH_2)_2Ø(CH_2)_2-$,

R^{16} is (C_1-C_4)-alkyl or (C_1-C_4)-haloalkyl,

R^{17} is (C_1-C_4)-alkyl or $NR^{14}R^{15}$,

R^{18} is (C_1-C_4)-alkyl, (C_1-C_4)-haloalkyl, (C_2-C_4)-alkoxyalkyl, (C_2-C_4)-alkenyl, (C_3-C_4)-alkynyl, phenyl or phenyl which is monosubstituted or polysubstituted by halogen, (C_1-C_3)-alkyl, (C_1-C_3)-alkoxy or (C_1-C_3)-haloalkyl;

R^{19} is (C_1-C_4)-alkyl or (C_1-C_4)-alkyl which is monosubstituted or polysubstituted by F or Cl or monosubstituted by OR^{16},

$R^{2Ø}$ and R^{21} independently of one another are hydrogen, halogen, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy or (C_1-C_6)-alkylthio, it being possible for the three abovementioned radicals to be monosubstituted or polysubstituted by halogen or monosubstituted or

disubstituted by (C_1-C_4)-alkoxy or (C_1-C_4)-alkylthio; or are $-NR^{14}R^{15}$, (C_3-C_6)-cycloalkyl, $-OCHR^{14}-CO_2R^{13}$, (C_2-C_5)-alkenyl, (C_2-C_4)-alkynyl, (C_3-C_5)-alkenyloxy or (C_3-C_5)-alkynyloxy;

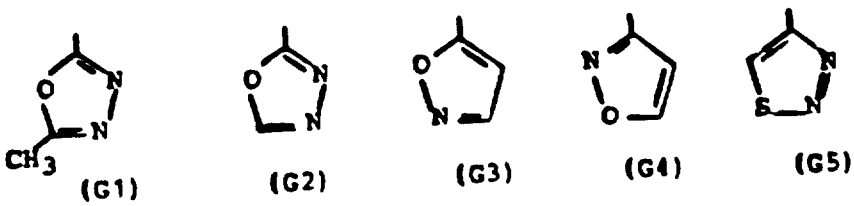
R^{22} is (C_1-C_4)-alkyl or (C_1-C_4)-haloalkyl,

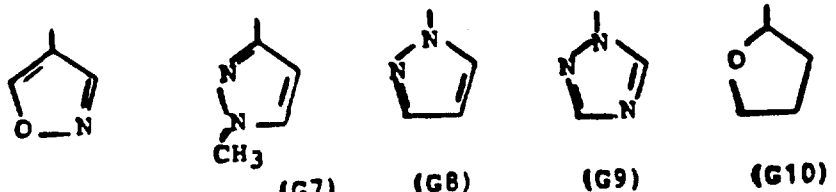
R^{23} and R^{24} independently of one another are hydrogen, (C_1-C_4)-alkyl, (C_2-C_4)-alkenyl or (C_2-C_4)-alkynyl;

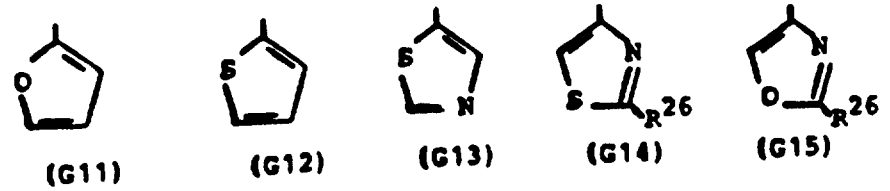
R^{25} is hydrogen, (C_1-C_4)-alkyl or (C_1-C_4)-haloalkyl,

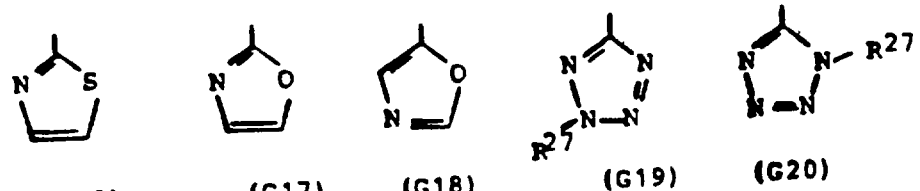
R^{26} is hydrogen or (C_1-C_3)-alkyl,

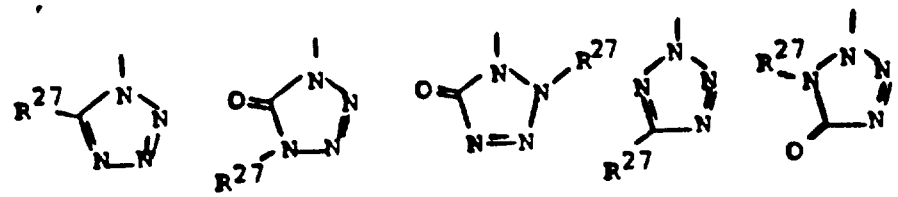
G is a heterocyclic radical (G 1) - (G 25),


(G1) (G2) (G3) (G4) (G5)


(G6) (G7) (G8) (G9) (G10)


(G11) (G12) (G13) (G14) (G15)


(G16) (G17) (G18) (G19) (G20)


(G21) (G22) (G23) (G24) (G25)

R^{27} is hydrogen, (C_1-C_3)-alkyl or (C_2-C_4)-alkenyl.

The compounds of the formula I can contain one or more chiral centers and are then present as mixtures of diastereomers or enantiomers. The invention embraces the pure enantiomers or diastereomers and their mixtures.

In the event that R^1 is H, the compounds of the formula I can form salts in which the hydrogen of the $-SO_2-NH-$ group is replaced by a cation which is suitable for agriculture. In general, these salts are metal salts, in

particular alkali metal salts, alkaline earth metal salts, optionally alkylated ammonium salts or organic amine salts. They are preferably prepared in inert solvents, such as, for example, water, methanol or acetone, at temperatures from Ø - 1ØØ°C. Examples of suitable bases for the preparation of salts according to the invention are alkali metal carbonates, such as potassium carbonate, or alkali metal hydroxides and alkaline earth metal hydroxides, ammonia or ethanolamine.

In the abovementioned definitions, the term "alkyl", on its own or in compound words, such as "alkylthio", "haloalkyl", "alkylamino" or "bisalkylamino", in each case denotes straight-chain or branched alkyl.

Likewise alkenyl denotes straight-chain or branched-chain alkenyl, for example 1-propenyl, 2-propenyl or 3-propenyl. Alkynyl denotes straight-chain or branched-chain alkynyl, for example ethynyl, 1-propynyl, 2-propynyl or the various butynyl isomers. Alkylsulfonyl

denotes, for example, methylsulfonyl, ethylsulfonyl or the various propylsulfonyl isomers.

The term "halogen" on its own or in compound words such as "haloalkyl" denotes fluorine, chlorine, bromine or iodine. Furthermore, the meaning of compound words such as "haloalkyl" is that said alkyl is partly or completely halogenated. Examples of haloalkyl are CHF_2, CH_2CH_2F, CF_2CF_3 and CH_2CHFCl.

Preferred compounds of the general formula I are those where

A is a radical of the formulae (A1),. (A2), (A3) or (A4), in particular (A1);

L is a radical of the formulae (L1), (L3), (L4) or (15),

X is CH_2, $CH(CH_3)$, Ø, NH, NCH_3, NC_2H_5 or $NOCH_3$, in particular CH_2, Ø or NH,

W is oxygen,

R^1 is hydrogen,

R^2 and R^3 independently of one another are hydrogen or (C_1-C_3)-alkyl, in particular hydrogen,

R^5 is halogen, NO_2, CN, (C_1-C_3)-alkyl which is unsubstituted or substituted by F, Cl, Br, CN, OCH_3 or SCH_3; or is (C_3)-alkenyl which is unsubstituted or substituted by F, Cl or Br; or is (C_3)-alkynyl, (C_3)-cycloalkyl, which is unsubstituted or substituted by F, Cl or CH_3, or is $-C(Ø)R^{1Ø}$, $-OCH_2CH_2OR^{1Ø}$, OH, $-C(R^{1Ø})(OR^{11})(OR^{12})$, $-CO_2R^{13}$, $-C(Ø)NR^{14}R^{15}$, N_3, $-SO_2NR^{14}R^{15}$, $-OSO_2R^{17}$, $-E^1R^{18}$ or $-(CH_2)_gG$;

R^6 is hydrogen, halogen, CN, NO_2, CH_3, CF_3, $-E^1R^{19}$ or (C_1-C_2)-alkoxy-(C_1-C_2) alkyl, (C_1-C_2)haloalkoxy, (C_1-C_2)-alkylthio, (C_1-C_2)-haloalkylthio,CN, $-CO_2R^{13}$ or $-SO_2NR^{14}R^{15}$,

R^7 is hydrogen,

$R^{1Ø}$ is (C_1-C_3)-alkyl, cyclopropyl or (C_3)-alkenyl,

R^{11} and R^{12} are (C_1-C_2)-alkyl, or R^{11} and R^{12} together are $-CH_2CH_2-$,

R^{13} is (C_1-C_3)-alkyl, (C_3)-alkenyl, $-CH_2CH_2F$, $-CH_2CH_2Cl$, $-CH_2CH_2OCH_3$ or

cyclopropylmethyl;

R^{14} is hydrogen or CH_3, or R^{14} and R^{15} together are $-(CH_2)_4-$, $(CH_2)_5-$ or $-(CH_2)_2Ø(CH_2)_2-$,

R^{15} is CH_3, CH_2CH_3 or OCH_3, or R^{14} and R^{15} together are $-(CH_2)_4-$, $-(CH_2)_5-$ or $-(CH_2)_2Ø(CH_2)_2-$,

R^{18} is (C_1-C_3)-alkyl, (C_1-C_3)-haloalkyl, (C_2-C_3)- alkoxyalkyl, allyl, propargyl or (C_2-C_3)-haloalkenyl,

R^{19} is (C_1-C_2)-alkyl which is unsubstituted or substituted by F, Cl or OCH_3,

$R^{2Ø}$ and R^{21} independently of one another are hydrogen , (C_1-C_2)-alkyl, (C_1-C_2)-alkoxy, $-CH_2OCH_3$, Cl, F, Br, I, $-CH_2OCH_2CH_3$, $-NHCH_3$, $-N(OCH_3)CH_3$, $-N(CH_3)_2$, $-CF_3$, $-SCH_3$, $-CH(OCH_3)_2$, $-OCH_2CH=CH_2$; $-OCH_2C=CH$ $-OCH_2CH_2-OCH_3$, $-CH_2SCH_3$, $-OCHF_2$, $-SCHF_2$, cyclopropyl, $-C=CH$ or $-C=C-CH_3$,

m is Ø or 1,

n is Ø or 1,

s is zero and

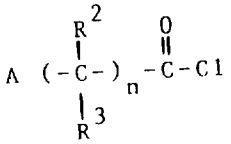
E^1 is Ø or S.

Radicals which are particularly preferred for R^{20} are CH_3, OCH_3, CH_2CH_3, OCH_2CH_3, $OCHF_2$, OCH_2OCH_3, CH_2OCH_3, $NHCH_3$, $CH(OCH_3)_2$, Cl or cyclopropyl, and radicals which are particularly preferred for R^{21} are CH_3, OCH_3, OCH_2CH_3 or $OCHF_2$.

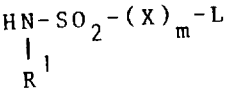
The present invention also relates to processes for the preparation of the compounds of the formula I, which comprise,

a) for the preparation of compounds with W = Ø,

a_1) reacting a compound of the formula II with



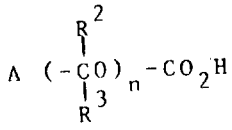
(II)



(III)

a compound of the formula III in the presence of a base, or

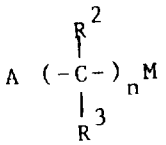
a_2) reacting a compound of the formula (IIa)



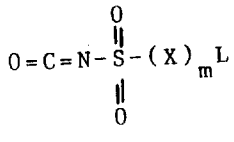
(IIa)

with a compound of the formula III in the presence of activating reagents, such as 2-chloro-1-methylpyridinium chloride (IVa), dicyclohexylcarbodiimide (IVb) or 1,1-carbonyldiimidazole (IVc) and if appropriate in the presence of a base, or

a_3) for the preparation of compounds with W = Ø and R^1 = H, reacting a compound of the formula (V),



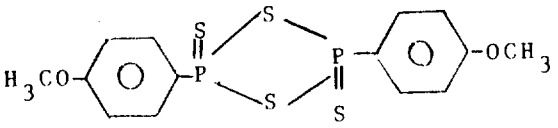
(V)



(VI)

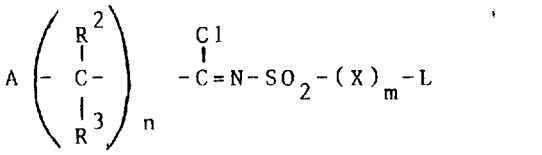
where M is hydrogen or lithium, with a compound of the formula (VI), or

b) for the preparation of compounds with W = S, reacting a compound of the formula I obtained in a) with the compound of the formula VII,



(VII)

c) for the preparation of compounds with W = NR^4, reacting a compound of the formula VIII

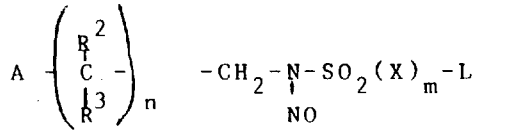


(VIII)

with an amine of the formula H_2N-R^4,

d) for the preparation of compounds with W = NOR^4,

d_1) reacting a compound of the formula IX with



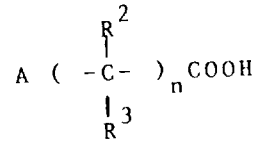
(IX)

an alkali metal hydroxide or alkaline earth metal hydroxide or ammonium hydroxide, or

d_2) reacting a compound of the formula VIII with a hydroxylamine of the formula $H_2N\text{-}OR^4$ in the presence of a base, or

e) for the preparation of compounds of the formula I with $R^1 \neq H$, reacting a compound of the formula I with $R^1 = H$ with an alkyl halide of the formula $R^{1'}\text{-}X^1$ in the presence of a base, where $R^{1'}$ has the meaning indicated for R^1 with the exception of hydrogen and X^1 is chlorine, bromine or iodine, and, if appropriate, converting the compounds obtained, of the formula I, into its salt.

The acid chloride of the formula II which is employed in process a_1) may be prepared in a known manner from the corresponding carboxylic acid of the formula (IIa)



(IIa)

or its salt with inorganic acid chlorides, such as thionyl chloride or with oxalyl chloride in the presence of suitable bases, in particular organic nitrogen bases, such as pyridine, 2,6-lutidine or triethylamine and/or catalysts, such as N,N-4-dimethylaminopyridine or dimethylformamide, and is advantageously reacted directly with the component III in the presence of the mentioned base, without intermediate isolation. Excess thionyl chloride or oxalyl chloride is distilled off before the acid chloride II is reacted with the sulfonamide III.

The reactions in accordance with process variant a_2) are known per se. Preferably, they are carried out in an inert, aprotic solvent, such as dichloromethane, 1,2-dichloroethane, acetonitrile or glycol dimethyl ether, at temperatures between -30°C to 83°C.

Examples of bases which are used are organic nitrogen bases, such as pyridine, triethylamine etc. In the case of carbonyldiimidazole, it is not necessary to add bases.

Process a_3) is known per se; preferably, it is carried out in an inert, aprotic solvent, such as dichloromethane, tetrahydrofuran, 1,2-dichloroethane or glycol dimethyl ether, in the temperature range of -78°C to 85°C.

The process in accordance with variant b) is likewise known per se; preferably, it is carried out in an inert aprotic solvent, such as toluene or xylene, at temperatures between 0°C and 145°C. In those cases in which the products are insoluble in the reaction medium, they can be isolated by a simple filtration. If the reaction products are soluble, they can be obtained after the solvent has been evaporated, by crystallization or chromatography of the residue.

Process variants c) and d) are known in

principle. Process c) and d_2) are preferably carried out in an inert aprotic solvent, such as dichloroethane or toluene, in the temperature range between Ø°C and 11Ø°C.

The imidoyl chlorides of the formula VIII can be obtained by reacting a compound of the formula I, prepared in accordance with variant a), with triphenylphosphine/-tetrachloromethane or $PCl_5/POCl_3$. The process is preferably carried out in CCl_4 or $POCl_3$ at temperatures between Ø°C and 1Ø5°C, cf. Houben-Weyl, Vol. E5/1, pp. 628-632 (1985); Vol. 5/3 pp. 916-922 and Vol. 8 pp. 346, 673-76.

Process e), which is known per se, is preferably carried out in an inert, aprotic solvent, such as dichloromethane, tetrahydrofuran, 1,2-dichloroethane or glycol dimethyl ether, in the temperature interval from -78°C to 85°C.

The carboxylic acids of the formula (IIa), which correspond to the acid chlorides of the

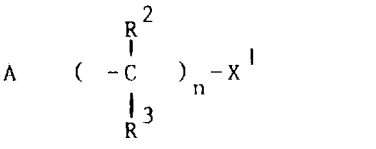
formula (II.), can be prepared using a range of methods. Methods which are possible are, for example, alkaline hydrolysis of the corresponding carboxylic esters (J. March "Advanced Organic Chemistry", 3rd edition, John Wiley & Sons, NY 1985, pp. 334-338), or the reaction of the ester compounds with lithium iodide in pyridine or other amines, or with trimethylsilyl chloride and sodium iodide (cf. J. March, "Advanced Organic Chemistry" 3rd edition, John Wiley & Sons, NY 1985, page 386) or by reaction with iodotrimethylsilane, see Olah, Narany, Tetrahedron 38 2225-2277 (1982), or by reaction with hydrobromic acid.

Furthermore, the carboxylic acids (IIa) can be prepared from the corresponding nitriles by hydrolysis, see Monatsh. Chem. 87, 526-35 (1956) or conversion into the imidoethers and subsequent hydrolysis, see T. Sakamoto; Chem. Pharm. Bull. 28, 3362-8 (1980).

Furthermore, the carboxylic acids (IIa) can be prepared from the corresponding benzyl esters

by hydrogenation in the presence of a catalyst, such as palladium, see Houben-Weyl, "Methoden der organischen Chemie" (Methods of Organic Chemistry), Vol. 4/1c (1980), pp 379-387.

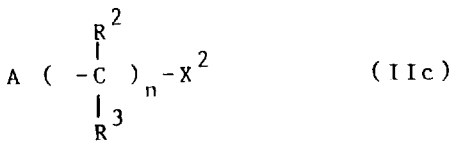
As an alternative, it is possible to obtain the carboxylic acids of the formula IIa directly by reacting the halogenated heterocycles of the formula IIb



(IIb)

with carbon dioxide, or indirectly via organometal intermediates, see Volpin and Kolomnikov, Organomet. React. 5, 313-386 (1975); Sneeden, in Patai "The Chemistry of Carboxylic Acids and Esters", pp. 137-173, Interscience, NY 1969; and also Kharasch and Reinmuth, Grignard Reactions of Nonmetallic Substances", pp. 913-948, Prentice-Hall, Englewood Cliffs, N.Y. 1954.

The nitriles on which the carboxylic acids IIa are based can be obtained from the compounds of the formula (IIc)



(IIc)

by reaction with alkali metal cyanides or tetraalkylammonium cyanides. X^2 in formula (IIc) is a leaving group, such as chlorine, bromine, iodine p-tosyl, OSO_2CH_3 or tetraalkylammonium, see W. Klötzer, Monatsch. Chem. 87, 526-35 (1956); H. Kobler, Liebigs Ann. Chem. 1978, 1937-45, T. Sakamoto, Chem. Pharm. Bull. 28, 3362-8 (1980); J. March. "Advanced Organic Chemistry", 3rd edition, John Wiley & Sons, NY 1985, pp. 594-595; Houben -Weyl, Vol. E5/2, pp. 1447-1474 (1985).

As an alternative, the nitrile compounds can be obtained by reacting heterocyclic N oxides of the formula A → Ø with trimethylsilyl cyanide, see H. Yamanaka, Synthesis 1984, 681-3; and H.

Vorbrüggen, Synthesis 1983, 316-9; HOuben-Weyl, Vol. E5/2, pp. 1444-1446 (1985).

Furthermore, the nitriles can be prepared from the amines of the formula a-NH_2 by a Sandmeyer reaction, i.e. by diazotization and subsequent reaction with copper(II) cyanide.

The halogenated heterocycles of the formula (IIb) may be prepared by halogenating the corresponding alkylated heterocyclic N oxides, see Craig, J. Org. Chem. 1970, (35), 1721; Bauer, J. Org. Chem. 1963 (28), 1323; Hunt, J. Chem. Soc. 525-530 (1959) and Matsumura, Nippon Kagaku Zasshi, 74 363 (1953).

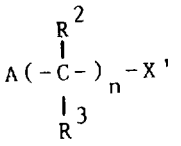
Furthermore, the halogenated heterocyles of the formula (IIb) can be obtained from the corresponding hydroxy compounds $A(CR^2R^3)_n$-OH by reaction with halogenating reagents, such as thionyl chloride or phosphorus oxychloride, see Angerstein, Ber. dtsch. Chem. Ges., 34, 3956 (1901); d'Atri, J.Chem 1984 (27), 1621-1629 or Sakamoto, Chem. Pharm. Bull. 28, 3362-8 (1980),

or in the case where n = Ø, by reacting the amines of the formula A-NH_2 in a Sandmeyer-type reaction, see Tagaki, Chem. Pharm. Bull. 11, pp./ 1382-8 (1963); HOuben-Weyl, "Methoden der organischen Chemie" (Methods of Organic Chemistry), Vol. 1Ø/3, p. 53 et seq., Georg Thieme Verlag, Stuttgart 1965, Vol. 5/3, p. et seq. 846 and Vol. 5/4, p. 437 et seq..

The heterocyclic amines A-NH_2 are known or may be prepared by processes which are known in principle, see "The Chemistry of Heterocyclic compounds", Vol. XVI, (1962), Interscience Publ. , NY & London and Supplement I (197Ø) of this handbook. Amino-substituted triazine derivatives are described by Smolin and Rapaport in "The Chemistry of Heterocyclic Compounds", Vol. XIII (1959), Interscience Publ. NY & London. The following patents describe specifically substituted heterocyclic amines: US Patent 4,515,626, US Patent 4,54Ø,782, US Patent 4,339,267, US Patent 4,487,626 and US Patent 4,421,55Ø. Further publications on the synthesis of bicyclic

pyrimidines can be found in Braker, J. Am. Chem. Soc. 1947 (69), 3072; Mitler, Quart. J. Ind. Chem. Soc. 4, 152 (1927); Shrage; J. Org. Chem. 1951 (16), 1153; Caldwell, J. Am. Chem. Soc. 1941 (63), 2188 and Fissekis, J. Org. Chem. 1964 (29), 2670.

The compounds of the formula (II), (IIa), (IIb), (IIc) and their precursors which were used in the above described processes are novel in some cases and correspond in particular to the formula (II')



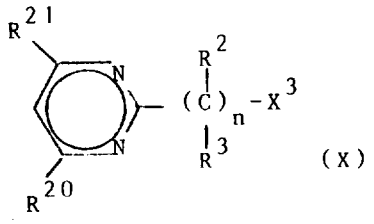
(II')

where

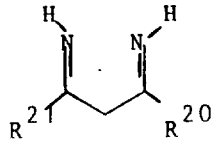
X' is COCl, CN, Cl, F, Br, I, p-tosyl, tetraalkylammonium, N_3, CO_2R^{13}, $CO_2CH_2C_6H_5$ or E^1 R^{18} and

A, n, R^{13}, E^1 and R^{18} have the meanings which have already been mentioned.

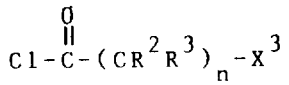
It is preferred to employ the heterocyclic compounds of the formula X (X^3 = CN, Cl, F, Br, I, N_3, CO_2R^{13}, $CO_2CH_2C_6H_5$ or E^1R^{18}) as starting materials for the preparation of the abovementioned intermediates; the compounds of the formula X may be prepared by reacting the compounds of the formula XI with acid chlorides of the formula XII or acid anhydrides of the formula XIII.



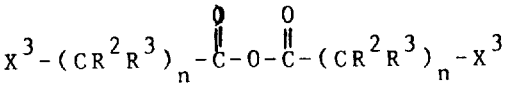
(X)



(XI)



(XII)



(XIII)

The reactions of the ketimines, amidates or imidates of the formula XI are carried out, for example, in an inert solvent, such as dichloromethane, toluene, tetrahydrofuran or 1,2-dimethoxyethane, in the presence of a base, such as triethylamine, potassium carbonate or N-ethyldiisopropylamine, in a temperature

interval from -78°C to 100°C, see Eilingsfeld, Chem. Ber. 101, 2426-2434 (1968). From the four compounds in question, Eilingsfeld however only described ethyl 4,6-diethoxypyrimidine-2-carboxylate and 2-chloromethyl-4,6-diethoxypyrimidine as prepared (see Chem. Ber. 101, 2426).

In the case where n = 0, the carboxylic esters which are employed as precursors for the preparation of the carboxylic acids of the formula (IIa) are accessible from the halogenated precursors A-X^1 by a Negishi-Kumada crosscoupling reaction, by reaction with appropriate organotin compounds, see Yamanaka; Chem. Pharm. Bull. 33, 4309-4313 (1985) and Sakamoto; Synthesis 1988, 485-486.

Specific heterocyclic precursors for the preparation of the compounds of the formula I are described in the following publications:

Sakamoto; Chem. Pharm. Bull. 32, 2005-2010 (1984); (methyl 4-methoxy-6-methylpyrimidine-2-carboxylate). Sakasai, Heterocycles 1979, 235-

238; Mekuskiene, Zh. Vses. Khim. O-va. 1976, 21(3), 348-349; Brown, Aust. J. Chem. 1974, 27, 2251-9 (methyl 4,6-dimethylpyrimidine-2-carboxylate; 4,6-dimethylpyrimidine-2-carboxylic acid). Eilingsfeld, Chem. Ber. 1968, 101-2426-2334; (ethyl4,6-diethoxypyrimidine-2-carboxylate; 2-chloromethyl-4,6-diethoxypyrimidine).

Brown, Aust. J. Chem. 1977, 30, 621-627; (ethyl (4-chloro-6-methylpyrimidin-2-yl)acetate; methyl (4,6-dichloropyrimidin-2-yl)acetate) Yamanaka,Heterocycles 1976, 5, 255-260 and Yamanaka, Chem. Pharm. Bull. 1979, 27, 2291-2294; (methyl 4-benzyloxy-6-methyl-2-pyrimidinylacetate, methyl 4-methoxy-6-methyl-2-pyrimidinylacetate).

Brown, Aust. J. Chem. 1978, 31, 649-659; (methyl (4,6-dichloropyrimidin-2-yl)acetate; methyl (4-chloro-6-methoxypyrimidin-2-yl) acetate, methyl (4,6-dimethoxypyrimidin-2-yl)acetate; methyl (4-chloro-6-methylpyrimidin-2-yl)acetate; besides the corresponding

carboxylic acids).

Yamanaka, Chem. Pharm. Bull. 1985, 33, 4309-4313, Chem. Pharm. Bull. 1981, 29, 2837-2843; Sakamoto, Chem. Pharm. Bull.1980, 28, 3362-3368, Niitsuma, Heterocycles 1978, 10, 171-176; Koet, Khim. Geterotsikl. Soedin.1978, 10, 1400-1405; Brown, Aust. J. Chem. 1974, 27, 2251-2259; Namaev, Khim. Geterotsikl. Soedin., Sb. 1: Azotsoderzhashchie Geterotsikly 1967, 354-359; (ethyl (4,6-dimethylpyrimidin-2-yl)acetate).

EP-A 154-132; (ethyl 1H-1-methyl-1,2,4-triazole-3-carboxylate).

FR-A 2,499,081; (methyl 1H-1-methyl-1,2,4-triazole-3-carboxylate).

Vakhatova, Khim, Geterotsikl. Soedin. 1981, 2, 264-267; (ethyl 4-chloro-6-methoxy-s-triazine-2-acetate).

Zaitseva, Zh. Obshch. Khim. 1964, 34, 2976-2979; Schaefer, J. Org. Chem. 1962, 27, 3608-3613; (ethyl 4,6-dimethyl-s-triazine-2-carboxylate).

Kober, J. Org. Chem. 1961, 26, 4705-4706;

(ethyl 4,6-dichloro-s-triazine-2-acetate).

The compounds which are known correspond to the compounds of the formula (II´), where A is A1, r is Ø, E^2 is CH and

a) X´ is CO_2CH_3, n is Ø, $R^{2Ø}/R^{21}$ is OCH_3/CH_3

b) X´ is $CO_2C_2H_5$, n is Ø, $R^{2Ø}$ and R^{21} each are OC_2H_5,

c) X´ is COOH or CO_2CH_3, n is Ø, $R^{2Ø}$ and R^{21} each are CH_3,

d) X´ is Cl, n is 1, R^2 is R^3 is H, $R^{2Ø}$ is R^{21} is OC_2H_5,

e) X´ is $CO_2C_2H_5$, n is 1, R^2 is R^3 is H, $R^{2Ø}/R^{21}$ is Cl/CH_3,

f) X´ COOH or $COOCH_3$, n is 1, R^2 is R^3 is H, $R^{2Ø}/R^{21}$ is benzyloxy/CH_3, OCH_3/CH_3, OC_2H_5/CH_3, Cl/Cl, Cl/OCH_3, OCH_3/OCH_3 or Cl/CH_3;

g) X´ is $COOC_2H_5$, n is 1, R^2 is R^3 is H, $R^{2Ø}/R^{21}$ is CH_3/CH_3, or correspond to compounds of the formula (II´) in which

h) A is A5, $R^{2Ø}$ is H, R^{22} is CH_3, n is Ø, X´ is $CO_2C_2H_5$ or CO_2CH_3,

or correspond to compounds of the formula (II´)

in which

i) A is Al, r is Ø, E^2 is N, n is Ø, $R^{2Ø}/R^{21}$ is CH_3/CH_3 and X´ is $CO_2C_2H_5$,

j) A is Al, r is Ø, E^2 is N, n is 1, R^2 R^3 is H, $R^{2Ø}/R^{21}$ is CL/OCH_3 or Cl/Cl and X´ is $CO_2C_2H_5$.

The invention therefore also relates to the intermediates of the formula (II´) with the exception of the intermediates which are known.

In the case where m = Ø, the sulfonamides of the formula III which are used as intermediates in processes a_1) and a_2) are obtained from the corresponding anilines by diazotization and exchange of the diazo group for sulfur dioxide in the presence of a catalyst, such as copper(I) chloride, in hydrochloric acid or acetic acid, and reacting the sulfonyl chloride which has formed with ammonia, cf. Meerwein, Chem. Ber. 1957, 9Ø, 841-852;

The intermediates of the formula III (with X = Ø and m = 1 are obtained from the

corresponding phenols by reaction with chlorosulfonyl isocyanate, followed by hydrolysis, cf. Lohaus, Chem. Ber. 1972, 105, 2791-2799.

The compounds of the formula III with X = NR^4 and m = 1 are prepared in a known manner from the corresponding anilines by reaction with amidosulfochloride in the presence of an auxiliary base, such as triethylamine.

The sulfonamides of the formula III with X = CHR^2 and m = 1 are obtained by customary methods from the corresponding benzyl halides by reaction with thiourea, followed by oxidation with chlorine and subsequent reaction with ammonia. The sulfonamides of the formula III with X = CHR^2 and m = 1 are also obtained from the corresponding benzyl halides after conversion into the Grignard reagent by reaction with SO_2 and subsequent reaction of the sulfinate salt which has formed with hydroxylamine -O-sulfonic acid in a buffered aqueous solution.

The sulfonyl isocyanates of the formula VI are prepared by conventional processes which are known to the expert, see "Newer Methods of Preparative Organic Chemistry", Vol. VI, 223-241, Adademic Press, NY & London; Lohaus, Chem. Ber. 1972, 105, 2791-2799.

The compounds of the formula I according to the invention have an excellent herbicidal activity against a broad range of economically important monocotyledon and dicotyledon weeds. The active substances act equally well on perennial weeds which produce shoots from rhizomes, rootstocks or other perennial organs and which cannot be easily controlled. In this context, it does not matter if the substances are applied before sowing, as pre-emergence treatment or post-emergence treatment. Some representatives of the monocotyledon and dicotyledon weed flora which can be controlled by the compounds according to the invention may be mentioned individually as examples, but this is not to be taken to mean a restriction to certain species.

The monocotyledon weed species controlled include, for example, Avena, Lolium, Alopecurus, Phalaris, Echinochloa, Digitaria, Setaria etc. and Cyperus species from the annual group, and the perennial species include Agropyron, Cynodon, Imperata and Sorghum etc, and also perennial Cyperus species.

Of the dicotyledon weed species, the range of action covers species such as, for example, Galium, Viola, Veronica, Lamium, Stellaria, Amaranthus, Sinapis, Ipomoea, Matricaria, Abutilon, Sida etc from the annual plants, and Convolvulus, Cirsium, Rumex, Artemisia etc from the perenniale.

Excellent control of weeds occurring under the specific culture conditions in rice, such as, for example, Sagittaria, Alisma, Eleocharis, Scirpus, Cyperus etc, by the active substances according to the invention is also possible.

If the compounds according to the invention are applied to the soil surface before germination,

either emergence of the weed seedlings is prevented completely, or the weeds grow until they have reached the cotyledon stage, but growth then comes to a standstill and, after a period of three to four weeks, the plants eventually die completely. When, in the post-emergence method, the active substances are applied to the green parts of the plants, growth also stops dramatically very soon after the treatment, and the weeds remain in the growth stage of the time of application, or, after a certain period of time, die more or less rapidly so that competition of the weeds, which is detrimental for the crop plants, can thus be prevented at a very early stage and in a sustained manner by using the novel compounds according to the invention.

Even though the compounds according to the invention have an excellent herbicidal activity against monocotyledon and dicotyledon weeds, crop plants of economically important crops such as, for example, wheat, barley, rye, rice, maize, sugar beet, cotton and soya beans, are

damaged to a negligible extent only, or not at all. Thus, the present compounds are very suitable for selectively controlling undesired plant growth in agricultural plantations of useful plants.

In addtion, the compounds according to the invention have growth-regulating properties in crop plants. They engage in the plant metabolism in a regulating manner and can thus be employed for facilitating harvesting, such as, for example, by provoking desiccation, abscission and stunted growth. Furthermore, they are suitable for generally regulating and inhibiting undesired vegetative growth, without simultaneously destroying the plants. Inhibition of vegetative growth plays an important role in many monocotyledon and dicotyledon crops because lodging can be reduced hereby, or prevented completely.

The compounds of the formula (I) or their combination with one or more of the mentioned herbicides or groups of herbicides can be

formulated in several manners, depending on the biological and/or physicochemical parameters. Examples of possible formulations which are suitable are: wettable powders (WP), emulsifiable concentrates(EC), aqueous solutions(SC), emulsions, sprayable solutions, dispersions based on oil or water (SC), suspoemulsions(SC), dusting agents (DP), seed-dressing agents, granules for the soil or microgranules (FG), water-dispersible granules (WG), ULV formulations, microcapsules or waxes.

These individual types of formulation are known in principle and described, for example, in: WinnackerKüchler, "Chemische Technologie" (Chemical Technology), Vol. 7, C. Hauser Verlag Munich, 4th Ed. 1986; van Falkenberg, "Pesticides Formulations", Marcel Dekker N.Y. 2nd Ed. 1972-73; K. Martens, "Spray Drying Handbook", 3rd Ed. 1979, G. Goodwin Ltd. London..

The formulation auxiliaries required, such as inert materials, surfactants, solvents and

other additives, are likewise known and are described, for example, in: Watkins, "Handbook of Insecticide Dust Diluents and Carriers", 2nd Ed., Darland Books, Caldwell N.J.; H.v.Ophen, "Introduction to Clay Colloid Chemistry" 2nd Ed., J. Wiley & Sons, N.Y.; Marschen, "Solvents Guide", 2nd Ed., Interscience, N.Y. 1950; McCutcheon's "Detergents and Emulsifiers Annual", MC Publ. Corp., Ridgewood N.J.; Sisley and Wood, "Encyclopedia of Surface Active Agents", Chem. Publ. Co. Inc., N.Y. 1964; Schönfeldt, "Grenzflächenaktive Äthylenoxidaddukte" (Surface-active ethylene oxide adducts), Wiss. Verlagsgesell., Stuttgart 1976; Winnacker-Küchler, "Chemische Technologie" (Chemical Technology), Vol. 7, C. Hauser Verlag Munich, 4th Ed. 1986.

On the basis of these formulations, it is also possible to prepare combinations with other pesticidally active substances, fertilizers and/or growth regulators, for example in the form of a readymix or as a tank mix. Wettable

powders are preparations which are uniformly dispersible in water and which, besides the active substance, also contain wetting agents, for example, polyoxyethylated alkylphenols, polyoxyethylated fatty alcohols, alkylsulfonates or alkylphenolsulfonates, and dispersing agents, for example, sodium ligninsulfonate, sodium 2,2'-dinaphthylmethane-6,6'-disulfonate, sodium dibutylnaphthalenesulfonate or sodium oleylmethyltaurinate, in addition, if appropriate, to a diluent or substance. Emulsifiable concentrates can be prepared, for example, by dissolving the active substance in an organic solvent, for example butanol, cyclohexanone, dimethylformamide, xylene and also higher-boiling aromatics or hydrocarbons, with the addition of one or more emulsifiers. Emulsifiers which can be used are, for example: calcium salts of alkylarylsulfonic acids, such as Ca dodecylbenzenesulfonate, or nonionic emulsifiers, such as fatty acid polyglycol esters, alkylaryl polyglycol ethers, fatty alcohol polyglycol ethers, propylene

oxide/ethylene oxide condensation products, alkyl polyethers, sorbitan fatty acid esters, polyoxyethylene sorbitan fatty acid esters or polyoxyethylene sorbitol esters.

Dusting agents are obtained by grinding the active substance with finely divided solid substances, for example talc or natural clays, such as kaolin, bentonite or pyrophillite, or diatomaceous earth. Soil granules or microgranules can be produced either by spraying the active substance onto adsorptive, granulated inert meterial or by applying active substance concentrates onto the surface of carriers such as sand, kaolinites or granulated inert material, by means of binders, for example polyvinyl alcohol, sodium polyacrylate or alternatively mineral oils. Suitable active substances can also be granulated in the manner which is conventional for the preparation of fertilizer granules, if desired in a mixture with fertilizers.

The agrochemical preparations usually contain

Ø.1 to 99 percent by weight, in particular Ø.1 to 95 % by weight, of active substance of the formula (I), 1 to 99.9 % by weight, in particular 5 to 99.8 % by weight, of a solid or liquid additive, and Ø to 25 % by weight, in particular Ø.1 to 25 % by weight, of a surfactant.

The active substance concentration in wettable powders is, for example, about 1Ø to 9Ø% by weight; the remainder to 1ØØ % by weight comprises conventional formulation components. In the case of emulsifiable concentates, the active substance concentration can be about 5 to 8Ø % by weight. Dust-like formulations usually contain 5 to 2Ø % by weight of active substance, sprayable solutions about 2 to 2Ø % by weight. In the case of water-dispersible granules, the active substance content depends partly on whether the active compound is liquid or solid.

In general, the content is betweeen 1Ø and 9Ø %

by weight in the water-dispersible granules.

In addition , the active substance formulations mentioned contain, if appropriate, the adhesives, wetting agents, dispersing agents, emulsifiers, penetrants, solvents, fillers or carriers which are conventional in each case.

For use, the formulations, present in commercially available form, are diluted, if appropriate, in a conventional manner, for example using water in the case of wettable powders, emulsifiable concentrates, dispersions and water-dispersible granules. Dust-like preparations and soil granules or microgranules and also sprayable solutions are usually not further diluted with other inert substances before use.

The application rate reequired of the compounds of the formula (I) varies with the external conditions, such as temperature, humidity, type of herbicide used, amongst others. It can vary within a wide range, for example between 0.005

and 10.0 kg/ha or more of active substance. preferably, however, it is between 0.01 and 5 kg/ha.

The following examples are intended to illustrate the invention:

A. Formulation examples

a) A dusting agent is obtained by mixing 10 parts by weight of a compound of the formula (I) and 90 parts by weight of talc or inert substance, and comminuting the mixture in a hammer mill.

b) A wettable powder which is readily dispersible in water is obtained by mixing 25 parts by weight of a compound of the formula (I), 64 parts by weight of kaolin-containing quartz as the inert substance, 10 parts by weight of potassium ligninsulfonate and 1 part by weight of sodium oleoylmethyltaurinate as the wetting and dispersing agent, and grinding the mixture in a pinned disk mill.

c) A dispersion concentrate which is readily dispersible in water is obtained by mixing 20 parts by weight of a compound of the formula (I) with 6 parts by weight of alkylphenol polyglycol ether (● Triton X 207), 3 parts by weight of isotridecanol polyglycol ether (8 EO) and 71 parts by weight of a paraffinic mineral oil (boiling range for example about 255 to above 277°C), and grinding the mixture in a ball mill to a fineness of below 5 microns.

d) An emulsifiable concentrate is obtained from 15 parts by weight of a compound of the formula (I), 75 parts by weight of cyclohexanone as the solvent and 10 parts by weight of oxethylated nonlyphenol as the emulsifier.

e) Granules which are water-dispersible are obtained by mixing
75 parts by weight of a compound of the formula (I),

10 " of calcium ligninsulfonate,

5 " of sodium lauryl sulfate,

3 " of polyvinyl alcohol and

7 " of kaolin,

grinding the mixture on a pinned disk mill, and granulating the powder in a fluidized bed by water being sprayed on as the granulation liquid.

f) Water-dispersible granules are also obtained by homogenizing and pre-comminuting

25 parts by weight of a compound of the formula (I),

5 " of sodium 2,2'-dinaphthylmethane-6,6'-disulfonate,

2 " of sodium oleylmethyltaurinate,

1 " of polyvinyl alcohol,

17 " of calcium carbonate and

50 " of water

on a colloidal mill, followed by grinding on a pearl mill, and atomizing the suspension obtained in this manner in a

spray tower by means of a single substance valve, and drying.

Chemical Examples

Example 1

2-Ethoxycarbonyl-4,6-dimethoxypyrimidine

76 ml of N-ethyldiisopropylamine in 35 ml of dichloromethane are added dropwise at -35°C to a suspension of 25.4 g of dimethyl malodiimidate dihydrochloride in 100 ml of dichloromethane. When the addition is complete, stirring is continued for 15 minutes, and 14 ml of oxalic acid ethyl ester chloride are then added dropwise at this temperature. The mixture is now allowed to come to room temperature, and stirring is continued for 2 hours. The mixture is poured onto 200 ml of ice water, and the organic phase is separated off and washed again twice with water. The organic phase is dried over $CaCl_2$ and concentrated. This gives 21.7 g of 2-ethoxycarbonyl-4,6-dimethoxypyrimidine of melting point 54-55°C (from hexane).

Example 2

4,6-Dimethoxypyrimidine-2-carboxylic acid

17.1 g of 2-ethoxycarbonyl-4,6-dimethoxypyrimidine are dissolved in 300 ml of ethanol, and 3.4 of sodium hydroxide in 50 ml of water are added. This solution is stirred for 4 hours at room temperature and refluxed for 1 hour. The mixture is cooled, and most of the ethanol is removed on a rotary evaporator. The residue is taken up in water and extracted using dichloromethane. The aqueous-alkaline phase is acidified to a pH of 2-3 using 6 N hydrochloric acid, and any precipitated product is filtered off with suction. This gives 9.8 g of 4,6-dimethoxypyrimidine-2-carboxylic acid of melting point 155-157°C.

Example 3

1-Bromo-1-(4-6-dimethoxypyrimidin-2-yl)ethane

58.7 ml of 2-bromo-propionyl bromide in 200 ml of dichloromethane are added dropwise at -30°C over the course of 1 hour to a stirred

suspension of 101 g of dimethyl malodiimidate dihydrochloride and 266 g of potassium carbonate in 1500 ml of dichloromethane. The mixture is allowed to come to room temperature, stirring is continued for 4 hours, and the mixture is treated carefully with such an amount of water that the salts are entirely dissolved (cooling). The phases are separated, the organic phase is washed again twice using saturated sodium hydrogen carbonate solution and dried over potassium carbonate, and the solvent is distilled off. After the residue has been filtered over silica gel (eluent: dichloromethane), 37 g of 1-bromo-1-(4,6-dimethoxypyrimidin-2-yl)ethane are obtained.

^{1}H-NMR($CDCl_3$): δ = 2.05(d, J= 7Hz; 3H); 3.98(s, 6H); 5.08(q, J= 7Hz; 1H); 5.93(s,1H).

2-Chloromethyl-4,6-dimethoxypyrimidine of melting point 40-42°C is prepared in the same.

Example 4

2-Cyanomethyl-4,6-dimethoxypyrimidine

16.7 g of dried sodium cyanide are dissolved in 850 ml of dimethyl sulfoxide at 90°C under N_2 protective gas. At this temperature, 52.8 g of 2-chloromethyl-4,6-dimethoxypyrimidine, dissolved in 280 ml of dimethyl sulfoxide, are added dropwise over the course of 2 hours. Stirring is continued for 1 hour at 90°C, and the mixture is cooled to room temperature and poured into 300 ml of water. The aqueous phase is extracted seven times using ether, and the combined organic phases are washed using saturated aqueous sodium chloride solution, dried over magnesium sulfate and evaporated in a rotary evaporator. This gives 29.1 gof crude product, from which 2-cyanomethyl-4,6-dimethoxypyrimidine of melting point 65-67°C are obtained after column chromatography (SiO_2; CH_2Cl_2/CH_3OH; 98.5/1.5).

Example 5

Methyl (4,6-dimethoxypyrimidin-2-yl)acetate

A powerful stream of hydrogen chloride gas is passed for 15 minutes into a solution of 230 ml

of methyl acetate and 6.4 ml of methanol, at Ø°C to 1Ø°C. 23.8 g of 2-cyanomethyl-4,6-dimethoxypyrimidine in 25Ø ml of methyl acetate are now added dropwise while more hydrogen chloride is passed in, and the passing-in of gas is stopped when the dropwise addition is complete, and stirring is continued for 5 hours at 1Ø°C to 15°C. 2ØØ ml of absolute diethyl ether are added, the mixture is cooled to 5°C, and the precipitate is filtered off with suction under nitrogen. The residue is washed with ether and filtered off with suction until dry. This gives 31.5 g of the imidomethyl ester hydrochloride of melting point 11Ø-112°C, to which 25Ø ml of water are added, and the mixture is stirred for 4 hours at 4Ø°C. The mixture is cooled to room temperature and extracted four times using four 15Ø ml portions of diethyl ether. The organic phase is dried over magnesium sulfate, and the solvent is distilled off. This gives 19.5 g of methyl (4,6-dimethoxypyrimidin-2-yl)acetate of boiling point 11Ø°C/-Ø.Ø4 mbar (ball tube distillation).

Example 6

(4,6-Dimethoxypyrimidin-2-yl)acetic acid

20 g of methyl (4,6-dimethoxypyrimidin-2-yl) acetate are stirred for 2 hours at 50°C with 3.9 g of sodium hydroxide in 300 ml of water. The mixture is cooled to room temperature and extracted three times using diethyl ether, and the aqueous phase is acidified to pH 2 using 2 N hydrochloric acid and extracted four times using 150 ml portions of ethyl acetate. The organic phase is dried over sodium sulfate, the solvent is distilled off, and the residue is dried in vacuo. This gives 13.1 g of (4,6-dimethoxypyrimidin-2-yl)acetic acid of melting point 175-177°C.

Example 7

2-Ethoxyphenyl sulfamate

2.2 g of water are added dropwise at 30°C to 40°C to a solution of 19.2 g of 2-ethoxyphenoxysulfonyl isocyanate in 150 ml of tetrachloromethane. The mixture is stirred at

room temperature until the evolution of carbon dioxide has ceased and cooled to 0°C, the product is filtered off with suction, and the filter residue is washed with ice-cold tetrachloromethane. Drying in vacuo gives 16 g of 2-ethoxyphenyl sulfamate of metling point 62-65°C.

Example 8

1-(2-Methoxycarbonylphenyl)sulfuryl diamide

A solution of 5 g of amidosulfochloride in 40 ml of absolute dichloromethane is added dropwise to 6.4 g of methyl anthranilate and 4.4 g of triethylamine in 50 ml of absolute dichloromethane. Stirring is continued for 0.5 hour at 40°C and then for 1 hour at room temperature, and the solvent is distilled off in a rotary evaporator. 100 ml of 1 N hydrochloric acid are added to the residue, stirring of the mixture is continued for 0.5 hour, and the solid is filtered off with suction. The filter residue is washed thoroughly with water and dried in vacuo. This

gives 7.9 g of 1-(2-methoxycarbonylphenyl)-sulfuryl diamide of melting point 116-118°C.

Example 9

1-(2-Chlorophenyl)-3-[(4,6-dimethoxypyrimidin-2-yl)carbonyl]sulfuryl diamide

A solution of 2.1 g of 1-(2-chlorophenyl)sulfuryl diamide is added dropwise at 0°C-2°C to a mixture of 2.3 g of dicyclohexylcarbodiimide, 0.12 g of 4-dimethylaminopyrimidine and 2.2 g of 4,6-dimethoxypyrimidine-2-carboxylic acid in 40 ml of dichloromethane. Stirring is continued for 4 hours at this temperature, the mixture is allowed to stand at room temperature overnight, and precipitated urea is filtered off with suction. The filtrate is stirred for 10 minutes with 100 ml of 1 N sodium carbonate solution, the phases are separated, and the aqueous phase is extracted again twice using dichloromethane. The sodium carbonate alkaline phase is acidified to a pH of 2-3 and stirred for 15 minutes, and the precipitate is filtered

off with suction and dried in vacuo. This gives 1.3 g of 1-(2-chlorophenyl)-3-[(4,6-dimethoxypyrimidin-2-yl)carbonyl]sulfuryl diamide of melting point 127-129°C.

Example 10

2,6-Dichlorophenyl N-[(4,6-dimethoxypyrimidin-2-yl)carbonyl]sulfamate

2.4 g of 2,6-dichlorophenyl sulfamate are added in portions at 0°C to 2°C to a mixture of 2.3 g of dicyclohexylcarbodiimide, 120 mg of 4-dimethylaminopyridine and 2.2 g of 4,6-dimethoxypyrimidine-2-carboxylic acid in 80 ml of absoulute dichloromethane, and stirring is continued for 0.5 hour at 0°C and 3 hours at room temperature. The mixture is filtered off with suction, the organic phase is washed with 100 ml of 1 N hydrochloric acid and then with water and dried over sodium sulfate. The solvent is distilled off, and the residue is recrystallized from diisopropyl ether. This gives 3.2 g of 2,6-dichlorophenyl N-[(4,6-dimethoxypyrimidin-2-yl)carbonyl]-sulfamate of melting point 136-139°C.

Example 11

N-[2-(4,6-Dimethoxypyrimidin-2-yl)acetyl]-2-methoxycarbonylbenzylsulfonamide

A solution of 1.9 g of (4,6-dimethoxypyrimidin-2-yl)acetic acid in 40 ml of absolute dichloromethane is added dropwise at 0°C to 2°C to a solution of 1.9 g of dicyclohexylcarbodiimide, 100 mg of 4-dimethylaminopyridine and 2.1 g of 2-methoxycarbonylbenzylsulfonamide in 40 ml of absoulute dichloromethane. Stirring is continued for 1 hour at 0°C, and the mixture is allowed to come to room temperature and stirred for another 0.5 hour. The solids are filtered off, and the filtrate is concentrated in a rotary evaporator. 100 ml of 2 N sodium carbonate solution are added to the residue, the mixture is stirred for 0.5 hour at room temperature, and the solids are filtered off with suction. The sodium carbonate alkaline phase is extracted twice using diethyl ether, and a pH of 2-3 is established using concentrated hydrochloric acid. Stirring is

continued for 15 minutes, the solids are filtered off with suction, the filter residue is washed once with water and twice with ether, and dried in vacuo. This gives 2.4 g of N-[2-(4,6-dimethoxypyrimidin-2-yl)acetyl]-2-methoxycarbonylbenzylsulfonamide of melting point 98-101°C.

Example 12

N-[4,6-Dimethoxypyrimidin-2-yl)carbonyl]-2-methoxycarbonylbenzenesulfonamide

2.2 g of 2-methoxycarbonylbenzenesulfonamide are added in portions at 0°C to 2°C to a mixture of 2.3 g of dicyclohexylcarbodiimide, 120 mg of 4-dimethylaminopyridine and 2.2 g of 4,6-dimethoxypyrimidine-2-carboxylic acid in 80 ml of absolute dichloromethane. The mixture is stirred for 0.5 hour at 0°C and 2 hours at room temperature, and allowed to stand overnight. The urea which has precipitated is filtered off, the filtrate is concentrated in vacuo, and the residue is stirred for 0.5 hour with 100 ml of 2 N sodium carbonate solution. The aqueous

phase is extracted using ether, and a pH of 2-3 is established using concentrated hydrochloric acid. The product which has precipitated is filtered off with suction and dried in vacuo. This gives 1.3 g of N-[(4,6-dimethoxypyrimidin-2-yl)carbonyl]-2-methoxycarbonylbenzenesulfonamide of melting point 163-165°C (from ethyl acetate).

Example 13

Ethyl 4-methoxy-6-methylpyrimidine-2-carboxylate

182 ml of triethylamine in 50 ml of dichloromethane are added dropwise at -30°C to a stirred suspension of 70.2 g of methyl-3-amino-2-butenimidate dihydrochloride in 350 ml of dichloromethane. Stirring is continued for 0.5 hour at this temperature, and 42 ml of oxalic acid ethyl ester chloride are then added dropwise. Stirring is continued for 1 hour at -30°C, and the mixture is allowed to come to room temperature in the course of 12 hours. The organic phase is stirred several times with

water, dried over Na_2SO_4 and concentrated. After filtration over silica gel (eluent: CH_2Cl_2), the residue is distilled in vacuo. This gives 51.5 g of ethyl 4-methoxy-6-methylpyrimidine-2-carboxylate of boiling point 105-115°C/-0.05 mbar.

Example 14

4-Methoxy-6-methylpyrimidine-2-carboxylic acid

A solution of 11.5 g of sodium hydroxide in 156 ml of ethanol and 78 ml of water is added to a stirred solution of 51.5 g of ethyl 4-methoxy-6-methylpyrimidine-2-carboxylate in 280 ml of ethanol. Stirring is continued for 12 hours at room temperature, and the sodium salt of the carboxylic acid, which has precipitated, is filtered off with suction. The sodium salt is transferred to a solution of 17.3 g of acetyl chloride in 220 ml of methanol, and the sodium chloride, which has precipitated, is filtered off with suction. The methanolic solution is evaporated on a rotary evaporator. This gives 30.9 g of 4-methoxy-6-methylpyrimidine-2-

carboxylic acid of melting point 140-141°C as the residue.

Example 5

2-Ethoxybenzylsulfonamide

A Grignard solution of 30.5 g of 2-ethoxybenzyl chloride and 6.1 g of magnesium shavings in 250 ml of diethyl ether is added dropwise at -60°C to -70°C to 50 ml of sulfur dioxide. Stirring is continued for 0.5 hour at -70°C, the mixture is allowed to come to room temperature, and the salt magnesium 2-ethoxybenzylsulfinate which has formed (47 g, melting point: 134-139°C, decomposition) is filtered off with suction. The sulfinate salt is dissolved in 900 ml of water and 16.4 g of anhydrous sodium acetate. To this are added 22.7 g of hydroxylamine-O-sulfonic acid at room temperature with stirring. After the mixture has been stirred for 12 hours, the product is filtered off with suction and dried in vacuo. This gives 23.9 g of 2-ethoxybenzylsulfonamide of melting point: 92-93°C.

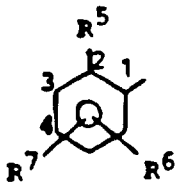
Example 16

2-Ethoxy-N-[4-methoxy-6-methylpyrimidin-2-yl)carbonyl]-benzylsulfonamide

2.2 g of 2-ethoxybenzylsulfonamide are added in portions at 0°C to 2°C to mixture of 2.3 g of dicyclohexylcarbodiimide, 120 mg of 4-dimethylaminopyridine and 2.0 g of 4-methoxy-6-methylpyrimidine-2-carboxylic acid in 80 ml of absolute dichloromethane, the mixture is stirred for 0.5 hour at 0°C, and stirring is continued for 3 hours at room temperature. The solids are filtered off with suction, the filtrate is evaporated on a rotary evaporator, and the residue is stirred in a mixture of acetone and 1 M sodium carbonate solution. The aqueous solution is extracted using ether, a pH of 2-3 is established using concentrated HCl, and the mixture is extracted using dichloromethane. The dichloromethane phase is evaporated in a rotary evaporator, and the residue is recrystallized from ether/heptane. This gives 2.2 g of 2-ethoxy-N-[4-methoxy-6-methylpyrimidin-2-yl)carbonyl]-

benzylsulfonamide of melting point : 111-113°C.

The compounds of the tables below can be prepared analogously to the procedures described in Examples 1 to 16.

L1 = 

L 1-1 : $R^5 = -CO_2CH_3$; $R^6, R^7 = H$

L 1-2 : $R^5 = -CO_2CH_2CH_3$; "

L 1-3 : $R^5 = -CO_2CH(CH_3)_2$; "

L 1-4 : $R^5 = -CO_2CH_3$; $R^6 = 5\text{-}OCF_2H$; $R^7 = H$

L 1-5 : $R^5 = -CO_2CH_3$; $R^6 = 5\text{-}Cl$; $R^7 = H$

L 1-6 : $R^5 = -CO_2CH_3$; $R^6 = 5\text{-}OCH_3$; $R^7 = H$

L 1-7 : $R^5 = -CON(CH_3)_2$; $R^6, R^7 = H$

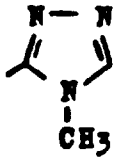
L 1-8 : $R^5 = -CF_3$; "

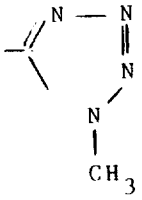
L 1-9 : $R^5 =$; "

L 1-10: R^5 ; "

L 1-11: R^5 ; "

L 1-12: R^5 ; "

L 1-13: R^5  ; $R^6 = 6\text{-}Cl$; $R^7 = H$

L 1-14: R^5 =  ; R^6=5-OCH_3 ; R^7=H

L 1-15: R^5= OCH_3 ; R^6, R^7=H

L 1-16: R^5= OC_2H_5 ; "

L 1-17: R^5= $OCH(CH_3)_2$; "

L 1-18: R^5= $-OCH_2CH_2Cl$; "

L 1-19: R^5= $OCH_2CH_2-OCH_3$; "

L 1-20: R^5= OCH_2CF_3 ; "

L 1-21: R^5= $-OCF_2CF_3$; "

L 1-22: R^5= OSO_2CH_3 ; "

L 1-23: R^5= $-OSO_2CH_2CH_3$; "

L 1-24: R^5= Br ; "

L 1-25: R^5= F ; "

L 1-26: R^5= Cl ; "

L 1-27: R^5= Cl ; R^6=4-Cl ; R^7=6-Cl

L 1-28: R^5= NO_2 ; R^6, R^7=H

L 1-29: R^5= $N(CH_3)_2$; "

L 1-30: R^5= $-N(CH_3)CH_2CH_3$; "

L 1-31: R^5= $-N(CH_2CH_3)_2$; "

L 1-32: R^5= CN ; "

L 1-33: R^5= $-CO-CH_3$; "

L 1-34: R^5= F R^6=6-F ; R^7=H

L 1-35: R^5= Cl ; R^6=6-Cl ; R^7=H

L 1-36: R^5= Br ; R^6=6-Br ; R^7=H

L 1-37: R^5= NO_2 ; R^6=6-CH_3 ; R^7=H

L 1-38: R^5= CH_3 ; R^6, R^7=H

L 1-39: R^5= C_6H_5 ; "

L 1-40: R^5= $-SO_2CH_3$; "

L 1-41: R^5= $-SO_2CH_2CH_3$; "

L 1-42: R^5= $-SO_2CH(CH_3)_2$; "

L 1-43: R^5= $-SO_2CH_2-CH_2-CH_3$; "

L 1-44: R^5= $-SO_2N(CH_3)_2$; "

L 1-45: R^5= $-CH_2Cl$; "

L 1-46: R^5= $-CH_2OCH_3$; R^6, R^7=H

L 1-47: R^5= $-CH_2-N(CH_3)_2$; "

L 1-48: R^5= $-CH_2SCH_3$; "

L 1-49: R^5= N_3 ; "

L 1-50: R^5= SCH_3 ; "

L 1-51: R^5= $-SCH_2CH_3$; "

L 1-52: R^5= $-OCF_2H$; "

L 1-53: R^5= $-OCF_3$; "

L 1-54: R^5= I ; " H

L 1-55: R^5= NO_2 ; R^6=6-F ; R^7=H

L 1-56: R^5= NO_2 ; R^6=6-Cl ; R^7=H

L 1-57: R^5= NO_2 ; R^6=6-I ; R^7=H

L 1-58: R^5= Cl ; R^6=6-CH_3; R^7=H

L 1-59: R^5= CO_2CH_3 ; R^6=6-NO_2; R^7=H

L 1-60: R^5= CO_2CH_3 ; R^6=6-Cl; R^7=H

L 1-61: R^5= CO_2CH_3 ; R^6=6-I ; R^7=H

L 1-62: R^5= CO_2CH_3 ; R^6=6-$SO_2N(CH_3)_2$; R^7=H

L 1-63: R^5= F ; R^6= 6-I ; R^7=H

L 1-64: R^5= F ; R^6=6-Cl ; R^7=H

L 1-65: R^5= Cl ; R^6=6-I ; R^7=H

L 1-66: R^5=$SO_2N(CH_3)_2$; R^6=6-$SO_2N(CH_3)_2$; R^7=H

L 1-67: R^5=$SO_2N(CH_3)_2$; R^6=6-Cl ; R^7=H

L 1-68: R^5=$SO_2N(CH_3)_2$; R^6=6-NO_2; R^7=H

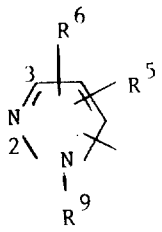
L 3-1 : 3-Methoxy-carbonyl-2-thienyl

L 3-2 : 2-Methoxy-carbonyl-3-thienyl

L 3-3 : 2-Dimethylaminocarbonyl-3-thienyl

L 3-4 : 4-Methoxycarbonyl-3-thienyl

L 3-5 : 3-Chloro-2-thienyl

L 4 = 

L 4-1 : R^5 = H ; R^6 = 4-CO_2CH_3 ; R^9=CH_3; free valency on C-5

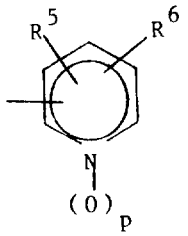
L 4-2 : R^5 = H; R^6 = 4-$CO_2CH_2CH_3$; R^9 = CH_3; "

L 4-3 : R^5 = 3-Cl; R^6 = 4-CO_2CH_3; R^9 = CH_3; "

L 4-4 : R^5 = 3-$SO_2N(CH_3)_2$; R^6 = H; R^9=CH_3; on C-4

L 4-5 : R^5 = CH_3; R^6 = 5-CO_2CH_3; R^9=CH_3; on C-4

L 5 =



L 5-1 : 3-Methoxy-carbonyl-2-pyridyl

L 5-2 : 3-Methylsulfonyl-2-pyridyl

L 5-3 : 3-Dimethylaminocarbonyl-2-pyridyl

L 5-4 : 3-Ethoxycarbonyl-2-pyridyl

L 5-5 : 3-Dimethylaminosulfonyl-2-pyridyl

L 5-6 : 3-Trifluoromethyl-2-pyridyl

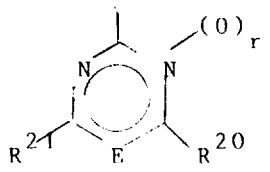
L 5-7 : 3-Ethoxy-2-pyridyl

L 5-8 : 2-Dimethylaminosulfonyl-3-pyridyl

L 5-9 : 2-Ethoxy-3-pyridyl

L 5-10: 2-Bromo-3-pyridyl

A I

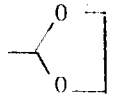


A I-1: R^{20}, R^{21} = OCH_3 ; E = CH ; r = 0

A I-2: R^{20} = Cl, R^{21} = OCH_3; " "

A I-3: R^{20} = CH_3; R^{21} = OCH_3; " "

A I-4: R^{20}, R^{21} = CH_3; " "

A I-5: R^{20} = CH_3; R^{21} =  " "

A I-6: R^{20} = OC_2H_5; R^{21} = OCH_3 E = CH ; r = 0

A I-7: R^{20} = C_2H_5 ; R^{21} = CH_3; " "

A I-8: R^{20} = OCF_2H; R^{21} = OCH_3; " "

A I-9: R^{20} = OCH_2OCH_3; R^{21} = OCH_3; " "

A I-10: R^{20} = OCH_2CF_3; R^{21} = OCH_3; " "

A I-11: R^{20}, R^{21} = $-OCF_2H$ " "

A I-12: R^{20} = CH_2F; R^{21} = OCH_3; " "

A I-13: R^{20} = ; R^{21} = OCH_3; " "

A I-14: R^{20} = " ; R^{21} = CH_3; " "

A I-15: R^{20} = $-CH(OCH_3)_2$; R^{21} = CH_3; " "

A I-16: R^{20} = H; R^{21} = CH_3; " "

A I-17: R^{20} = H; R^{21} = OCH_3; " "

A I-18: R^{20}, R^{21} = OCH_3; E = N ;

A I-19: R^{20} = CH_3; R^{21} = OCH_3; " "

A 1-20: R^{20}, R^{21} = CH_3 E = N ; r = 0

A 1-21: R^{21} = OCH_3; R^{20} = $NHCH_3$; " "

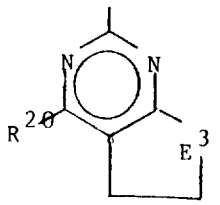
A 1-22: R^{21} = OC_2H_5; R^{20} = $NH-CH_3$; " "

A 1-23: R^{20} = SCH_3; R^{21} = CH_3; " "

A 1-24: R^{20}, R^{21} = OCH_3 E = CH ; r = 1

A 1-25: R^{20}, R^{21} = CH_3 " "

A 2



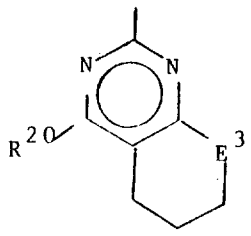
A 2-1 : R^{20}=OCH_3 E^3 = 0

A 2-2 : R^{20}=CH_3 E^3 = 0

A 2-3 : R^{20}=Cl E^3 = 0

A 2-4 : R^{20}=OCH_3 E^3 = CH_2

A 3



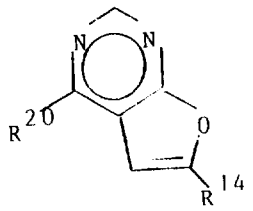
A 3-1 : $R^{20} = OCH_3$ $E^3 = O$

A 3-2 : $R^{20} = OCH_2CH_3$ $E^3 = O$

A 3-3 : $R^{20} = Cl$ $E^3 = O$

A 3-4 : $R^{20} = CH_3$ $E^3 = O$

A 4



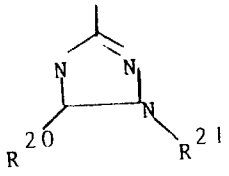
A 4-1 : $R^{20}=OCH_3$ $R^{14}=CH_3$

A 4-2 : $R^{20}=CH_3$ $R^{14}=CH_3$

A 4-3 : $R^{20}=OCH_3$ $R^{14}=H$

A 4-4 : $R^{20}=OCH_2CH_3$ $R^{14}=H$

A 5



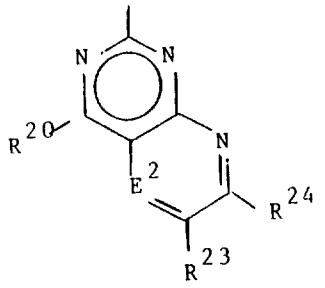
A 5-1 : $R^{20} = OCH_3$ $R^{21}=CH_3$

A 5-2 : $R^{20} = CH_3$ $R^{21}=CH_3$

A 5-3 : R^{20} = Cl R^{21} = CH_3

A 5-4 : R^{20} = OCH_3 R^{21} = CH_2CH_3

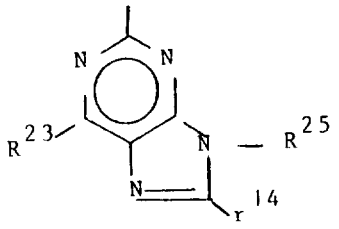
A 6



A 6-1 : R^{20} = OCH_3 R^{23}, R^{24} = H E^2 = N

A 6-2 : R^{20} = OCH_3 R^{23} = H; R^{24} = OCH_3

A 7



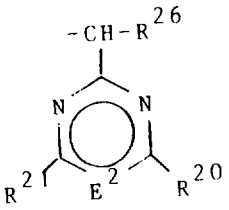
A 7-1 : R^{14} = OCH_3 R^{23} = OCH_3 R^{25} = CH_3

A 7-2 : " = CH_3 " = OCH_3 " = CH_3

A 7-3 : " = OCH_3 " = CH_3 " = CH_3

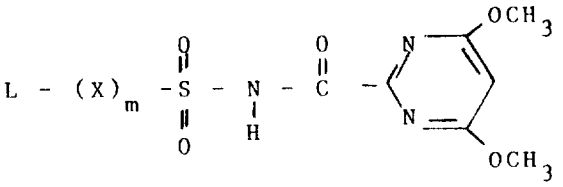
A 7-4 :	$R^{14} = CH_3$	$R^{23} = CH_3$	$R^{25} = CH_3$
A 7-5:	" = Cl	" = Cl	" = CH_3

A 8



	R^{20}	R^{21}	R^{26}	E^2
A 8-1 :	OCH_3	OCH_3	H	CH
A 8-2 :	"	"	CH_3	CH
A 8-3 :	"	"	C_2H_5	CH
A 8-4 :	CH_3	Cl	H	CH
A 8-5 :	CH_3	OCH_3	H	CH
A 8-6 :	Cl	Cl	H	CH
A 8-7 :	OCH_3	Cl	H	CH
A 8-8 :	CH_3	CH_3	H	CH
A 8-9 :	OC_2H_5	CH_3	H	CH
A 8-10:	Cl	Cl	H	N
A 8-11 :	Cl	OCH_3	H	N
A 8-12 :	$N(CH_3)_2$	$N(CH_3)_2$	H	N
A 8-13 :	OCH_3	OCH_3	H	N
A 8-14:	OCH_3	CH_3	H	N

Table 1



Example No.	L	X	m	Melting point /°C_/
1	L1-1	-	0	163-165
2	L1-2	-	0	128 -130
3	L1-3		0	
4	L1-4	-	0	
5	L1-5	-	0	
6	L1-6	-	0	
7	L1-7	-	0	
8	L1-8	-	0	159-162
9	L1-9	-	0	
10	L1-10	-	0	
11	L1-11	-	0	
12	L1-12	-	0	
13	L1-13	-	0	
14	L1-14	-	0	
15	L1-15	-	0	224 - 226
16	L1-16	-	0	190 - 192
17	L1-17	-	0	
18	L1-18	-	0	

Table 1, continuation

Example No.	L	X	m	Melting point [°C]
19	L1-19	-	0	142-144
20	L-20	-	0	
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	159-161
26	L1-26	-	0	165-167
27	L1-27	-	0	
28	L1-28	-	0	183-185
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	168-169
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	187-189
36	L1-36	-	0	
37	L1-37	-	0	204-210
38	L1-38	-	0	167-169

Table 1, continuation

Example NO.	L	X	m	Melting point [°C]
39	L1-39	-	0	
40	L1-40	-	0	
41	L1-41	-	0	
42	L1-42	-	0	
43	L1-43	-	0	
44	L1-44	-	0	245-248
45	L1-45	-	0	168-170
46	L1-46	-	0	
47	L1-47	-	0	232-237
48	L1-48	-	0	
49	L1-49	-	0	
50	L1-50	-	0	
51	L1-51	-	0	
52	L1-52	-	0	
53	L1-53	-	0	164-166
54	L1-54	-	0	
55	L1-1	CH_2	1	124-126
56	L1-2	CH_2	1	
57	L1-3	CH_2	1	
58	L1-4	CH_2	1	
59	L1-5	CH_2	1	

Table 1, continuation

Example No.	L	X	m	Melting point [°C]
60	L1-16	CH_2	1	
61	L1-7	CH_2	1	
62	L1-8	CH_2	1	173-174
63	L1-9	CH_2	1	
64	L1-10	CH_2	1	
65	L1-11	CH_2	1	
66	L1-12	CH_2	1	
67	L1-13	CH_2	1	
68	L1-14	CH_2	1	
69	L1-15	CH_2	1	145-147
70	L1-16	CH_2	1	146-148
71	L1-17	CH_2	1	
72	L1-18	CH_2	1	
73	L1-19	CH_2	1	
74	L1-20	CH_2	1	
75	L1-21	CH_2	1	138-142
76	L1-22	CH_2	1	112-116
77	L1-23	CH_2	1	121-126
78	L1-24	CH_2	1	145-148
79	L1-25	CH_2	1	125-127

Table 1, continuation

Example No.	L	X	m	Melting point /°C/
80	L1-26	CH_2	1	126-128
81	L1-27	CH_2	1	
82	L1-28	CH_2	1	159-161
83	L1-29	CH_2	1	
84	L1-30	CH_2	1	
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	
88	L1-34	CH_2	1	163-166
89	L1-35	CH_2	1	185-187
90	L1-30	CH_2	1	
91	L1-37	CH_2	1	194-196
92	L1-38	CH_2	1	150-152
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	138-142
95	L1-41	CH_2	1	136-140
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	165-166
99	L1-45	CH_2	1	

Table 1, continuation

Example No.	L	X	m	Melting point /°C/
100	L1-46	CH_2	1	127-132
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	148-152
107	L1-53	CH_2	1	104-166
108	L1-54	CH_2	1	142-146
109	L1-1	O	1	128-130
110	L1-2	O	1	
111	L1-3	O	1	
112	L1-4	O	1	
113	L1-5	O	1	
114	L1-6	O	1	
115	L1-7	O	1	
116	L1-8	O	1	125-127
117	L1-9	O	1	
118	L1-10	O	1	
119	L1-11	O	1	
120	L1-12	O	1	
121	L1-13	O	1	
122	L1-14	O	1	

Table 1, continuation

Example No.	L	X	m	Melting point /°C/
123	L1-15	0	1	
124	L1-16	0	1	87-92
125	L1-17	0	1	
126	L1-18	0	1	
127	L1-19	0	1	
128	L1-20	0	1	
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L-26	0	1	144-146
135	L1-27	0	1	148-152
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	121-124

Table 1, continuation

Example No.	L	X	m	Melting point [°C]
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	
149	L1-41	0	1	168-170
150	L1-42	0	1	
151	L1-43	0	1	
152	L1-44	0	1	
153	L1-45	0	1	
154	L1-46	0	1	
155	L1-47	0	1	
156	L1-48	0	1	
157	L1-49	0	1	
158	L1-50	0	1	
159	L1-51	0	1	
160	L1-52	0	1	
161	L1-53	0	1	
162	L1-54	0	1	
163	L1-1	NH	1	188-193
164	L1-2	NH	1	
165	L1-3	NH	1	

Table 1, continuation

Example No.	L	X	m	Melting point /°C/
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	
169	L1-7	NH	1	
170	L1-8	NH	1	156-158
171	L1-9	NH	1	
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L1-12	NH	1	
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	
178	L1-16	NH	1	129-131
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	
182	L1-20	NH	1	
183	L1-21	NH	1	
184	L1-22	NH	1	
185	L1-23	NH	1	
186	L1-24	NH	1	

Table 1, continuation

Example NO.	L	X	m	Melting point /°C/
187	L1-25	NH	1	
188	L1-26	NH	1	127-129
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	
194	L1-32	NH	1	166-168
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	Nh	1	
206	L1-44	NH	1	186-187
207	L1-45	NH	1	

Table 1, continuation

Example No.	L	X	m	Melting point /°C/
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	132-136
219	L3-3	-	0	
220	L3-4	-	0	
221	L3-5	-	0	179-181
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	

Table 1, continuation

Example No.	L	X	m	Melting point [°C]
229	L3-3	O	1	
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	164-167
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	171-174
238	L4-2	-	0	174-175
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	
248	L4-2	O	1	

Table 1, continuation

Example No.	L	X	m	Melting point /°C/
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	
254	L4-3	NH	1	
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	152-154
258	L5-2	-	0	
259	L5-3	-	0	177-180
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	

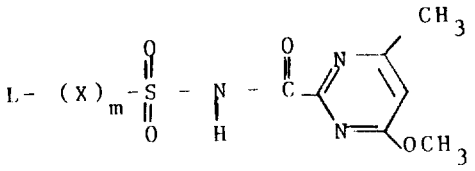
Table 1, continuation

Example NO.	L	X	m	Melting point [°C]
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	
277	L5-1	O	1	
278	L5-2	O	1	
*279	L5-3	O	1	
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	

Table 1, continuation

Example NO.	L	X	m	Melting point /°C/
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	
297	L1-55	CH_2	1	175-177
298	L1-56	CH_2	1	199-201
299	L1-57	CH_2	1	
300	L1-58	CH_2	1	170-172
301	L1-59	CH_2	1	166-168
302	L1-60	CH_2	1	
303	L1-61	CH_2	1	190-191
304	L1-62	CH_2	1	
305	L1-63	CH_2	1	
306	L1-64	CH_2	1	166-168
307	L1-65	CH_2	1	
308	L1-66	CH_2	1	
309	L1-67	CH_2	1	
310	L1-68	CH_2	1	

Table 2



Example NO.	L	X	m	Melting point [°C]
1	L1-1	-	0	151-158
2	L1-2	-	0	
3	L1-3	-	0	
4	L1-4	-	0	
5	L1-5	-	0	
6	L1-6	-	0	
7	L1-7	-	0	
8	L1-8	-	0	157
9	L1-9	-	0	
10	L1-10	-	0	
11	L1-11	-	0	
12	L1-12	-	0	
13	L1-13	-	0	
14	L1-14	-	0	
15	L1-15	-	0	
16	L1-16	-	0	141-143
17	L1-17	-	0	
18	L1-18	-	0	
19	L1-19	-	0	
20	L1-20	-	0	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	136-142
27	L1-27	-	0	
28	L1-28	-	0	159-163
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	
36	L1-36	-	0	
37	L1-37	-	0	165-167
38	L1-38	-	0	92-97
39	L1-39	-	0	
40	L1-40	-	0	
41	L1-41	-	0	
42	L1-42	-	0	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
43	L1-43	-	0	
44	L1-44	-	0	185-186
45	L1-45	-	0	
46	L1-46	-	0	
47	L1-47	-	0	
48	L1-48	-	0	
49	L1-49	-	0	
50	L1-50	-	0	
51	L1-51	-	0	
52	L1-52	-	0	
53	L1-53	-	0	110-112
54	L1-54	-	0	
55	L1-1	CH_2	1	117-120
56	L1-2	CH_2	1	
57	L1-3	CH_2	1	
58	L1-4	CH_2	1	
59	L1-5	CH_2	1	
60	L1-6	CH_2	1	
61	L1-7	CH_2	1	
62	L1-8	CH_2	1	148-151
63	L1-9	CH_2	1	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
64	L1-10	CH_2	1	
65	L1-11	CH_2	1	
66	L1-12	CH_2	1	
67	L2-13	CH_2	1	
68	L1-14	CH_2	1	
69	L1-15	CH_2	1	
70	L1-16	CH_2	1	111-113
71	L1-17	CH_2	1	
72	L1-18	CH_2	1	
73	L1-19	CH_2	1	
74	L1-20	CH_2	1	
75	L1-21	CH_2	1	91-97
76	L1-22	CH_2	1	102-107
77	L1-23	CH_2	1	105-109
78	L1-24	CH_2	1	
79	L1-25	CH_2	1	
80	L1-26	CH_2	1	173-174
81	L1-27	CH_2	1	
82	L1-28	CH_2	1	110-113
83	L1-29	CH_2	1	
84	L1-30	CH_2	1	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	
88	L1-34	CH_2	1	
89	L1-35	CH_2	1	
90	L1-36	CH_2	1	
91	L1-37	CH_2	1	178-180
92	L1-38	CH_2	1	136-137
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	97-101
95	L1-41	CH_2	1	101-105
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	118-122
99	L1-45	CH_2	1	
100	L1-46	CH_2	1	
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	
105	L1-51	CH_2	1	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
106	L1-52	CH_2	1	108-112
107	L1-53	CH_2	1	125-127
108	L1-54	CH_2	1	183-184
109	L1-1	O	1	
110	L1-2	O	1	
111	L1-3	O	1	
112	L1-4	O	1	
113	L1-5	O	1	
114	L1-6	O	1	
115	L1-7	O	1	
116	L1-8	O	1	
117	L1-9	O	1	
118	L1-10	O	1	
119	L1-11	O	1	
120	L1-12	O	1	
121	L1-13	O	1	
122	L1-14	O	1	
123	L1-15	O	1	
124	L1-16	O	1	
125	L1-17	O	1	
126	L1-18	O	1	
127	L1-19	O	1	
128	L1-20	O	1	

Table 2, continuation

Example No.	L	X	m	Melting point
				[°C]
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-26	0	1	
135	L1-27	0	1	
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	
149	L1-41	0	1	
150	L1-42	0	1	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
151	L1-43	O	1	
152	L1-44	O	1	
153	L1-45	O	1	
154	L1-46	O	1	
155	L1-47	O	1	
156	L1-48	O	1	
157	L1-49	O	1	
158	L1-50	O	1	
159	L1-51	O	1	
160	L1-52	O	1	
161	L1-53	O	1	
162	L1-54	O	1	
163	L1-1	NH	1	
164	L102	NH	1	
165	L1-3	NH	1	
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	
169	L1-7	NH	1	
170	L1-8	NH	1	
171	L1-9	NH	1	

Table 2, continuation

Example NO.	L	X	m	Melting point [°C]
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L1-12	NH	1	
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	
178	L1-16	NH	1	
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	
182	L1-20	NH	1	
183	L1-21	NH	1	
184	L1-22	NH	1	
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L1-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	
206	L1-44	NH	1	
207	L1-45	NH	1	
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	

Table 2, continuation

Example No.	L	X	m	Melting point [°C]
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	
220	L3-4	-	0	
221	L3-5	-	0	
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
237	L4-1	-	0	
238	L4-2	-	0	
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	
254	L4-3	NH	1	
255	L4-4	NH	1	
256	L4-5	NH	1	

Table 2, continuation

Example No.	L	X	m	Melting point /°C/
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	
277	L5-1	0	1	
278	L5-2	0	1	
279	L5-3	0	1	

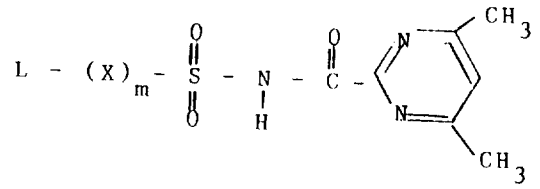
Table 2, continuation

Example No.	L	X	m	Melting point /°C/
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	
297	L1-55	CH_2	1	
298	L1-56	CH_2	1	
299	L1-57	CH_2	1	

Table 2, continuation

Example No.	L	X	m	Melting point [°C]
300	L1-58	CH_2	1	138-139
301	L1-59	CH_2	1	
302	L1-60	CH_2	1	
303	L1-61	CH_2	1	
304	L1-62	CH_2	1	
305	L1-63	CH_2	1	
306	L1-64	CH_2	1	
307	L1-65	CH_2	1	
308	L1-66	CH_2	1	
309	L1-67	CH_2	1	
310	L1-68	CH_2	1	

Table 3



Example No.	L	X	m	Melting point /°C/
1	L I-1	-	0	
2	L I-2	-	0	
3	L I-3	-	0	
4	L I-4	-	0	
5	L I-5	-	0	
6	L I-6	-	0	
7	L I-7	-	0	
8	L I-8	-	0	162-164
9	L I-9	-	0	
10	L I-10	-	0	
11	L I-11	-	0	
12	L I-12	-	0	
13	L I-13	-	0	
14	L I-14	-	0	
15	L I-15	-	0	
16	L I-16	-	0	
17	L I-17	-	0	

Table 3, continuation

Example No.	L	X	m	Melting point [°C]
18	L1-18	-	0	
19	L1-19	-	0	
20	L1-20	-	0	
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	186-188
27	L1-27	-	0	
28	L1-28	-	0	
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	
36	L1-36	-	0	
37	L1-37	-	0	

Table 3, continuation

Example No.	L	X	m	Melting point /°C/
38	L I-38	-	0	
39	L I-39	-	0	
40	L I-40	-	0	
41	L I-41	-	0	
42	L I-42	-	0	
43	L I-43	-	0	
44	L I-44	-	0	
45	L I-45	-	0	
46	L I-46	-	0	
47	L I-47	-	0	
48	L I-48	-	0	
49	L I-49	-	0	
50	L I-50	-	0	
51	L I-51	-	0	
52	L I-52	-	0	
53	L I-53	-	0	
54	L I-54	-	0	
55	L I-1	CH_2	1	
56	L I-2	CH_2	1	
57	L I-3	CH_2	1	
58	L I-4	CH_2	1	

TAble 3, continuation

Example No.	L	X	m	Melting point /°C_/
59	L1-5	CH_2	1	
60	L1-6	CH_2	1	
61	L1-7	CH_2	1	
62	L1-8	CH_2	1	184-186
63	L1-9	CH_2	1	
64	L1-10	CH_2	1	
65	L1-11	CH_2	1	
66	L1-12	CH_2	1	
67	L1-13	CH_2	1	
68	L1-14	CH_2	1	
69	L1-15	CH_2	1	
70	L1-16	CH_2	1	
71	L1-17	CH_2	1	
72	L1-18	CH_2	1	
73	L1-19	CH_2	1	
74	L1-20	CH_2	1	
75	L1-21	CH_2	1	
76	L1-22	CH_2	1	
77	L1-23	CH_2	1	
78	L1-24	CH_2	1	
79	L1-25	CH_2	1	

Table 3, continuation

Example No.	L	X	m	Melting point /°C/
80	L1-26	CH_2	1	
81	L1-27	CH_2	1	
82	L1-28	CH_2	1	
83	L1-29	CH_2	1	
84	L1-30	CH_2	1	
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	
88	L1-34	CH_2	1	
89	L1-35	CH_2	1	
90	L1-36	CH_2	1	
91	L1-37	CH_2	1	
92	L1-38	CH_2	1	
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	
95	L1-41	CH_2	1	
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	
99	L1-45	CH_2	1	
100	L1-46	CH_2	1	

Table 3, continuation

Example No.	L	X	m	Melting point [°C]
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	
107	L1-53	CH_2	1	
108	L1-54	CH_2	1	
109	L1-1	O	1	
110	L1-2	O	1	
111	L1-3	O	1	
112	L1-4	O	1	
113	L1-5	O	1	
114	L1-6	O	1	
115	L1-7	O	1	
116	L1-8	O	1	
117	L1-9	O	1	
118	L1-10	O	1	
119	L1-11	O	1	
120	L1-12	O	1	
121	L1-13	O	1	
122	L1-14	O	1	

Table 3, continuation

Example No.	L	X	m	Melting point /°C/
123	L1-15	0	1	
124	L1-16	0	1	
125	L1-17	0	1	
126	L1-18	0	1	
127	L1-19	0	1	
128	L1-20	0	1	
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-26	0	1	
135	L1-27	0	1	
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	

Table 3, Continuation

Example No.	L	X	m	Melting point [°C]
143	L-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	
149	L1-41	0	1	
150	L1-42	0	1	
151	L1-43	0	1	
152	L1-44	0	1	
153	L1-45	0	1	
154	L1-46	0	1	
155	L1-47	0	1	
156	L1-48	0	1	
157	L1-49	0	1	
158	L1-50	0	1	
159	L1-51	0	1	
160	L1-52	0	1	
161	L1-53	0	1	
162	L1-54	0	1	
163	L1-1	NH	1	
164	L1-2	NH	1	

Table 3, continuation

Example No.	L	X	m	Melting Point /°C/
165	L I-3	NH	1	
166	L I-4	NH	1	
167	L I-5	NH	1	
168	L I-6	NH	1	
169	L I-7	NH	1	
170	L I-8	NH	1	
171	L I-9	NH	1	
172	L I-10	NH	1	
173	L I-11	NH	1	
174	L I-12	NH	1	
175	L I-13	NH	1	
176	L I-14	NH	1	
177	L I-15	NH	1	
178	L I-16	NH	1	
179	L I-17	NH	1	
180	L I-18	NH	1	
181	L I-19	NH	1	
182	L I-20	NH	1	
183	L I-21	NH	1	
184	L I-22	NH	1	

Table 3, continuation

Example NO.	L	X	m	Melting point [°C]
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L1-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	

Table 3, continuation

Example No.	L	X	m	Melting point /°C/
206	L1-44	NH	1	
207	L1-45	NH	1	
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	
220	L3-4	-	0	
221	L3-5	-	0	
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	

Table 3, continuation

Example NO.	L	X	m	Melting point /°C/
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	
238	L4-2	-	0	
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	

Table 3, continuation

Example No.	L	X	m	Melting point /°C/
247	L4-1	O	1	
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	
254	L4-3	NH	1	
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	

Table 3, continuation

Example No.	L	X	m	Melting point /°C/
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	
277	L5-1	O	1	
278	L5-2	O	1	
279	L5-3	O	1	
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	

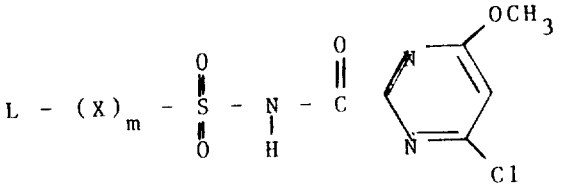
Table 3, continuation

Example No.	L	X	m	Melting point /°C/
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	
297	L1-55	CH_2	1	
298	L1-56	CH_2	1	
299	L1-57	CH_2	1	
300	L1-58	CH_2	1	
301	L1-59	CH_2	1	
302	L1-60	CH_2	1	
303	L1-61	CH_2	1	
304	L1-62	CH_2	1	
305	L1-63	CH_2	1	
306	L1-64	CH_2	1	
307	L1-65	CH_2	1	
308	L1-66	CH_2	1	

Table 3, continuation

Example No.	L	X	m	Melting point /°C/
309	L1-67	CH_2	1	
310	L1-68	CH_2	1	

Table 4



Example NO.	L	X	m	Melting point [°C]
1	L1-1	-	0	
2	L1-2	-	0	
3	L1-3	-	0	
4	L1-4	-	0	
5	L1-5	-	0	
6	L1-6	-	0	
7	L1-7	-	0	
8	L1-8	-	0	
9	L1-9	-	0	
10	L1-10	-	0	
11	L1-11	-	0	
12	L1-12	-	0	
13	L1-13	-	0	
14	L1-14	-	0	
15	L1-15	-	0	

Table 4, continuation

Example No.	L	X	m	Melting point /°C/
16	L1-16	-	0	
17	L1-17	-	0	
18	L1-18	-	0	
19	L1-19	-	0	
20	L1-20	-	0	
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	
27	L1-27	-	0	
28	L1-28	-	0	
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	

Table 4, continuation

Example No.	L	X	m	Melting point [°C]
36	L1-36	-	0	
37	L1-37	-	0	
38	L1-38	-	0	
39	L1-39	-	0	
40	L1-40	-	0	
41	L1-41	-	0	
42	L1-42	-	0	
43	L1-43	-	0	
44	L1-44	-	0	
45	L1-45	-	0	
46	L1-46	-	0	
47	L1-47	-	0	
48	L1-48	-	0	
49	L1-49	-	0	
50	L1-50	-	0	
51	L1-51	-	0	
52	L1-52	-	0	
53	L1-53	-	0	
54	L1-54	-	0	

Table 4, continuation

Example No.	L	X	m	Melting point /°C/
55	L I-1	CH_2	1	
56	L I-2	CH_2	1	
57	L I-3	CH_2	1	
58	L I-4	CH_2	1	
59	L I-5	CH_2	1	
60	L I-6	CH_2	1	
61	L I-7	CH_2	1	
62	L I-8	CH_2	1	
63	L I-9	CH_2	1	
64	L I-10	CH_2	1	
65	L I-11	CH_2	1	
66	L I-12	CH_2	1	
67	L I-13	CH_2	1	
68	L I-14	CH_2	1	
69	L I-15	CH_2	1	
70	L I-16	CH_2	1	
71	L I-17	CH_2	1	
72	L I-18	CH_2	1	
73	L I-19	CH_2	1	
74	L I-20	CH_2	1	

Table 4, continuation

Example No.	L	X	m	Melting point [°C]
75	L1-21	CH_2	1	
76	L1-22	CH_2	1	
77	L1-23	CH_2	1	
78	L1-24	CH_2	1	
79	L1-25	CH_2	1	
80	L1-26	CH_2	1	
81	L1-27	CH_2	1	
82	L1-28	CH_2	1	
83	L1-29	CH_2	1	
84	L1-30	CH_2	1	
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	
88	L1-34	CH_2	1	
89	L1-35	CH_2	1	
90	L1-36	CH_2	1	
91	L1-37	CH_2	1	
92	L1-38	CH_2	1	
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	

Table 4, continuation

Example No.	L	X	m	Melting point /°C/
95	L1-41	CH_2	1	
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	
99	L1-45	CH_2	1	
100	L1-46	CH_2	1	
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	
107	L1-53	CH_2	1	
108	L1-54	CH_2	1	
109	L1-1	0	1	
110	L1-2	0	1	
111	L1-3	0	1	
112	L1-4	0	1	
113	L1-5	0	1	
114	L1-6	0	1	
115	L1-7	0	1	

Table 4, continuation

Example No.	L	X	m	Melting point /°C/
116	L1-8	0	1	
117	L1-9	0	1	
118	L1-10	0	1	
119	L1-11	0	1	
120	L1-12	0	1	
121	L1-13	0	1	
122	L1-14	0	1	
123	L1-15	0	1	
124	L1-16	0	1	
125	L1-17	0	1	
126	L1-18	0	1	
127	L1-19	0	1	
128	L1-20	0	1	
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-26	0	1	
135	L1-27	0	1	
136	L1-28	0	1	

Table 4, continuation

Example No.	L	X	m	Melting point /°C/
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	
149	L1-41	0	1	
150	L1-42	0	1	
151	L1-43	0	1	
152	L1-44	0	1	
153	L1-45	0	1	
154	L1-46	0	1	
155	L1-47	0	1	
156	L1-48	0	1	

Table 4, continuation

Example No.	L	X	m	Melting point [°C]
157	L1-49	O	1	
158	L1-50	O	1	
159	L1-51	O	1	
160	L1-52	O	1	
161	L1-53	O	1	
162	L1-54	O	1	
163	L1-1	NH	1	
164	L1-2	NH	1	
165	L1-3	NH	1	
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	
169	L1-7	NH	1	
170	L1-8	NH	1	
171	L1-9	NH	1	
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L1-12	NH	1	
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	

Table 4, continuation

Example No.	L	X	m	Melting point /°C/
178	L1-16	NH	1	
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	
182	L1-20	NH	1	
183	L1-21	NH	1	
184	L1-22	NH	1	
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	

Table 4, continuation

Example No.	L	X	m	Melting point [°C]
199	L1-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	
206	L1-44	NH	1	
207	L1-45	NH	1	
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	

Table 4, continuation

Example No.	L	X	m	Melting point [°C]
220	L3-4	-	0	
221	L3-5	-	0	
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	
238	L4-2	-	0	

Table 4, continuation

Example No.	L	X	m	Melting point /°C/
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	
254	L4-3	NH	1	
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	

Table 4, continuation

Example No.	L	X	m	Melting point [°C]
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	
277	L5-1	O	1	
278	L5-2	O	1	
279	L5-3	O	1	
280	L5-4	O	1	

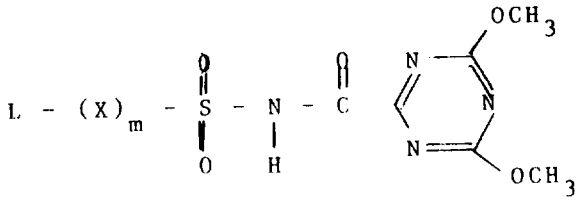
Table 4, continuation

Example No.	L	X	m	Melting point /°C/
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	
297	L1-55	CH_2	1	
298	L1-56	CH_2	1	
299	L1-57	CH_2	1	
300	L1-58	CH_2	1	

Table 4, continuation

Example No.	L	X	m	Melting point /°C/
301	L1-59	CH_2	1	
302	L1-60	CH_2	1	
303	L1-61	CH_2	1	
304	L1-62	CH_2	1	
305	L1-63	CH_2	1	
306	L1-64	CH_2	1	
307	L1-65	CH_2	1	
308	L1-66	CH_2	1	
309	L1-67	CH_2	1	
310	L1-68	CH_2	1	

Table 5



Example No.	L	X	m	Melting point /°C/
1	L1-1	-	0	
2	L1-2	-	0	
3	L1-3	-	0	
4	L1-4	-	0	
5	L1-5	-	0	
6	L1-6	-	0	
7	L1-7	-	0	
8	L1-8	-	0	
9	L1-9	-	0	
10	L1-10	-	0	
11	L1-11	-	0	
12	L1-12	-	0	
13	L1-13	-	0	
14	L1-14	-	0	
15	L1-15	-	0	
16	L1-16	-	0	

Table 5, continuation

Example No.	L	X	m	Melting point [°C]
17	L1-17	-	0	
18	L1-18	-	0	
19	L1-19	-	0	
20	L1-20	-	0	
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	
27	L1-27	-	0	
28	L1-28	-	0	
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	
36	L1-36	-	0	
37	L1-37	-	0	

Table 5, continuation

Example No.	L	X	m	Melting point/°C_/
38	L I-38	-	0	
39	L I-39	-	0	
40	L I-40	-	0	
41	L I-41	-	0	
42	L I-42	-	0	
43	L I-43	-	0	
44	L I-44	-	0	
45	L I-45	-	0	
46	L I-46	-	0	
47	L I-47	-	0	
48	L I-48	-	0	
49	L I-49	-	0	
50	L I-50	-	0	
51	L I-51	-	0	
52	L I-52	-	0	
53	L I-53	-	0	
54	L I-54	-	0	
55	L I-1	CH_2	1	
56	L I-2	CH_2	1	
57	L I-3	CH_2	1	
58	L I-4	CH_2	1	
59	L I-5	CH_2	1	

Table 5, continuation

Example No.	L	X	m	Melting point [°C]
60	L1-6	CH_2	1	
61	L1-7	CH_2	1	
62	L1-8	CH_2	1	
63	L1-9	CH_2	1	
64	L1-10	CH_2	1	
65	L1-11	CH_2	1	
66	L1-12	CH_2	1	
67	L1-13	CH_2	1	
68	L1-14	CH_2	1	
69	L1-15	CH_2	1	
70	L1-16	CH_2	1	
71	L1-17	CH_2	1	
72	L1-18	CH_2	1	
73	L1-19	CH_2	1	
74	L1-20	CH_2	1	
75	L1-21	CH_2	1	
76	L1-22	CH_2	1	
77	L1-23	CH_2	1	
78	L1-24	CH_2	1	
79	L1-25	CH_2	1	
80	L1-26	CH_2	1	
81	L1-27	CH_2	1	

Table 5, continuation

Example No.	L	X	m	Melting point /°C/
82	L I-28	CH_2	I	
83	L I-29	CH_2	I	
84	L I-30	CH_2	I	
85	L I-31	CH_2	I	
86	L I-32	CH_2	I	
87	L I-33	CH_2	I	
88	L I-34	CH_2	I	
89	L I-35	CH_2	I	
90	L I-36	CH_2	I	
91	L I-37	CH_2	I	
92	L I-38	CH_2	I	
93	L I-39	CH_2	I	
94	L I-40	CH_2	I	
95	L I-41	CH_2	I	
96	L I-42	CH_2	I	
97	L I-43	CH_2	I	
98	L I-44	CH_2	I	
99	L I-45	CH_2	I	
100	L I-46	CH_2	I	
101	L I-47	CH_2	I	
102	L I-48	CH_2	I	
103	L I-49	CH_2	I	
104	L I-50	CH_2	I	

Table 5, continuation

Example No.	L	X	m	Melting point [°C]
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	
107	L1-53	CH_2	1	
108	L1-54	CH_2	1	
109	L1-1	O	1	
110	L1-2	O	1	
111	L1-3	O	1	
112	L1-4	O	1	
113	L1-5	O	1	
114	L1-6	O	1	
115	L1-7	O	1	
116	L1-8	O	1	
117	L1-9	O	1	
118	L1-10	O	1	
119	L1-11	O	1	
120	L1-12	O	1	
121	L1-13	O	1	
122	L1-14	O	1	
123	L1-15	O	1	
124	L1-16	O	1	
125	L1-17	O	1	
126	L1-18	O	1	

Table 5, continuation

Example No.	L	X	m	Melting point [°C]
127	L1-19	0	1	
128	L1-20	0	1	
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-26	0	1	
135	L1-27	0	1	
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	

Table 5, continuation

Example No.	L	X	m	Melting point /°C/
149	L1-41	O	1	
150	L1-42	O	1	
151	L1-43	O	1	
152	L1-44	O	1	
153	L1-45	O	1	
154	L1-46	O	1	
155	L1-47	O	1	
156	L1-48	O	1	
157	L1-49	O	1	
158	L1-50	O	1	
159	L1-51	O	1	
160	L1-52	O	1	
161	L1-53	O	1	
162	L1-54	O	1	
163	L1-1	NH	1	
164	L1-2	NH	1	
165	L1-3	NH	1	
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	
169	L1-7	NH	1	
170	L1-8	NH	1	

Table 5, continuation

Example No.	L	X	m	Melting point /°C/
171	L1-9	NH	1	
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L1-12	NH	1	
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	
178	L1-16	NH	1	
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	
182	L1-20	NH	1	
183	L1-21	NH	1	
184	L1-22	NH	1	
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	

Table 5, continuation

Example No.	L	X	m	Melting point [°C]
193	L1-31	NH	1	
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L1-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	
206	L1-44	NH	1	
207	L1-45	NH	1	
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	

Table 5, continuation

Example No.	L	X	m	Melting point [°C]
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	
220	L3-4	-	0	
221	L3-5	-	0	
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	

Table 5, continuation

Example No.	L	X	m	Melting point /°C/
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	
238	L4-2	-	0	
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	
254	L4-3	NH	1	

Table 5, continuation

Example No.	L	X	m	Melting point [°C]
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	
277	L5-1	O	1	

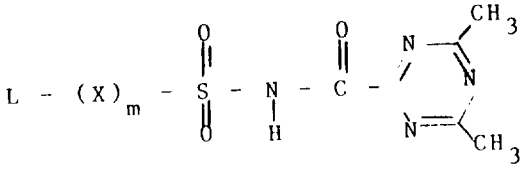
Table 5, continuation

Example No.	L	X	m	Melting point [°C]
278	L5-2	O	1	
279	L5-3	O	1	
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	
297	L1-55	CH_2	1	
298	L1-56	CH_2	1	

Table 5, continuation

Example No.	L	X	m	Melting point /°C/
299	L1-57	CH_2	1	
300	L1-58	CH_2	1	
301	L1-59	CH_2	1	
302	L1-60	CH_2	1	
303	L1-61	CH_2	1	
304	L1-62	CH_2	1	
305	L1-63	CH_2	1	
306	L1-64	CH_2	1	
307	L1-65	CH_2	1	
308	L1-66	CH_2	1	
309	L1-67	CH_2	1	
310	L1-68	CH_2	1	

Table 6



Example No.	L	X	m	Melting point (°C)
1	L1-1	-	0	
2	L1-2	-	0	
3	L1-3	-	0	
4	L1-4	-	0	
5	L1-5	-	0	
6	L1-6	-	0	
7	L1-7	-	0	
8	L1-8	-	0	
9	L1-9	-	0	
10	L1-10	-	0	
11	L1-11	-	0	
12	L1-12	-	0	
13	L1-13	-	0	
14	L1-14	-	0	
15	L1-15	-	0	
16	L1-16	-	0	
17	L1-17	-	0	
18	L1-18	-	0	
19	L1-19	-	0	

Table 6, continuation

Example No.	L	X	m	Melting point/$^{-o}$C/
20	L1-20	-	0	
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	
27	L1-27	-	0	
28	L1-28	-	0	
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	
36	L1-36	-	0	
37	L1-37	-	0	
38	L1-38	-	0	
39	L1-39	-	0	
40	L1-40	-	0	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
41	L1-41	-	0	
42	L1-42	-	0	
43	L1-43	-	0	
44	L1-44	-	0	
45	L1-45	-	0	
46	L1-46	-	0	
47	L1-47	-	0	
48	L1-48	-	0	
49	L1-49	-	0	
50	L1-50	-	0	
51	L1-51	-	0	
52	L1-52	-	0	
53	L1-53	-	0	
54	L1-54	-	0	
55	L1-1	CH_2	1	
56	L1-2	CH_2	1	
57	L1-3	CH_2	1	
58	L1-4	CH_2	1	
59	L1-5	CH_2	1	
60	L1-6	CH_2	1	
61	L1-7	CH_2	1	
62	L1-8	CH_2	1	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
63	L1-9	CH_2	1	
64	L1-10	CH_2	1	
65	L1-11	CH_2	1	
66	L1-12	CH_2	1	
67	L1-13	CH_2	1	
68	L1-14	CH_2	1	
69	L1-15	CH_2	1	
70	L1-16	CH_2	1	
71	L1-17	CH_2	1	
72	L1-18	CH_2	1	
73	L1-19	CH_2	1	
74	L1-20	CH_2	1	
75	L1-21	CH_2	1	
76	L1-22	CH_2	1	
77	L1-23	CH_2	1	
78	L1-24	CH_2	1	
79	L1-25	CH_2	1	
80	L1-26	CH_2	1	
81	L1-27	CH_2	1	
82	L1-28	CH_2	1	
83	L1-29	CH_2	1	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
84	L1-30	CH_2	1	
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	
88	L1-34	CH_2	1	
89	L1-35	CH_2	1	
90	L1-36	CH_2	1	
91	L1-37	CH_2	1	
92	L1-38	CH_2	1	
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	
95	L1-41	CH_2	1	
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	
99	L1-45	CH_2	1	
100	L1-46	CH_2	1	
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	
107	L1-53	CH_2	1	
108	L1-54	CH_2	1	
109	L1-1	O	1	
110	L1-2	O	1	
111	L1-3	O	1	
112	L1-4	O	1	
113	L1-5	O	1	
114	L1-6	O	1	
115	L1-7	O	1	
116	L1-8	O	1	
117	L1-9	O	1	
118	L1-10	O	1	
119	L1-11	O	1	
120	L1-12	O	1	
121	L1-13	O	1	
122	L1-14	O	1	
123	L1-15	O	1	
124	L1-16	O	1	
125	L1-17	O	1	

Table 6, continuation

Example No.	L	X	m	Melting point [°C]
126	L1-18	0	1	
127	L1-19	0	1	
128	L1-20	0	1	
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-26	0	1	
135	L1-27	0	1	
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
147	L1-39	O	1	
148	L1-40	O	1	
149	L1-41	O	1	
150	L1-42	O	1	
151	L1-43	O	1	
152	L1-44	O	1	
153	L1-45	O	1	
154	L1-46	O	1	
155	L1-47	O	1	
156	L1-48	O	1	
157	L1-49	O	1	
158	L1-50	O	1	
159	L1-51	O	1	
160	L1-52	O	1	
161	L1-53	O	1	
162	L1-54	O	1	
163	L1-1	NH	1	
164	L1-2	NH	1	
165	L1-3	NH	1	
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
169	L1-7	NH	1	
170	L1-8	NH	1	
171	L1-9	NH	1	
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L1-12	NH	1	
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	
178	L1-16	NH	1	
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	
182	L1-20	NH	1	
183	L1-21	NH	1	
184	L1-22	NH	1	
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	

Table 6, continuation

Example No.	L	X	m	Melting point [°C]
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L1-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	
206	L1-44	NH	1	
207	L1-45	NH	1	
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	
220	L3-4	-	0	
221	L3-5	-	0	
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	

Table 6, continuation

Example No.	L	X	m	Melting point [°C]
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	
238	L4-2	-	0	
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	
254	L4-3	NH	1	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	

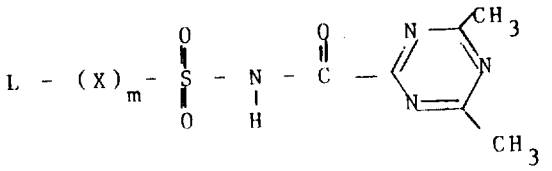
Table 6, continuation

Example No.	L	X	m	Melting point /°C/
277	L5-1	O	1	
278	L5-2	O	1	
279	L5-3	O	1	
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	
297	L1-55	CH_2	1	
298	L1-56	CH_2	1	
299	L1-57	CH_2	1	

Table 6, continuation

Example No.	L	X	m	Melting point /°C/
300	L I-58	CH_2	I	
301	L I-59	CH_2	I	
302	L I-60	CH_2	I	
303	L I-61	CH_2	I	
304	L I-62	CH_2	I	
305	L I-63	CH_2	I	
306	L I-64	CH_2	I	
307	L I-65	CH_2	I	
308	L I-66	CH_2	I	
309	L I-67	CH_2	I	
310	L I-68	CH_2	I	

Table 7



Example No.	L	X	m	Melting point /°C/
1	L I-1	-	0	
2	L I-2	-	0	
3	L I-3	-	0	
4	L I-4	-	0	
5	L I-5	-	0	
6	L I-6	-	0	
7	L I-7	-	0	
8	L I-8	-	0	
9	L I-9	-	0	
10	L I-10	-	0	
11	L I-11	-	0	
12	L I-12	-	0	
13	L I-13	-	0	
14	L I-14	-	0	
15	L I-15	-	0	
16	L I-16	-	0	
17	L I-17	-	0	
18	L I-18	-	0	

Table 7, continuation

Example No.	L	X	m	Melting point /°C/
19	L1-19	-	0	
20	L1-20	-	0	
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	
27	L1-27	-	0	
28	L1-28	-	0	
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	
36	L1-36	-	0	
37	L1-37	-	0	
38	L1-38	-	0	
39	L1-39	-	0	
40	L1-40	-	0	

Table 7, continuation

Example No.	L	X	m	Melting point [°C]
41	L1-41	-	0	
42	L1-42	-	0	
43	L1-43	-	0	
44	L1-44	-	0	
45	L1-45	-	0	
46	L1-46	-	0	
47	L1-47	-	0	
48	L1-48	-	0	
49	L1-49	-	0	
50	L1-50	-	0	
51	L1-51	-	0	
52	L1-52	-	0	
53	L1-53	-	0	
54	L1-54	-	0	
55	L1-1	CH_2	1	
56	L1-2	CH_2	1	
57	L1-3	CH_2	1	
58	L1-4	CH_2	1	
59	L1-5	CH_2	1	
60	L1-6	CH_2	1	
61	L1-7	CH_2	1	

Table 7, continuation

Example No.	L	X	m	Melting point /°C/
62	L I-8	CH_2	I	
63	L I-9	CH_2	I	
64	L I-10	CH_2	I	
65	L I-11	CH_2	I	
66	L I-12	CH_2	I	
67	L I-13	CH_2	I	
68	L I-14	CH_2	I	
69	L I-15	CH_2	I	
70	L I-16	CH_2	I	
71	L I-17	CH_2	I	
72	L I-18	CH_2	I	
73	L I-19	CH_2	I	
74	L I-20	CH_2	I	
75	L I-21	CH_2	I	
76	L I-22	CH_2	I	
77	L I-23	CH_2	I	
78	L I-24	CH_2	I	
79	L I-25	CH_2	I	
80	L I-26	CH_2	I	
81	L I-27	CH_2	I	
82	L I-28	CH_2	I	
83	L I-29	CH_2	I	
84	L I-30	CH_2	I	

Table 7, continuation

Example No.	L	X	m	Melting point /°C/
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	
88	L1-34	CH_2	1	
89	L1-35	CH_2	1	
90	L1-36	CH_2	1	
91	L1-37	CH_2	1	
92	L1-38	CH_2	1	
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	
95	L1-41	CH_2	1	
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	
99	L1-45	CH_2	1	
100	L1-46	CH_2	1	
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	
107	L1-53	CH_2	1	

Table 7, continuation

Example No.	L	X	m	Melting point /°C/
108	L1-54	CH_2	1	
109	L1-1	O	1	
110	L1-2	O	1	
111	L1-3	O	1	
112	L1-4	O	1	
113	L1-5	O	1	
114	L1-6	O	1	
115	L1-7	O	1	
116	L1-8	O	1	
117	L1-9	O	1	
118	L1-10	O	1	
119	L1-11	O	1	
120	L1-12	O	1	
121	L1-13	O	1	
122	L1-14	O	1	
123	L1-15	O	1	
124	L1-16	O	1	
125	L1-17	O	1	
126	L1-18	O	1	
127	L1-19	O	1	
128	L1-20	O	1	
129	L1-21	O	1	
130	L1-22	O	1	

Table 7, continuation

Example No.	L	X	m	Melting point [°C]
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-26	0	1	
135	L1-27	0	1	
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	
149	L1-41	0	1	
150	L1-42	0	1	
151	L1-43	0	1	

Table 7, continuation

Example No.	L	X	m	Melting point /°C/
152	L1-44	O	1	
153	L1-45	O	1	
154	L1-46	O	1	
155	L1-47	O	1	
156	L1-48	O	1	
157	L1-49	O	1	
158	L1-50	O	1	
159	L1-51	O	1	
160	L1-52	O	1	
161	L1-53	O	1	
162	L1-54	O	1	
163	L1-1	NH	1	
164	L1-2	NH	1	
165	L1-3	NH	1	
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	
169	L1-7	NH	1	
170	L1-8	NH	1	
171	L1-9	NH	1	
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L1-12	NH	1	

Table 7, continuation

Example No.	L	X	m	Melting point /°C/
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	
178	L1-16	NH	1	
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	
182	L1-20	NH	1	
183	L1-21	NH	1	
184	L1-22	NH	1	
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	

Table 7, continuation

Example No.	L	X	m	Melting point [°C]
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L1-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	
206	L1-44	NH	1	
207	L1-45	NH	1	
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	

Table 7, continuation

Example No.	L	X	m	Melting point [°C]
220	L3-4	-	0	
221	L3-5	-	0	
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	
238	L4-2	-	0	
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	

Table 7, continuation

Example No.	L	X	m	Melting point /°C/
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	
254	L4-3	NH	1	
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	

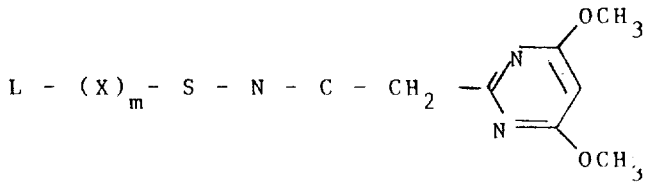
Table 7, continuation

Example No.	L	X	m	Melting point /°C/
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	
277	L5-1	O	1	
278	L5-2	O	1	
279	L5-3	O	1	
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	

Table 7, continuation

Example No.	L	X	m	Melting point [°C]
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	
297	L1-55	CH_2	1	
298	L1-56	CH_2	1	
299	L1-57	CH_2	1	
300	L1-58	CH_2	1	
301	L1-59	CH_2	1	
302	L1-60	CH_2	1	
303	L1-61	CH_2	1	
304	L1-62	CH_2	1	
305	L1-63	CH_2	1	
306	L1-64	CH_2	1	
307	L1-65	CH_2	1	
308	L1-66	CH_2	1	
309	L1-67	CH_2	1	
310	L1-68	CH_2	1	

Table 8



Example No.	L	X	m	Melting point/°C/
1	L1-1	-	0	
2	L1-2	-	0	113-115
3	L1-3	-	0	
4	L1-4	-	0	
5	L1-5	-	0	
6	L1-6	-	0	
7	L1-7	-	0	
8	L1-8	-	0	
9	L1-9	-	0	
10	L1-10	-	0	
11	L1-11	-	0	
12	L1-12	-	0	
13	L1-13	-	0	
14	L1-14	-	0	
15	L1-15	-	0	
16	L1-16	-	0	
17	L1-17	-	0	
18	L1-18	-	0	
19	L1-19	-	0	

TAble 8, continuation

Example NO.	L	X	m	Melting point /°C/
20	L1-20	-	0	
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	97 - 100
27	L1-27	-	0	
28	L1-28	-	0	125 - 129
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	
36	L1-36	-	0	
37	L1-37	-	0	
38	L1-38	-	0	84 - 87
39	L1-39	-	0	
40	L1-40	-	0	
41	L1-41	-	0	

Table 8, continuation

Example No.	L	X	m	Melting point /°C/
42	L1-42	-	0	
43	L1-43	-	0	
44	L1-44	-	0	
45	L1-45	-	0	
46	L1-46	-	0	
47	L1-47	-	0	
48	L1-48	-	0	
49	L1-49	-	0	
50	L1-50	-	0	
51	L1-51	-	0	
52	L1-52	-	0	
53	L1-53	-	0	
54	L1-54	-	0	
55	L1-1	CH_2	1	98 - 101
56	L1-2	CH_2	1	
57	L1-3	CH_2	1	
58	L1-4	CH_2	1	
59	L1-5	CH_2	1	
60	L1-6	CH_2	1	
61	L1-7	CH_2	1	
62	L1-8	CH_2	1	
63	L1-9	CH_2	1	
64	L1-10	CH_2	1	

Table 8, continuation

Example No.	L	X	m	Melting point /°C/
65	L1-11	CH_2	1	
66	L1-12	CH_2	1	
67	L1-13	CH_2	1	
68	L1-14	CH_2	1	
69	L1-15	CH_2	1	
70	L1-16	CH_2	1	
71	L1-17	CH_2	1	
72	L1-18	CH_2	1	
73	L1-19	CH_2	1	
74	L1-20	CH_2	1	
75	L1-21	CH_2	1	
76	L1-22	CH_2	1	
77	L1-23	CH_2	1	
78	L1-24	CH_2	1	
79	L1-25	CH_2	1	
80	L1-26	CH_2	1	
81	L1-27	CH_2	1	
82	L1-28	CH_2	1	
83	L1-29	CH_2	1	
84	L1-30	CH_2	1	
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	

Table 8, continuation

Example No.	L	X	m	Melting point /°C/
88	L1-34	CH_2	1	
89	L1-35	CH_2	1	
90	L1-36	CH_2	1	
91	L1-37	CH_2	1	
92	L1-38	CH_2	1	
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	
95	L1-41	CH_2	1	
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	
99	L1-45	CH_2	1	
100	L1-46	CH_2	1	
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	
107	L1-53	CH_2	1	
108	L1-54	CH_2	1	

Table 8, continuation

Example No.	L	X	m	Melting point /°C/
109	L1-1	0	1	
110	L1-2	0	1	
111	L1-3	0	1	
112	L1-4	0	1	
113	L1-5	0	1	
114	L1-6	0	1	
115	L1-7	0	1	
116	L1-8	0	1	
117	L1-9	0	1	
118	L1-10	0	1	
119	L1-11	0	1	
120	L1-12	0	1	
121	L1-13	0	1	
122	L1-14	0	1	
123	L1-15	0	1	
124	L1-16	0	1	100 - 102
125	L1-17	0	1	
126	L1-18	0	1	
127	L1-19	0	1	
128	L1-20	0	1	
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	

Table 8, continuation

Example No.	L	X	m	Melting point /°C/
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-26	0	1	
135	L1-27	0	1	
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	
149	L1-41	0	1	
150	L1-42	0	1	
151	L1-43	0	1	
152	L1-44	0	1	
153	L1-45	0	1	
154	L1-46	0	1	

Table 8, continuation

Example No.	L	X	m	Melting point [°C]
155	L1-47	O	1	
156	L1-48	O	1	
157	L1-49	O	1	
158	L1-50	O	1	
159	L1-51	O	1	
160	L1-52	O	1	
161	L1-53	O	1	
162	L1-54	O	1	
163	L1-1	NH	1	
164	L1-2	NH	1	
165	L1-3	NH	1	
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	
169	L1-7	NH	1	
170	L1-8	NH	1	
171	L1-9	NH	1	
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L1-12	NH	1	
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	

Table 8, continuation

Example No.	L	X	m	Melting point [°C]
178	L1-16	NH	1	
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	
182	L1-20	NH	1	
183	L1-21	NH	1	
184	L1-22	NH	1	
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L1-37	NH	1	
200	L1-38	NH	1	

Table 8, continuation

Example No.	L	X	m	Melting point /°C/
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	
206	L1-44	NH	1	
207	L1-45	NH	1	
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	
220	L3-4	-	0	
221	L3-5	-	0	97 - 99
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	

Table 8, continuation

Example No.	L	X	m	Melting point [°C]
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	
238	L4-2	-	0	101 - 104
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	

Table 8, continuation

Example No.	L	X	m	Melting point /°C/
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	
254	L4-3	NH	1	
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	

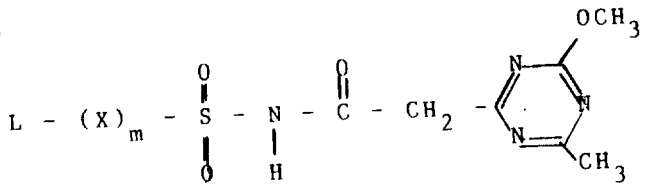
Table 8, continuation

Example No.	L	M	m	Melting point [°C]
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	
277	L5-1	O	1	
278	L5-2	O	1	
279	L5-3	O	1	
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	

Table 8, continuation

Example No.	L	X	m	Melting point /°C/
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	

Table 9



Example No.	L	X	m	Melting point /°C/
1	L1-1	-	0	
2	L1-2	-	0	
3	L1-3	-	0	
4	L1-4	-	0	
5	L1-5	-	0	
6	L1-6	-	0	
7	L1-7	-	0	
8	L1-8	-	0	
9	L1-9	-	0	
10	L1-10	-	0	
11	L1-11	-	0	
12	L1-12	-	0	
13	L1-13	-	0	
14	L1-14	-	0	
15	L1-15	-	0	
16	L1-16	-	0	
17	L1-17	-	0	
18	L1-18	-	0	
19	L1-19	-	0	
20	L1-20	-	0	

Table 9, continuation

Example No.	L	X	m	Melting point [°C]
21	L1-21	-	0	
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	
27	L1-27	-	0	
28	L1-28	-	0	
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	
36	L1-36	-	0	
37	L1-37	-	0	
38	L1-38	-	0	
39	L1-39	-	0	
40	L1-40	-	0	
41	L1-41	-	0	
42	L1-42	-	0	
43	L1-43	-	0	

Table 9, continuation

Example No.	L	x	m	Melting point /°C/
44	L1-44	-	0	
45	L1-45	-	0	
46	L1-46	-	0	
47	L1-47	-	0	
48	L1-48	-	0	
49	L1-49	-	0	
50	L1-50	-	0	
51	L1-51	-	0	
52	L1-52	-	0	
53	L1-53	-	0	
54	L1-54	-	0	
55	L1-1	CH_2	1	
56	L1-2	CH_2	1	
57	L1-3	CH_2	1	
58	L1-4	CH_2	1	
59	L1-5	CH_2	1	
60	L1-6	CH_2	1	
61	L1-7	CH_2	1	
62	L1-8	CH_2	1	
63	L1-9	CH_2	1	
64	L1-10	CH_2	1	
65	L1-11	CH_2	1	
66	L1-12	CH_2	1	

T.ble 9, continuation

Example No.	L	X	m	Melting point /$^{-o}$C/
67	L1-13	CH_2	1	
68	L1-14	CH_2	1	
69	L1-15	CH_2	1	
70	L1-16	CH_2	1	
71	L1-17	CH_2	1	
72	L1-18	CH_2	1	
73	L1-19	CH_2	1	
74	L1-20	CH_2	1	
75	L1-21	CH_2	1	
76	L1-22	CH_2	1	
77	L1-23	CH_2	1	
78	L1-24	CH_2	1	
79	L1-25	CH_2	1	
80	L1-26	CH_2	1	
81	L1-27	CH_2	1	
82	L1-28	CH_2	1	
83	L1-29	CH_2	1	
84	L1-30	CH_2	1	
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	
88	L1-34	CH_2	1	
89	L1-35	CH_2	1	

Table 9, continuation

Example No.	L	X	m	Melting point [°C]
90	L1-36	CH_2	1	
91	L1-37	CH_2	1	
92	L1-38	CH_2	1	
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	
95	L1-41	CH_2	1	
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	
99	L1-45	CH_2	1	
100	L1-46	CH_2	1	
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	
107	L1-53	CH_2	1	
108	L1-54	CH_2	1	
109	L1-1	O	1	
110	L1-2	O	1	
111	L1-3	O	1	
112	L1-4	O	1	

Table 9, continuation

Example No.	L	X	m	Melting point /° C/
113	L1-5	0	1	
114	L1-6	0	1	
115	L1-7	0	1	
116	L1-8	0	1	
117	L1-9	0	1	
118	L1-10	0	1	
119	L1-11	0	1	
120	L1-12	0	1	
121	L1-13	0	1	
122	L1-14	0	1	
123	L1-15	0	1	
124	L1-16	0	1	
125	L1-17	0	1	
126	L1-18	0	1	
127	L1-19	0	1	
128	L1-20	0	1	
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-36	0	1	
135	L1-27	0	1	
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	

Table 9, continuation

Example No.	L	X	m	Melting point [°C]
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	
149	L1-41	0	1	
150	L1-42	0	1	
151	L1-43	0	1	
152	L1-44	0	1	
153	L1-45	0	1	
154	L1-46	0	1	
155	L1-47	0	1	
156	L1-48	0	1	
157	L1-49	0	1	
158	L1-50	0	1	
159	L1-51	0	1	
160	L1-52	0	1	
161	L1-53	0	1	

Table 9, continuation

Example No.	L	X	m	Melting point /°C/
162	L1-54	O	1	
163	L1-1	NH	1	
164	L1-2	NH	1	
165	L1-3	NH	1	
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	
169	L1-7	NH	1	
170	L1-8	NH	1	
171	L1-9	NH	1	
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L112	NH	1	
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	
178	L1-16	NH	1	
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	
182	L1-20	NH	1	
183	L1-21	Nh	1	
184	L1-22	NH	1	

Table 9, continuation

Example No.	L	X	m	Melting point [°C]
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L1-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	
206	L1-44	NH	1	
207	L1-45	NH	1	

Table 9, continuation

Example No.	L	X	m	Melting point [°C]
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	
220	L3-4	-	0	
221	L3-5	-	0	
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	
230	L3-4	O	1	

Table 9, continuation

Example No.	L	X	m	Melting point [°C]
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	
238	L4-2	-	0	
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	

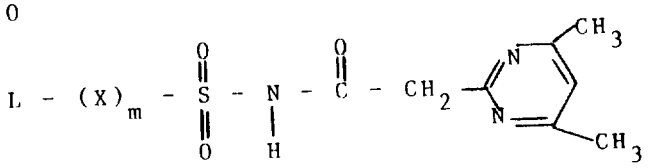
Table 9, continuation

Example No.	L	X	m	Melting point /°C/
254	L4-3	NH	1	
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	

Table 9, continuation

Example No.	L	X	m	Melting point [°C]
277	L5-1	O	1	
278	L5-2	O	1	
279	L5-3	O	1	
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	

Table 10



Example No.	L	X	m	Melting point /°C/
1	L1-1	-	0	
2	L1-2	-	0	
3	L1-3	-	0	
4	L1-4	-	0	
5	L1-5	-	0	
6	L1-6	-	0	
7	L1-7	-	0	
8	L1-8	-	0	
9	L1-9	-	0	
10	L1-10	-	0	
11	L1-11	-	0	
12	L1-12	-	0	
13	L1-13	-	0	
14	L1-14	-	0	
15	L1-15	-	0	
16	L1-16	-	0	
17	L1-17	-	0	
18	L1-18	-	0	
19	L1-19	-	0	
20	L1-20	-	0	
21	L1-21	-	0	

Table 10, continuation

Example No.	L	X	m	Melting point /°C/
22	L1-22	-	0	
23	L1-23	-	0	
24	L1-24	-	0	
25	L1-25	-	0	
26	L1-26	-	0	
27	L1-27	-	0	
28	L1-28	-	0	
29	L1-29	-	0	
30	L1-30	-	0	
31	L1-31	-	0	
32	L1-32	-	0	
33	L1-33	-	0	
34	L1-34	-	0	
35	L1-35	-	0	
36	L1-36	-	0	
37	L1-37	-	0	
38	L1-38	-	0	
39	L1-39	-	0	
40	L1-40	-	0	
41	L1-41	-	0	
42	L1-42	-	0	
43	L1-43	-	0	

Table 10, continuation

Example No.	L	X	m	Melting point /°C/
44	L1-44	-	0	
45	L1-45	-	0	
46	L1-46	-	0	
47	L1-47	-	0	
48	L1-48	-	0	
49	L1-49	-	0	
50	L1-50	-	0	
51	L1-51	-	0	
52	L1-52	-	0	
53	L1-53	-	0	
54	L1-54	-	0	
55	L1-1	CH_2	1	
56	L1-2	CH_2	1	
57	L1-3	CH_2	1	
58	L1-4	CH_2	1	
59	L1-5	CH_2	1	
60	L1-6	CH_2	1	
61	L1-7	CH_2	1	
62	L1-8	CH_2	1	
63	L1-9	CH_2	1	
64	L1-10	CH_2	1	
65	L1-11	CH_2	1	
66	L1-12	CH_2	1	
67	L1-13	CH_2	1	

Table 10, continuation

Example No.	L	X	m	Melting point /°C/
68	L1-14	CH_2	1	
69	L1-15	CH_2	1	
70	L1-16	CH_2	1	
71	L1-17	CH_2	1	
72	L1-18	CH_2	1	
73	L1-19	CH_2	1	
74	L1-20	CH_2	1	
75	L1-21	CH_2	1	
76	L1-22	CH_2	1	
77	L1-23	CH_2	1	
78	L1-24	CH_2	1	
79	L1-25	CH_2	1	
80	L1-26	CH_2	1	
81	L1-27	CH_2	1	
82	L1-28	CH_2	1	
83	L1-29	CH_2	1	
84	L1-30	CH_2	1	
85	L1-31	CH_2	1	
86	L1-32	CH_2	1	
87	L1-33	CH_2	1	
88	L1-34	CH_2	1	
89	L1-35	CH_2	1	
90	L1-36	CH_2	1	

Table 10, continuation

Example No.	L	X	m	Melting point /°C/
91	L1-37	CH_2	1	
92	L1-38	CH_2	1	
93	L1-39	CH_2	1	
94	L1-40	CH_2	1	
95	L1-41	CH_2	1	
96	L1-42	CH_2	1	
97	L1-43	CH_2	1	
98	L1-44	CH_2	1	
99	L1-45	CH_2	1	
100	L1-46	CH_2	1	
101	L1-47	CH_2	1	
102	L1-48	CH_2	1	
103	L1-49	CH_2	1	
104	L1-50	CH_2	1	
105	L1-51	CH_2	1	
106	L1-52	CH_2	1	
107	L1-53	CH_2	1	
108	L1-54	CH_2	1	
109	L1-1	O	1	
110	L1-2	O	1	
111	L1-3	O	1	
112	L1-4	O	1	
113	L1-5	O	1	

Table 10, continuation

Example No.	L	X	m	Melting point [°C]
114	L1-6	0	1	
115	L1-7	0	1	
116	L1-8	0	1	
117	L1-9	0	1	
118	L1-10	0	1	
119	L1-11	0	1	
120	L1-22	0	1	
121	L1-13	0	1	
122	L1-14	0	1	
123	L1-15	0	1	
124	L1-16	0	1	
125	L1-17	0	1	
126	L1-18	0	1	
127	L1-19	0	1	
128	L1-20	0	1	
129	L1-21	0	1	
130	L1-22	0	1	
131	L1-23	0	1	
132	L1-24	0	1	
133	L1-25	0	1	
134	L1-26	0	1	
135	L1-27	0	1	

Table 10, continuation

Example No.	L	X	m	Melting point [°C]
136	L1-28	0	1	
137	L1-29	0	1	
138	L1-30	0	1	
139	L1-31	0	1	
140	L1-32	0	1	
141	L1-33	0	1	
142	L1-34	0	1	
143	L1-35	0	1	
144	L1-36	0	1	
145	L1-37	0	1	
146	L1-38	0	1	
147	L1-39	0	1	
148	L1-40	0	1	
149	L1-41	0	1	
150	L1-42	0	1	
151	L1-43	0	1	
152	L1-44	0	1	
153	L1-45	0	1	
154	L1-46	0	1	
155	L1-47	0	1	
156	L1-48	0	1	
157	L1-49	0	1	

Table 10, continuation

Example No.	L	X	m	Melting point /°C/
158	L1-50	O	1	
159	L1-51	O	1	
160	L1-52	O	1	
161	L1-53	O	1	
162	L1-54	O	1	
163	L1-1	NH	1	
164	L1-2	NH	1	
165	L1-3	NH	1	
166	L1-4	NH	1	
167	L1-5	NH	1	
168	L1-6	NH	1	
169	L1-7	NH	1	
170	L1-8	NH	1	
171	L1-9	NH	1	
172	L1-10	NH	1	
173	L1-11	NH	1	
174	L1-12	NH	1	
175	L1-13	NH	1	
176	L1-14	NH	1	
177	L1-15	NH	1	
178	L1-16	NH	1	
179	L1-17	NH	1	
180	L1-18	NH	1	
181	L1-19	NH	1	

Table 10, continuation

Example No.	L	X	m	Melting point /°C/
182	L1-20	NH	1	
183	L1-21	NH	1	
184	L1-22	NH	1	
185	L1-23	NH	1	
186	L1-24	NH	1	
187	L1-25	NH	1	
188	L1-26	NH	1	
189	L1-27	NH	1	
190	L1-28	NH	1	
191	L1-29	NH	1	
192	L1-30	NH	1	
193	L1-31	NH	1	
194	L1-32	NH	1	
195	L1-33	NH	1	
196	L1-34	NH	1	
197	L1-35	NH	1	
198	L1-36	NH	1	
199	L1-37	NH	1	
200	L1-38	NH	1	
201	L1-39	NH	1	
202	L1-40	NH	1	
203	L1-41	NH	1	
204	L1-42	NH	1	
205	L1-43	NH	1	

Table 10, continuation

Example No.	L	X	m	Melting point [°C]
206	L1-44	NH	1	
207	L1-45	NH	1	
208	L1-46	NH	1	
209	L1-47	NH	1	
210	L1-48	NH	1	
211	L1-49	NH	1	
212	L1-50	NH	1	
213	L1-51	NH	1	
214	L1-52	NH	1	
215	L1-53	NH	1	
216	L1-54	NH	1	
217	L3-1	-	0	
218	L3-2	-	0	
219	L3-3	-	0	
220	L3-4	-	0	
221	L3-5	-	0	
222	L3-1	CH_2	1	
223	L3-2	CH_2	1	
224	L3-3	CH_2	1	
225	L3-4	CH_2	1	
226	L3-5	CH_2	1	
227	L3-1	O	1	
228	L3-2	O	1	
229	L3-3	O	1	

Table 10, continuation

Example No.	L	X	m	Melting point /°C/
230	L3-4	O	1	
231	L3-5	O	1	
232	L3-1	NH	1	
233	L3-2	NH	1	
234	L3-3	NH	1	
235	L3-4	NH	1	
236	L3-5	NH	1	
237	L4-1	-	0	
238	L4-2	-	0	
239	L4-3	-	0	
240	L4-4	-	0	
241	L4-5	-	0	
242	L4-1	CH_2	1	
243	L4-2	CH_2	1	
244	L4-3	CH_2	1	
245	L4-4	CH_2	1	
246	L4-5	CH_2	1	
247	L4-1	O	1	
248	L4-2	O	1	
249	L4-3	O	1	
250	L4-4	O	1	
251	L4-5	O	1	
252	L4-1	NH	1	
253	L4-2	NH	1	

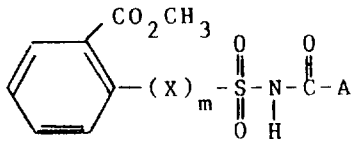
Table 10, continuation

Example No.	L	X	m	Melting point [°C]
254	L4-3	NH	1	
255	L4-4	NH	1	
256	L4-5	NH	1	
257	L5-1	-	0	
258	L5-2	-	0	
259	L5-3	-	0	
260	L5-4	-	0	
261	L5-5	-	0	
262	L5-6	-	0	
263	L5-7	-	0	
264	L5-8	-	0	
265	L5-9	-	0	
266	L5-10	-	0	
267	L5-1	CH_2	1	
268	L5-2	CH_2	1	
269	L5-3	CH_2	1	
270	L5-4	CH_2	1	
271	L5-5	CH_2	1	
272	L5-6	CH_2	1	
273	L5-7	CH_2	1	
274	L5-8	CH_2	1	
275	L5-9	CH_2	1	
276	L5-10	CH_2	1	
277	L5-1	O	1	

Table 10, continuation

Example No.	L	X	m	Melting point /°C/
278	L5-2	O	1	
279	L5-3	O	1	
280	L5-4	O	1	
281	L5-5	O	1	
282	L5-6	O	1	
283	L5-7	O	1	
284	L5-8	O	1	
285	L5-9	O	1	
286	L5-10	O	1	
287	L5-1	NH	1	
288	L5-2	NH	1	
289	L5-3	NH	1	
290	L5-4	NH	1	
291	L5-5	NH	1	
292	L5-6	NH	1	
293	L5-7	NH	1	
294	L5-8	NH	1	
295	L5-9	NH	1	
296	L5-10	NH	1	

Table 11



Example No.	X	m	A	M.p./°C/
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	
20	-	0	A2-2	

Table II, continuation

Example No.	X	m	A	M.p. /°C/
21	-	0	A2-3	
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	

Table II, continuation

Example No.	X	m	A	M.p. [°C]
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	

Table 11, continuation

Example No.	X	m	A	M.p. /°C/
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	

Table 11, continuation

Example No.	X	m	A	M.p. [°C]
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	0	1	A1-5	
106	0	1	A1-6	
107	0	1	A1-7	
108	0	1	A1-8	
109	0	1	A1-9	
110	0	1	A1-10	
111	0	1	A1-11	
112	0	1	A1-12	
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	

Table 11, continuation

Example No.	X	m	A	M.p. [°C]
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	
139	0	1	A6-1	

Table 11, continuation

Example No.	X	m	A	M.p. [°C]
140	0	1	A6-2	
141	0	1	A7-1	
142	0	1	A7-2	
143	0	1	A7-3	
144	0	1	A7-4	
145	0	1	A7-5	
146	0	1	A8-2	
147	0	1	A8-3	
148	0	1	A8-4	
149	0	1	A8-5	
150	0	1	A8-6	
151	0	1	A8-7	
152	0	1	A8-9	
153	0	1	A8-10	
154	0	1	A8-11	
155	0	1	A8-12	
156	0	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	

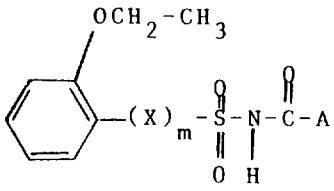
Table II, continuation

Example No.	X	m	A	M.p. /°C/
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	

Table II, continuation

Example No.	X	m	A	M.p. /°C/
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 12



Example No.	X	m	A	M.p. [°C]
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	

Table 12, continuation

Example No.	X	m	A	M.p. [°C]
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	

Table 12, continuation

Example No.	X	m	A	M.p. [°C]
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	

Table 12, continuation

Example No.	X	m	A	M.p. /°C/
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	

Table 12, continuation

Example No.	X	m	A	M.p. /°C/
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	O	1	A1-5	
106	O	1	A1-6	
107	O	1	A1-7	
108	O	1	A1-8	
109	O	1	A1-9	
110	O	1	A1-10	
111	O	1	A1-11	
112	O	1	A1-12	

Table 12, continuation

Example No.	X	m	A	M.p. [°C]
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	

Table 12, continuation

Example No.	X	m	A	M.p. [°C]
137	O	1	A5-3	
138	O	1	A5-4	
139	O	1	A6-1	
140	O	1	A6-2	
141	O	1	A7-1	
142	O	1	A7-2	
143	O	1	A7-3	
144	O	1	A7-4	
145	O	1	A7-5	
146	O	1	A8-2	
147	O	1	A8-3	
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	À8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	

Table 12, continuation

Example No.	X	m	A	M.p. [°C]
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	

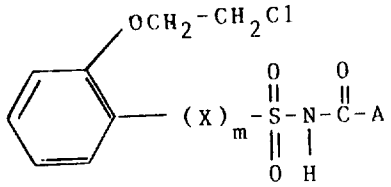
Table 12, continuation

Example No.	X	m	A	M.p. [°C]
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	Nh	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	

Table 12, continuation

Example No.	X	m	A	M.p. [°C]
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 13



Example No.	X	m	A	M.p. /°C/
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	

Table 13, continuation

Example No.	X	m	A	M.p. [°C]
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	

Table 13, continuation

Example No.	X	m	A	M.p. /°C/
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	

Table 13, continuation

Example No.	X	m	A	M.p. [°C]
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	

Table 13, continuation

Example No.	X	m	A	M.p. /°C/
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	O	1	A1-5	
106	O	1	A1-6	
107	O	1	A1-7	
108	O	1	A1-8	
109	O	1	A1-9	
110	O	1	A1-10	
111	O	1	A1-11	
112	O	1	A1-12	
113	O	1	A1-13	

Table 13, continuation

Example No.	X	m	A	M.p. [°C]
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	

Table 13, continuation

Example No.	X	m	A	M.p. /°C/
137	O	1	A5-3	
138	O	1	A5-4	
139	O	1	A6-1	
140	O	1	A6-2	
141	O	1	A7-1	
142	O	1	A7-2	
143	O	1	A7-3	
144	O	1	A7-4	
145	O	1	A7-5	
146	O	1	A8-2	
147	O	1	A8-3	
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	

Table 13, continuation

Example No.	X	m	A	M.p. /°C/
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	

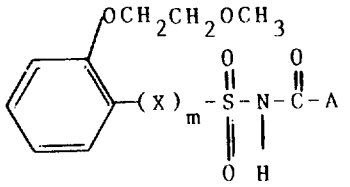
Table 13, continuation

Example No.	X	m	A	M.p. /°C/
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	

Table 13, continuation

Example No.	X	m	A	M.p. [°C]
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 14



Example No.	X	m	A	M.p. /°C/
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	

Table 14, continuation

Example No.	X	m	A	M.p. /°C/
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	

Table 14, continuation

Example No.	X	m	A	M.p. [°C]
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	

Table 14, continuation

Example No.	X	m	A	M.p. /°C/
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	

Table 14, continuation

Example No.	X	m	A	M.p. /°C/
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	O	1	A1-5	
106	O	1	A1-6	
107	O	1	A1-7	
108	O	1	A1-8	
109	O	1	A1-9	
110	O	1	A1-10	
111	O	1	A1-11	
112	O	1	A1-12	
113	O	1	A1-13	
114	O	1	A1-14	

Table 14, continuation

Example No.	X	m	A	M.p. [°C]
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	

Table 14, continuation

Example No.	X	m	A	M.p. [°C]
139	O	1	A6-1	
140	O	1	A6-2	
141	O	1	A7-1	
142	O	1	A7-2	
143	O	1	A7-3	
144	O	1	A7-4	
145	O	1	A7-5	
146	O	1	A8-2	
147	O	1	A8-3	
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	

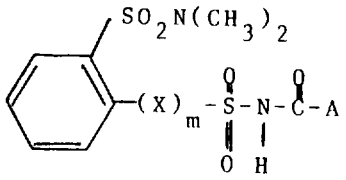
Table 14, continuation

Example No.	X	m	A	M.p. /°C/
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	

Table 14, continuation

Example No.	X	m	A	M.p. [°C]
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 15



Example No.	X	m	A	M.p. /°C/
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	

Table 15, continuation

Example No.	X	m	A	M.p. /°C/
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	

Table 15, continuation

Example No.	X	m	A	M.p. [°C]
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	

Table 15, continuation

Example No.	X	m	A	M.p. [°C]
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	

Table 15, continuation

Example No.	X	m	A	M.p. /°C/
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	0	1	A1-5	
106	0	1	A1-6	
107	0	1	A1-7	
108	0	1	A1-8	
109	0	1	A1-9	
110	0	1	A1-10	
111	0	1	A1-11	
112	0	1	A1-12	
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	

Table 15, continuation

Example No.	X	m	A	M.p. [°C]
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	
139	0	1	A6-1	
140	0	1	A6-2	
141	0	1	A7-1	
142	0	1	A7-2	
143	0	1	A7-3	
144	0	1	A7-4	
145	0	1	A7-5	
146	0	1	A8-2	
147	0	1	A8-3	
148	0	1	A8-4	
149	0	1	A8-5	
150	0	1	A8-6	
151	0	1	A8-7	
152	0	1	A8-9	

Table 15, continuation

Example No.	X	m	A	M.p. /°C/
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	

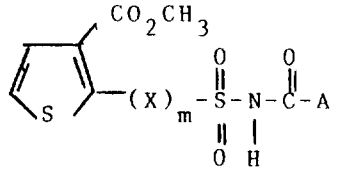
Table 15, continuation

Example No.	X	m	A	M.p. [°C]
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	

Table 15, continuation

Example No.	X	m	A	M.p. [°C]
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 16



Example No.	X	m	A	M.p. [°C]
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	
20	-	0	A2-2	
21	-	0	A2-3	

Table 16, continuation

Example No.	X	m	A	M.p. /°C/
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	

Table 16, continuation

Example No.	X	m	A	M.p. [°C]
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	

Table 16, continuation

Example No.	X	m	A	M.p. [°C]
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	

Table 16, continuation

Example No.	X	m	A	M.p. [°C]
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	0	1	A1-5	
106	0	1	A1-6	
107	0	1	A1-7	
108	0	1	A1-8	
109	0	1	A1-9	
110	0	1	A1-10	
111	0	1	A1-11	
112	0	1	A1-12	
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	

Table 16, continuation

Example No.	X	m	A	M.p. /°C/
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	
139	0	1	A6-1	
140	0	1	A6-2	
141	0	1	A7-1	
142	0	1	A7-2	
143	0	1	A7-3	
144	0	1	A7-4	
145	0	1	A7-5	
146	0	1	A8-2	
147	0	1	A8-3	

Table 16, continuation

Example No.	X	m	A	M.p. [°C]
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	

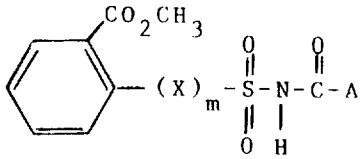
Table 16, continuation

Example No.	X	m	A	M.p. [°C]
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	

Table 16, continuation

Example No.	X	m	A	M.p. [°C]
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 17



Example No.	X	m	A	M.p. (°C)
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	

Table 17, continuation

Example No.	X	m	A	M.p. /°C/
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	

Table 17, continuation

Example No.	X	m	A	M.p. [°C]
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	

Table 17, continuation

Example No.	X	m	A	M.p. [°C]
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	

Table 17, continuation

Example No.	X	m	A	M.p. /°C/
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	0	1	A1-5	
106	0	1	A1-6	
107	0	1	A1-7	
108	0	1	A1-8	
109	0	1	A1-9	
110	0	1	A1-10	
111	0	1	A1-11	
112	0	1	A1-12	
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	

Table 17, continuation

Example No.	X	m	A	M.p. [°C]
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	
139	0	1	A6-1	
140	0	1	A6-2	
141	0	1	A7-1	
142	0	1	A7-2	
143	0	1	A7-3	
144	0	1	A7-4	
145	0	1	A7-5	
146	0	1	A8-2	
147	0	1	A8-3	

Table 17, continuation

Example No.	X	m	A	M.p. [°C]
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	

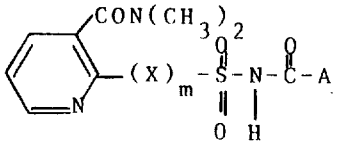
Table 17, continuation

Example No.	X	m	A	M.p./°C/
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	

TAble 17, continuation

Example No.	X	m	A	M.p. [°C]
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 18



Example No.	X	m	A	M.p. /°C/
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	

Table 18, continuation

Example No.	X	m	A	M.p./°C/
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	

Table 18, continuation

Example No.	X	m	A	M.p. /°C/
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	

Table 18, continuation

Example No.	X	m	A	M.p. /°C/
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	

Table 18, continuation

Example No.	X	m	A	M.p. [°C]
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	0	1	A1-5	
106	0	1	A1-6	
107	0	1	A1-7	
108	0	1	A1-8	
109	0	1	A1-9	
110	0	1	A1-10	
111	0	1	A1-11	
112	0	1	A1-12	
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	

Table 18, continuation

Example No.	X	m	A	M.p. /°C/
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	
139	0	1	A6-1	
140	0	1	A6-2	
141	0	1	A7-1	
142	0	1	A7-2	
143	0	1	A7-3	
144	0	1	A7-4	
145	0	1	A7-5	
146	0	1	A8-2	
147	0	1	A8-3	

Table 18, continuation

Example No.	X	m	A	M.p. [°C]
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	

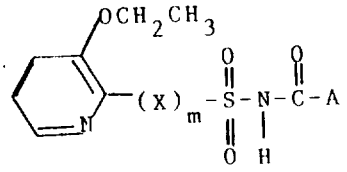
Table 18, continuation

Example No.	X	m	A	M.p. [°C]
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	Nh	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	

Table 18, continuation

Example No.	X	m	A	M.p. [°C]
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 19



Example No.	X	m	A	M.p. [°C]
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	

Table 19, continuation

Example No.	X	m	A	M.p. /°C/
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	

TAble 19, continuation

Example No.	X	m	A	M.p. [°C]
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	

Table 19, continuation

Example No.	X	m	A	M.p./°C/
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	

Table 19, continuation

Example No.	X	m	A	M.p. [°C]
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	0	1	A1-5	
106	0	1	A1-6	
107	0	1	A1-7	
108	0	1	A1-8	
109	0	1	A1-9	
110	0	1	A1-10	
111	0	1	A1-11	
112	0	1	A1-12	
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	

Table 19, continuation

Example No.	X	m	A	M.p./°C/
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	
139	0	1	A6-1	
140	0	1	A6-2	
141	0	1	A7-1	
142	0	1	A7-2	
143	0	1	A7-3	
144	0	1	A7-4	
145	0	1	A7-5	
146	0	1	A8-2	
147	0	1	A8-3	
148	0	1	A8-4	
149	0	1	A8-5	
150	0	1	A8-6	
151	0	1	A8-7	
152	0	1	A8-9	

Table 19, continuation

Example No.	X	m	A	M.p. [°C]
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	

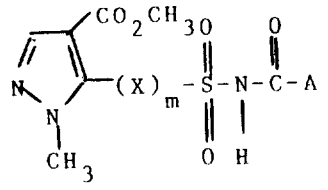
Table 19, continuation

Example No.	X	m	A	M.p. /°C/
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	

Table 19, continuation

Example No.	X	m	A	M.p. [°C]
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 20



Example No.	X	m	A	M.p. [°C]
0				
1	–	0	A1-5	
2	–	0	A1-6	
3	–	0	A1-7	
4	–	0	A1-8	
5	–	0	A1-9	
6	–	0	A1-10	
7	–	0	A1-11	
8	–	0	A1-12	
9	–	0	A1-13	
10	–	0	A1-14	
11	–	0	A1-15	
12	–	0	A1-16	
13	–	0	A1-17	
14	–	0	A1-21	
15	–	0	A1-22	
16	–	0	A1-23	
17	–	0	A1-24	
18	–	0	A1-25	
19	–	0	A2-1	
20	–	0	A2-2	

Table 20, continuation

Example No.	X	m	A	M.p. [°C]
21	-	0	A2-3	
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	
43	-	0	A8-3	

Table 20, continuation

Example No.	X	m	A	M.p. /°C/
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	

Table 20, continuation

Example No.	X	m	A	M.p. [°C]
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	

Table 20, continuation

Example No.	X	m	A	M.p. /°C/
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	O	1	A1-5	
106	O	1	A1-6	
107	O	1	A1-7	
108	O	1	A1-8	
109	O	1	A1-9	
110	O	1	A1-10	
111	O	1	A1-11	
112	O	1	A1-12	
113	O	1	A1-13	

Table 20, continuation

Example No.	X	m	A	M.p. /°C/
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	
139	0	1	A6-1	
140	0	1	A6-2	

Table 20, continuation

Example No.	X	m	A	M.p. /°C/
141	O	1	A7-1	
142	O	1	A7-2	
143	O	1	A7-3	
144	O	1	A7-4	
145	O	1	A7-5	
146	O	1	A8-2	
147	O	1	A8-3	
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	

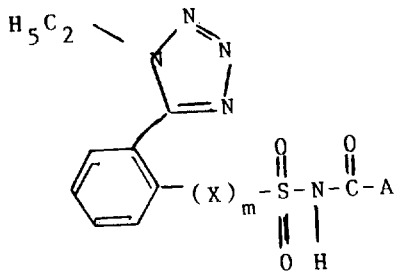
Table 20, continuation

Example No.	X	m	A	M.p. [°C]
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	

Table 20, continuation

Example No.	X	m	A	M.p./°C/
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 21



Example No.	X	m	A	M.p. /°C/
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	

Table 21, continuation

Example No.	X	m	A	M.p. /°C/
18	-	0	A1-25	
19	-	0	A2-1	
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	

Table 21, continuation

Example No.	X	m	A	M.p. [°C]
42	-	0	A8-2	
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	Ch_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	

Table 21, continuation

Example No.	X	m	A	M.p. [°C]
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	

Table 21, continuation

Example No.	X	m	A	M.p. /°C/
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	O	1	A1-5	
106	O	1	A1-6	
107	O	1	A1-7	
108	O	1	A1-8	
109	O	1	A1-9	
110	O	1	A1-10	
111	O	1	A1-11	
112	O	1	A1-12	

Table 21, continuation

Example No.	X	m	A	M.p./°C/
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	

Table 21, continuation

Example No.	X	m	A	M.p. [°C]
137	O	1	A5-3	
138	O	1	A5-4	
139	O	1	A6-1	
140	O	1	A6-2	
141	O	1	A7-1	
142	O	1	A7-2	
143	O	1	A7-3	
144	O	1	A7-4	
145	O	1	A7-5	
146	O	1	A8-2	
147	O	1	A8-3	
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	

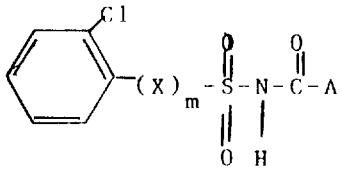
Table 21, continuation

Example No.	X	m	A	M.p./°C/
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	

Table 21, continuation

Example No.	X	m	A	M.p./°C/
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 22



Example No.	X	m	A	M.p. [°C]
1	-	0	A1-5	
2	-	0	A1-6	
3	-	0	A1-7	
4	-	0	A1-8	
5	-	0	A1-9	
6	-	0	A1-10	
7	-	0	A1-11	
8	-	0	A1-12	
9	-	0	A1-13	
10	-	0	A1-14	
11	-	0	A1-15	
12	-	0	A1-16	
13	-	0	A1-17	
14	-	0	A1-21	
15	-	0	A1-22	
16	-	0	A1-23	
17	-	0	A1-24	
18	-	0	A1-25	
19	-	0	A2-1	
20	-	0	A2-2	
21	-	0	A2-3	
22	-	0	A2-4	

Table 22, continuation

Example No.	X	m	A	M.p. [°C]
23	-	0	A3-1	
24	-	0	A3-2	
25	-	0	A3-3	
26	-	0	A3-4	
27	-	0	A4-1	
28	-	0	A4-2	
29	-	0	A4-3	
30	-	0	A4-4	
31	-	0	A5-1	
32	-	0	A5-2	
33	-	0	A5-3	
34	-	0	A5-4	
35	-	0	A6-1	
36	-	0	A6-2	
37	-	0	A7-1	
38	-	0	A7-2	
39	-	0	A7-3	
40	-	0	A7-4	
41	-	0	A7-5	
42	-	0	A8-2	
43	-	0	A8-3	
44	-	0	A8-4	
45	-	0	A8-5	
46	-	0	A8-6	

Table 22, continuation

Example No.	X	m	A	M.p. [°C]
47	-	0	A8-7	
48	-	0	A8-9	
49	-	0	A8-10	
50	-	0	A8-11	
51	-	0	A8-12	
52	-	0	A8-13	
53	CH_2	1	A1-5	
54	CH_2	1	A1-6	
55	CH_2	1	A1-7	
56	CH_2	1	A1-8	
57	CH_2	1	A1-9	
58	CH_2	1	A1-10	
59	CH_2	1	A1-11	
60	CH_2	1	A1-12	
61	CH_2	1	A1-13	
62	CH_2	1	A1-14	
63	CH_2	1	A1-15	
64	CH_2	1	A1-16	
65	CH_2	1	A1-17	
66	CH_2	1	A1-21	
67	CH_2	1	A1-22	
68	CH_2	1	A1-23	
69	CH_2	1	A1-24	
70	CH_2	1	A1-25	

Table 22, continuation

Example No.	X	m	A	M.p./°C/
71	CH_2	1	A2-1	
72	CH_2	1	A2-2	
73	CH_2	1	A2-3	
74	CH_2	1	A2-4	
75	CH_2	1	A3-1	
76	CH_2	1	A3-2	
77	CH_2	1	A3-3	
78	CH_2	1	A3-4	
79	CH_2	1	A4-1	
80	CH_2	1	A4-2	
81	CH_2	1	A4-3	
82	CH_2	1	A4-4	
83	CH_2	1	A5-1	
84	CH_2	1	A5-2	
85	CH_2	1	A5-3	
86	CH_2	1	A5-4	
87	CH_2	1	A6-1	
88	CH_2	1	A6-2	
89	CH_2	1	A7-1	
90	CH_2	1	A7-2	
91	CH_2	1	A7-3	
92	CH_2	1	A7-4	
93	CH_2	1	A7-5	

Table 22, continuation

Example No.	X	m	A	M.p. [°C]
94	CH_2	1	A8-2	
95	CH_2	1	A8-3	
96	CH_2	1	A8-4	
97	CH_2	1	A8-5	
98	CH_2	1	A8-6	
99	CH_2	1	A8-7	
100	CH_2	1	A8-9	
101	CH_2	1	A8-10	
102	CH_2	1	A8-11	
103	CH_2	1	A8-12	
104	CH_2	1	A8-13	
105	0	1	A1-5	
106	0	1	A1-6	
107	0	1	A1-7	
108	0	1	A1-8	
109	0	1	A1-9	
110	0	1	A1-10	
111	0	1	A1-11	
112	0	1	A1-12	
113	0	1	A1-13	
114	0	1	A1-14	
115	0	1	A1-15	
116	0	1	A1-16	
117	0	1	A1-17	
118	0	1	A1-21	

Table 22, continuation

Example No.	X	m	A	M.p. /°C/
119	0	1	A1-22	
120	0	1	A1-23	
121	0	1	A1-24	
122	0	1	A1-25	
123	0	1	A2-1	
124	0	1	A2-2	
125	0	1	A2-3	
126	0	1	A2-4	
127	0	1	A3-1	
128	0	1	A3-2	
129	0	1	A3-3	
130	0	1	A3-4	
131	0	1	A4-1	
132	0	1	A4-2	
133	0	1	A4-3	
134	0	1	A4-4	
135	0	1	A5-1	
136	0	1	A5-2	
137	0	1	A5-3	
138	0	1	A5-4	
139	0	1	A6-1	
140	0	1	A6-2	
141	0	1	A7-1	
142	0	1	A7-2	

Table 22, continuation

Example No.	X	m	A	M.p. /°C/
143	O	1	A7-3	
144	O	1	A7-4	
145	O	1	A7-5	
146	O	1	A8-2	
147	O	1	A8-3	
148	O	1	A8-4	
149	O	1	A8-5	
150	O	1	A8-6	
151	O	1	A8-7	
152	O	1	A8-9	
153	O	1	A8-10	
154	O	1	A8-11	
155	O	1	A8-12	
156	O	1	A8-13	
157	NH	1	A1-5	
158	NH	1	A1-65	
159	NH	1	A1-7	
160	NH	1	A1-8	
161	NH	1	A1-9	
162	NH	1	A1-10	
163	NH	1	A1-11	
164	NH	1	A1-12	
165	NH	1	A1-13	
166	NH	1	A1-14	

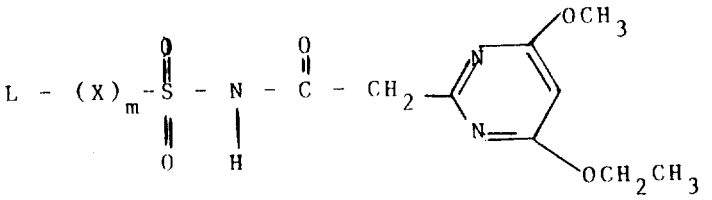
Table 22, continuation

Example No.	X	m	A	M.p. /°C/
167	NH	1	A1-15	
168	NH	1	A1-16	
169	NH	1	A1-17	
170	NH	1	A1-21	
171	NH	1	A1-22	
172	NH	1	A1-23	
173	NH	1	A1-24	
174	NH	1	A1-25	
175	NH	1	A2-1	
176	NH	1	A2-2	
177	NH	1	A2-3	
178	NH	1	A2-4	
179	NH	1	A3-1	
180	NH	1	A3-2	
181	NH	1	A3-3	
182	NH	1	A3-4	
183	NH	1	A4-1	
184	NH	1	A4-2	
185	NH	1	A4-3	
186	NH	1	A4-4	
187	NH	1	A5-1	
188	NH	1	A5-2	
189	NH	1	A5-3	
190	NH	1	A5-4	
191	NH	1	A6-1	

Table 22, continuation

Example No.	X	m	A	M.p./°C/
192	NH	1	A6-2	
193	NH	1	A7-1	
194	NH	1	A7-2	
195	NH	1	A7-3	
196	NH	1	A7-4	
197	NH	1	A7-5	
198	NH	1	A8-2	
199	NH	1	A8-3	
200	NH	1	A8-4	
201	NH	1	A8-5	
202	NH	1	A8-6	
203	NH	1	A8-7	
204	NH	1	A8-9	
205	NH	1	A8-10	
206	NH	1	A8-11	
207	NH	1	A8-12	
208	NH	1	A8-13	

Table 23

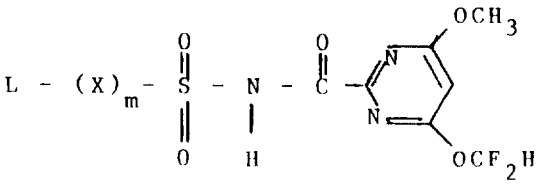


Example No.	X	m	L	M.p. /°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	
21	-	0	L1-41	
22	-	0	L1-45	

Table 23, continuation

Example No.	X	m	L	M.p. [°C]
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 24

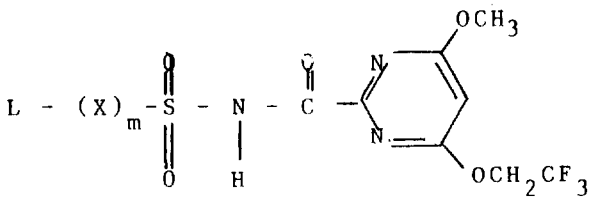


Example No.	X	m	L	M.p./°C/
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	
20	-	0	L I-40	
21	-	0	L I-41	

Table 24, continuation

Example No.	X	m	L	M.p./°C/
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-		L5-8	
39	-	0	L5-9	

Table 25

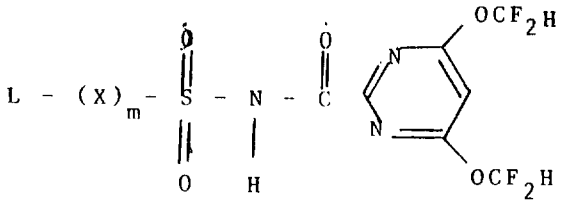


Example No.	X	m	L	M.p. [°C]
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	
20	-	0	L I-40	
21	-	0	L I-41	

Table 25, continuation

Example No.	X	m	L	M.p. [°C]
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 26

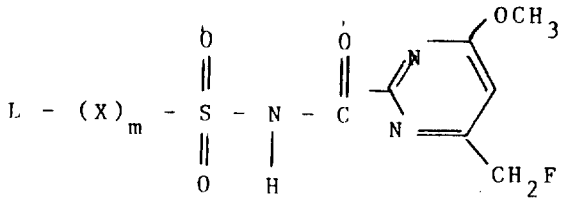


Example No.	X	m	L	M.p. /°C/
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	
20	-	0	L I-40	
21	-	0	L I-41	

Table 26, continuation

Example No.	X	m	L	M.p. /°C/
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 27

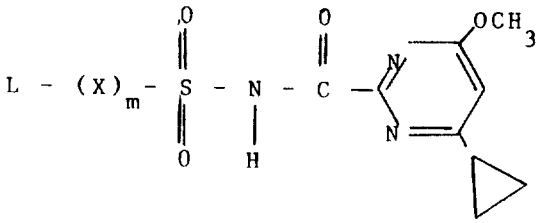


Example No.	X	m	L	M.p./°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	

Table 27, continuation

Example No.	X	m	L	M.p. [°C]
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 28

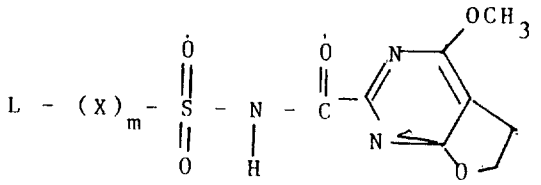


Example No.	X	m	L	M.p. [°C]
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	

TAble 28, continuation

Example No.	X	m	L	M.p./°C/
20	-	0	L1-40	
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 29



Example No.	X	m	L	M.p. [°C]
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	
20	-	0	L I-40	
21	-	0	L I-41	
22	-	0	L I-45	

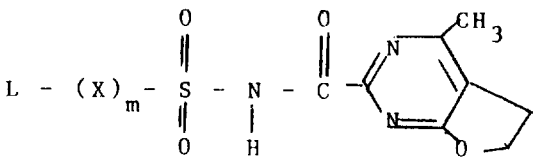
Table 29, continuation

Example No.	X	m	L	M.p. /°C/
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 29, continuation

Example No.	X	m	L	M.p. [°C]
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

TAble 30



Example No.	X	m	L	M.p./°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	

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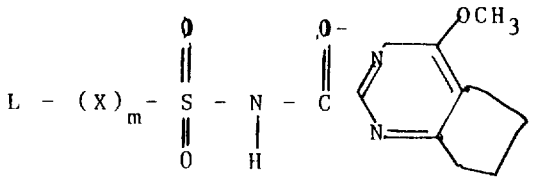
TAble 30, continuation

Example No.	X	m	L	M.p./°C/
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 31

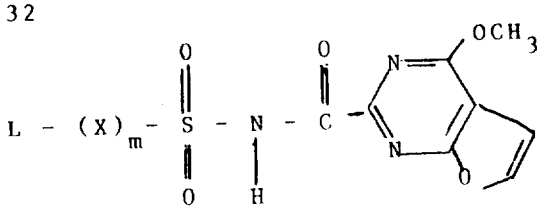


Example No.	X	m	L	M.p. /°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	

Table 31, continuation

Example No.	X	m	L	M.p. [°C]
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 32

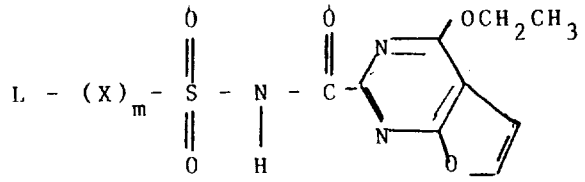


Example No.	X	m	L	M.p. (°C)
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	
20	-	0	L I-40	
21	-	0	L I-41	

TAble 32, continuation

Example No.	X	m	L	M.p. /°C/
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 33

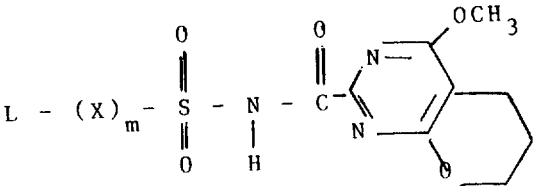


Example No.	X	m	L	M.p. /°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	
21	-	0	L1-41	

Table 33, continuation

Example No.	X	m	L	M.p./°C/
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 34

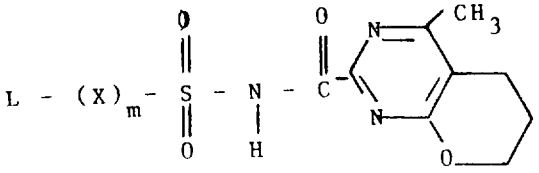


Example No.	X	m	L	M.p. [°C]
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	

Table 34, continuation

Example No.	X	m	L	M.p./°C/
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 35

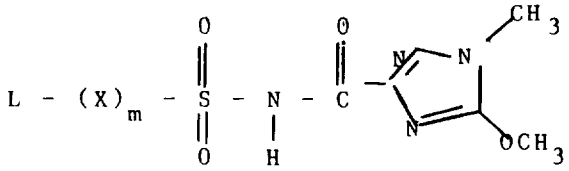


Example No.	X	m	L	M.p. [°C]
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	

Table 35

Example No.	X	m	L	M.p. /°C/
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 36

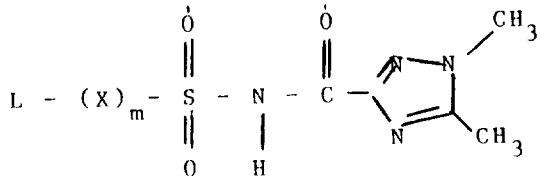


Example No.	X	m	L	M.p. /°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	

Table 36, continuation

Example No.	X	m	L	M.p. [°C]
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 37

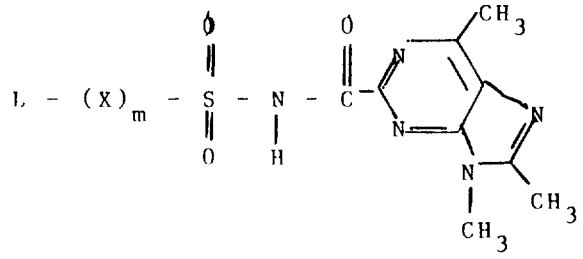


Example No.	X	m	L	M.p. /°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	

Table 37 continuation

Example No.	X	m	L	M.p. /°C/
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Example 38

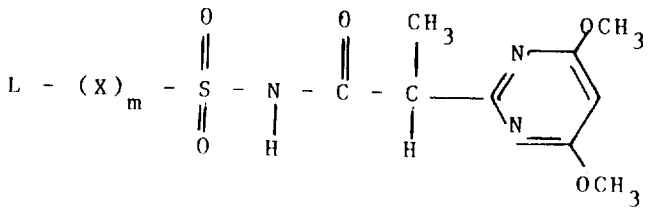


Example No.	X	m	L	M.p. /°C/
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	

Table 38, continuation

Example No.	X	m	L	M.p. /°C/
20	-	0	L1-40	
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 39

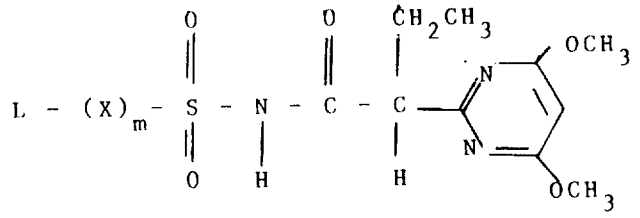


Example No.	X	m	L	M.p. /°C/
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	
20	-	0	L I-40	
21	-	0	L I-41	
22	-	0	L I-45	
23	-	0	L I-46	

Table 39, continuation

Example No.	X	m	L	M.p. [°C]
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 40

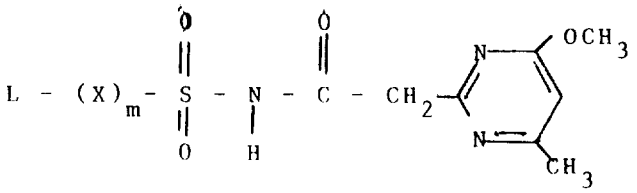


Example No.	X	m	L	M.p./°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	

Table 40, continuation

Example No.	X	m	L	M.p./°C/
20	-	0	L1-40	
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 41

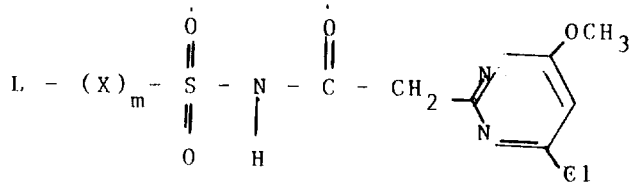


Example No.	X	m	L	M.p./°C/
1	-	0	L1-2	
2	-	0	L1-4	
3	-	0	L1-5	
4	-	0	L1-6	
5	-	0	L1-7	
6	-	0	L1-8	
7	-	0	L1-10	
8	-	0	L1-11	
9	-	0	L1-12	
10	-	0	L1-14	
11	-	0	L1-20	
12	-	0	L1-22	
13	-	0	L1-24	
14	-	0	L1-25	
15	-	0	L1-28	
16	-	0	L1-34	
17	-	0	L1-35	
18	-	0	L1-37	
19	-	0	L1-39	
20	-	0	L1-40	
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	

Table 41, continuation

Example No.	X	m	L	M.p. /°C/
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 42

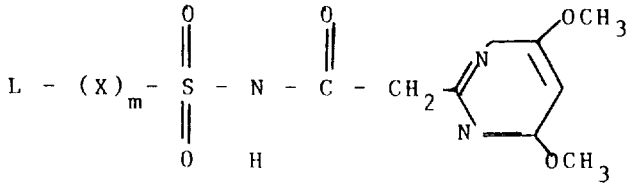


Example No.	X	m	L	M.p. /°C/
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	
20	-	0	L I-40	

Table 42, continuation

Example No.	X	m	L	M.p. [°C]
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Table 43



Example No.	X	m	L	M.p./°C/
1	-	0	L I-2	
2	-	0	L I-4	
3	-	0	L I-5	
4	-	0	L I-6	
5	-	0	L I-7	
6	-	0	L I-8	
7	-	0	L I-10	
8	-	0	L I-11	
9	-	0	L I-12	
10	-	0	L I-14	
11	-	0	L I-20	
12	-	0	L I-22	
13	-	0	L I-24	
14	-	0	L I-25	
15	-	0	L I-28	
16	-	0	L I-34	
17	-	0	L I-35	
18	-	0	L I-37	
19	-	0	L I-39	

Table 43, continuation

Example No.	X	m	L	M.p./°C/
20	-	0	L1-40	
21	-	0	L1-41	
22	-	0	L1-45	
23	-	0	L1-46	
24	-	0	L1-48	
25	-	0	L1-50	
26	-	0	L1-51	
27	-	0	L1-52	
28	-	0	L1-53	
29	-	0	L3-2	
30	-	0	L3-3	
31	-	0	L3-4	
32	-	0	L4-2	
33	-	0	L4-3	
34	-	0	L5-2	
35	-	0	L5-4	
36	-	0	L5-5	
37	-	0	L5-6	
38	-	0	L5-8	
39	-	0	L5-9	

Biological Examples

The damage on the weed plants and the tolerance by crop plants were scored using a key where numbers from 0 to 5 express the effectiveness. In the key

0 denotes no action
1 denotes 0 - 20 % action or damage
2 denotes 20 - 40 % action or damage
3 denotes 40 - 60 % action or damage
4 denotes 60 - 80 % action or damage
5 denotes 80 - 100 % action or damage

I. Pre-emergence action on weeds

Seeds or rhizome pieces of monocotyledon and dicotyledon weed plants were placed in plastic potscontaining sandy loam and covered with soil. Various dosages of aqueous sus-pensions or emulsions of the compounds according to the invention formulated as wettable powders or emulsion concentrates were then applied to the surface of the cover soil, at an application rate of water of 600 - 800 l/ha (converted).

After the treatment, the pots were placed in the greenhouse and maintained at good growth conditions for

the weeds. Visual scoring of the damage to plants or the emergence damage was carried out after the emergence of the test plants after a trial period of 3 - 4 weeks, comparing them to untreated control plants. As shown by the score data in Table 41, the compounds according to the invention have good herbicidal pre-emergence activity against a broad range of grass weeds and broad-leaf weeds.

2. Post-emergence action weeds

Seeds or rhizome pieces of monocotyledon and dicotyledon weeds were placed in plastic pots in sandy loam ground, covered with soil and grown in the greenhouse under good growth conditions. Three weeks after sowing, the test plants were treated in the three-leaf stage.

Various dosages of the compounds according to the invention formulated as wettable powders or emulsion concentrates were sprayed onto the green parts of the plants, at an application rate of water of 600 - 800 l/ha (converted), and the results were scored visually after the rest plants had remaind in the greenhouse

for about 3 - 4 weeks under optimum growth conditions, comparing them to untreated control plants.

The agents according to the invention exhibit a good herbicidal activity against a broad range of economically important grass weeds and broad leaf-weeds, also in the post-emergence treatment (Table 42).

Table 41: Pre-emergence action of the compounds according to the invention

Table	Ex. No.	Dosage (kg of a.i./ha)	Herbicidal action					
			SIA	CRS	STM	LOM	ECG	AS
1	26	0.3	5	3	2	2	1	1
1	38	0.3	5	0	1	1	1	0
1	1	0.3	5	5	5	5	5	2
1	2	0.3	5	3	5	2	2	1
1	55	0.3	5	5	5	5	5	5
1	19	0.3	5	2	4	1	2	0
1	124	0.3	5	5	4	2	3	2
1	109	0.3	5	2	3	2	2	2
1	28	0.3	5	3	3	1	2	1
1	238	0.3	5	4	4	2	2	2
8	26	0.3	5	5	2	1	1	1
8	221	0.3	5	5	2	0	1	1
8	55	0.3	5	5	5	1	4	1
8	38	0.3	2	2	2	2	2	1
8	28	0.3	5	5	5	2	4	3
1	35	0.3	5	3	2	2	3	2
1	194	0.3	3	0	0	0	0	2
1	82	0.3	5	5	4	3	5	3
1	15	0.3	5	2	2	1	1	1
1	44	0.3	5	4	4	2	2	1
1	16	0.3	5	3	5	3	3	3

Table	Ex. No.	Dosage (kg of a.i./ha)	Herbicidal action					
			SIA	CRS	STM	LOM	ECG	AS
1	170	0.3	5	5	5	3	2	2
1	178	0.3	5	5	5	3	2	2
1	45	0.3	2	0	0	0	0	1
1	80	0.3	5	5	5	3	2	1
1	89	0.3	5	4	2	0	0	1
1	79	0.3	3	0	1	0	0	1
1	32	0.3	5	0	0	0	1	1
1	257	0.3	5	2	5	2	2	1
1	62	0.3	5	5	5	4	5	3
1	206	0.3	3	0	0	0	0	1
1	25	0.3	5	3	3	1	1	1
1	237	0.3	3	1	0	0	1	1
1	37	0.3	5	5	4	0	1	1
1	218	0.3	3	0	0	0	0	0
1	306	0.3	5	4	4	1	0	1
1	88	0.3	1	1	2	1	0	0
2	26	0.3	5	2	5	0	0	1
2	38	0.3	5	1	5	1	1	0
3	62	0.3	5	5	5	5	5	5
1	233	0.3	1	2	0	0	2	1
2	1	0.3	5	5	5	5	5	5
2	55	0.3	5	5	5	5	5	4
1	47	0.3	5	1	0	1	1	3
3	8	0.3	3	0	0	0	0	2
2	62	0.3	5	5	5	5	5	5

Table	Ex. No.	Dosage (kg of a.i./ha)	Herbicidal action					
			SIA	CRS	STM	LOM	ECG	AS
2	8	0.3	5	3	5	3	2	2
1	116	0.3	5	5	5	2	4	3
1	78	0.3	5	5	5	4	4	4
1	70	0.3	5	5	5	4	5	3
1	297	0.3	5	5	5	4	4	4
1	69	0.3	5	5	5	4	5	4

Table 42: Post-emergence action of the compounds according to the invention

Table	Ex. No.	Dosage (kg of a.i./ha)	Herbicidal action				
			SIA	CRS	STM	LOM	ECG	AS
1	26	0.3	5	4	3	2	2	1
1	38	0.3	4	2	2	2	2	2
1	1	0.3	5	3	5	2	2	2
1	2	0.3	5	2	5	2	2	2
1	55	0.3	5	5	5	4	5	4
1	19	0.3	5	2	4	3	2	2
1	124	0.3	5	4	2	1	2	2
1	109	0.3	4	2	3	2	2	2
1	28	0.3	5	2	5	2	3	2
1	238	0.3	5	2	2	2	1	1
8	26	0.3	5	5	4	2	2	1
8	221	0.3	4	2	3	2	2	1
8	55	0.3	5	5	3	2	3	1
8	38	0.3	3	2	1	1	2	1
8	28	0.3	5	5	5	3	2	3
1	35	0.3	5	3	5	3	3	3
1	194	0.3	3	3	2	3	3	2
1	82	0.3	5	4	5	4	4	3
1	15	0.3	5	2	2	1	1	2
1	44	0.3	5	3	5	3	2	2
1	16	0.3	5	3	5	2	3	3
1	170	0.3	5	5	5	3	4	1

Table	Ex. No.	Dosage (kg of a.i./ha)	Herbicidal action					
			SIA	CRS	STM	LOM	ECG	AS
1	178	0.3	5	5	5	4	2	2
1	45	0.3	3	1	1	0	2	0
1	80	0.3	5	5	5	1	4	2
1	89	0.3	5	5	5	2	2	1
1	79	0.3	5	5	5	3	2	0
1	32	0.3	5	3	4	2	3	2
1	257	0.3	5	5	5	2	5	2
1	62	0.3	5	5	5	5	5	4
1	206	0.3	3	1	2	2	1	2
1	25	0.3	5	1	3	1	1	1
1	237	0.3	3	2	0	0	1	0
1	37	0.3	5	4	5	2	3	1
1	218	0.3	5	0	0	0	0	0
1	306	0.3	5	5	4	1	2	0
1	88	0.3	5	2	4	0	0	0
2	26	0.3	4	0	3	0	0	1
2	38	0.3	5	3	5	1	0	0
3	62	0.3	5	5	5	4	4	2
1	233	0.3	2	0	0	0	0	0
2	1	0.3	5	4	5	5	5	3
2	55	0.3	5	4	5	4	4	3
1	47	0.3	2	0	0	0	0	0

Table	Ex.No.	Dosage	Herbicial action				
		(kg of a.i./ha)	SIA	CRS	STM	LOM	ECG	AS
2	62	0.3	5	5	5	3	4	2
2	8	0.3	5	1	5	0	2	1
1	116	0.3	5	5	4	1	3	1
1	78	0.3	5	5	5	3	4	2
1	70	0.3	5	5	5	2	4	2
1	297	0.3	5	5	5	3	2	2
1	69	0.3	5	5	5	2	4	2

Abbreviations: SIA = Sinapis alba

CRS = Chrysanthemum segetum

STM = Stellaria media

LOM = Lolium multiflorum

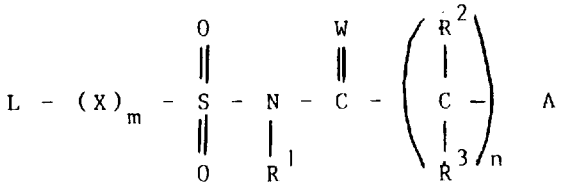
ECG = Echinochloa crus-galli

AS = Avena sativa

a.i. = active substance

PATENT CLAIMS for US, CA, TW, PH, KR

1. A compound of formula I, or a salt thereof,



in which

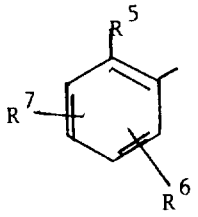
R^1, R^2 and R^3 are hydrogen,

W is an oxygen atom,

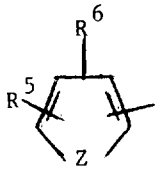
X is CHR^2, o or NR^4,

R^4 is hydrogen,

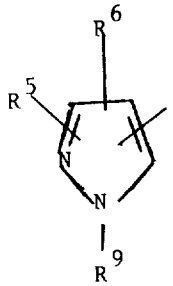
L is a heterocyclic or isocyclic radical of the formula (L1),(L3), (L4) or (L5),



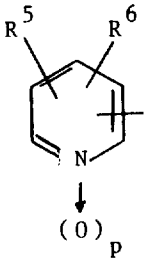
(L1)



(L3)

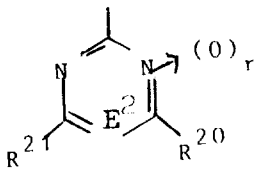


(L4)



(L5)

A is a heterocylic radical of the formula (A1),



Z is a sulfur atom,

E^1 is O or SO_2,

E^2 is CH,

m and n are 0 or 1,

p and r are 0,

R^5 is hydrogen, halogen, NO_2, CN, (C_1-C_4) alkyl which is unsubstituted or monosubstituted or polysubstituted by F or Cl or monosubstituted by OCH_3, or is $-C(O)R^{10}$, $-OCH_2CH_2OR^{10}$, $-CO_2R^{13}$, $-C(O)NR^{14}R^{15}$, $-SO_2NR^{14}R^{15}$, $-OSO_2R^{17}$ or $-E^1R^{18}$,

R^6 is hydrogen, halogen, NO_2, (C_1-C_4)alkyl, $-CO_2R^{13}$ or $-SO_2NR^{14}R^{15}$,

R^7 is hydrogen or halogen,

R^9 is (C_1-C_4)alkyl,

R^{10}, R^{13}, R^{14}, R^{15} and R^{17} are (C_1-C_4)alkyl,

R^{18} is (C_1-C_4) alkyl or (C_1-C_4)-haloalkyl,

R^{20} is (C_1-C_4) alkyl or (C_1-C_4)-alkoxy and

R^{21} is (C_1-C_4) alkyl or (C_1-C_4)-alkoxy.

2. A compound of the formula I or a salt as claimed in claim 1, wherein

R^5 is hydrogen, halogen, NO_2, CN, (C_1-C_4) alkyl which is unsubstituted or monosubstituted or polysubstituted by F or Cl or monosubstituted by OCH_3, or is $-OCH_2CH_2OR^{10}$, $-CO,R^{13}$, $-C(O)NR^{14}R^{15}$, $-SO_2NR^{14}R^{15}$, OSO_2R^{17} or E^1R^{18},

R^6 is hydrogen, halogen, NO_2, methyl, $-CO_2R^{13}$ or $-SO_2NR^{14}R^{15}$,

R^7 is hydrogen or halogen,

R^9 is methyl,

R^{10}, R^{13}, R^{14}, R^{15} and R^{17} are (C_1-C_4)alkyl,

R^{18} is (C_1-C_4) alkyl or (C_1-C_4)-haloalkyl,

R^{20} is methyl or methoxy and

R^{21} is methyl or methoxy.

3. A compound of the formula I or a salt thereof as claimed in claim 2, wherein L is a radical of the formula (L1).

4. A compound of the formula I or a salt thereof as claimed in claim 2, wherein L is a radical of the formula (L3).

5. A compound of the formula I or a salt thereof as

claimed in claim 2, wherein L is a radical of the formula (14).

6. A compound of the formula I or a salt thereof as claimed in claim 2, wherein L is a radical of the formula (L5).

7. A herbicidal or plant growth-regulating agent, containing an effective amount of a compound of the formula I of claim 1 or a salt thereof and inert additives.

8. A herbicidal or plant growth-regulating agent, containing an effective amount of a compound of the formula I of claim 2 or a salt thereof and inert additives.

9. A method of controlling undesired plants or for regulating the growth of plants, which comprises applying an effective amount of a compound of the formula I or a salt thereof, of claim 1, to these plants or the cropping area.

10. A method of controlling undesired plants or regulating the growth of plants, which comprises applying an effective amount of a compound of the formula I or a salt thereof, of claim 2, to these plants or the cropping areas,