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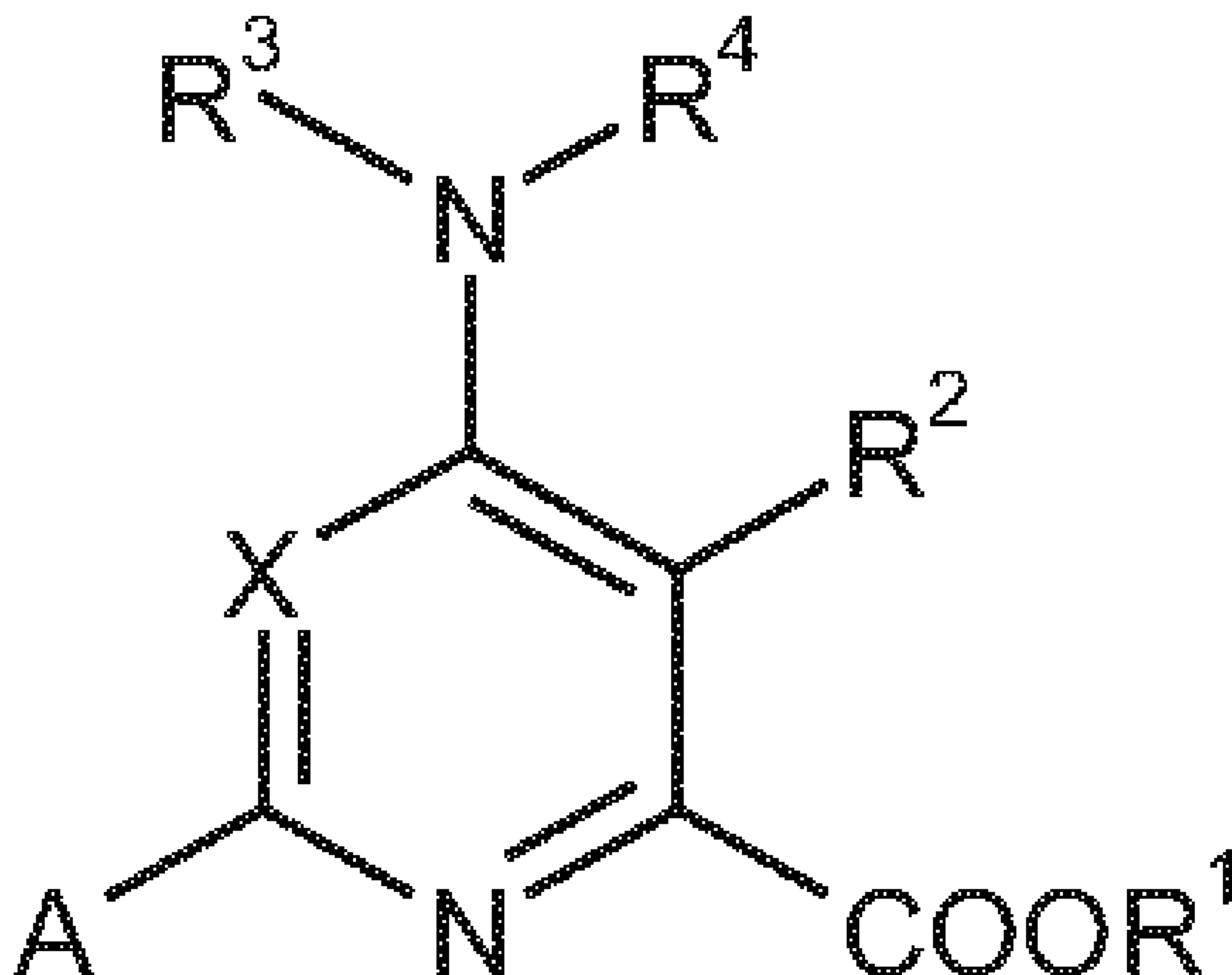
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(54) Titre : ACIDES PICOLINIQUES ET ACIDES PYRIMIDIN-4-CARBOXYLIQUES SUBSTITUES, LEUR PROCEDE DE PRODUCTION ET LEUR UTILISATION COMME HERBICIDES ET REGULATEURS DE CROISSANCE VEGETALE

(54) Title: SUBSTITUTED PICOLINIC ACIDS AND PYRIMIDINE-4-CARBOXYLIC ACIDS, METHOD FOR THE PRODUCTION THEREOF, AND USE THEREOF AS HERBICIDES AND PLANT GROWTH REGULATORS



(I)

(57) Abrégé/Abstract:

The invention relates to a carboxylic acid derivatives of benzoheterocyclyl pyridines and benzoheterocyclyl pyrimidines of general formula (I) and to the use thereof as herbicides. (I) In said formula (I), X stands for N or CH, A stands for a benzo-fused heterocycle, and R¹, R², R³, and R⁴ stand for groups such as hydrogen and organic groups such as alkyl.

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Abstract

The invention relates to a carboxylic acid derivatives of benzoheterocyclyl pyridines and benzoheterocyclyl pyrimidines of general formula (I) and to the use thereof as herbicides. (I) In said formula (I), X stands for N or CH, A stands for a benzo-fused heterocycle, and R^1 , R^2 , R^3 , and R^4 stand for groups such as hydrogen and organic groups such as alkyl.

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Description

Substituted picolinic acids and pyrimidine-4-carboxylic acids, method for the production thereof, and use thereof as herbicides and plant growth regulators

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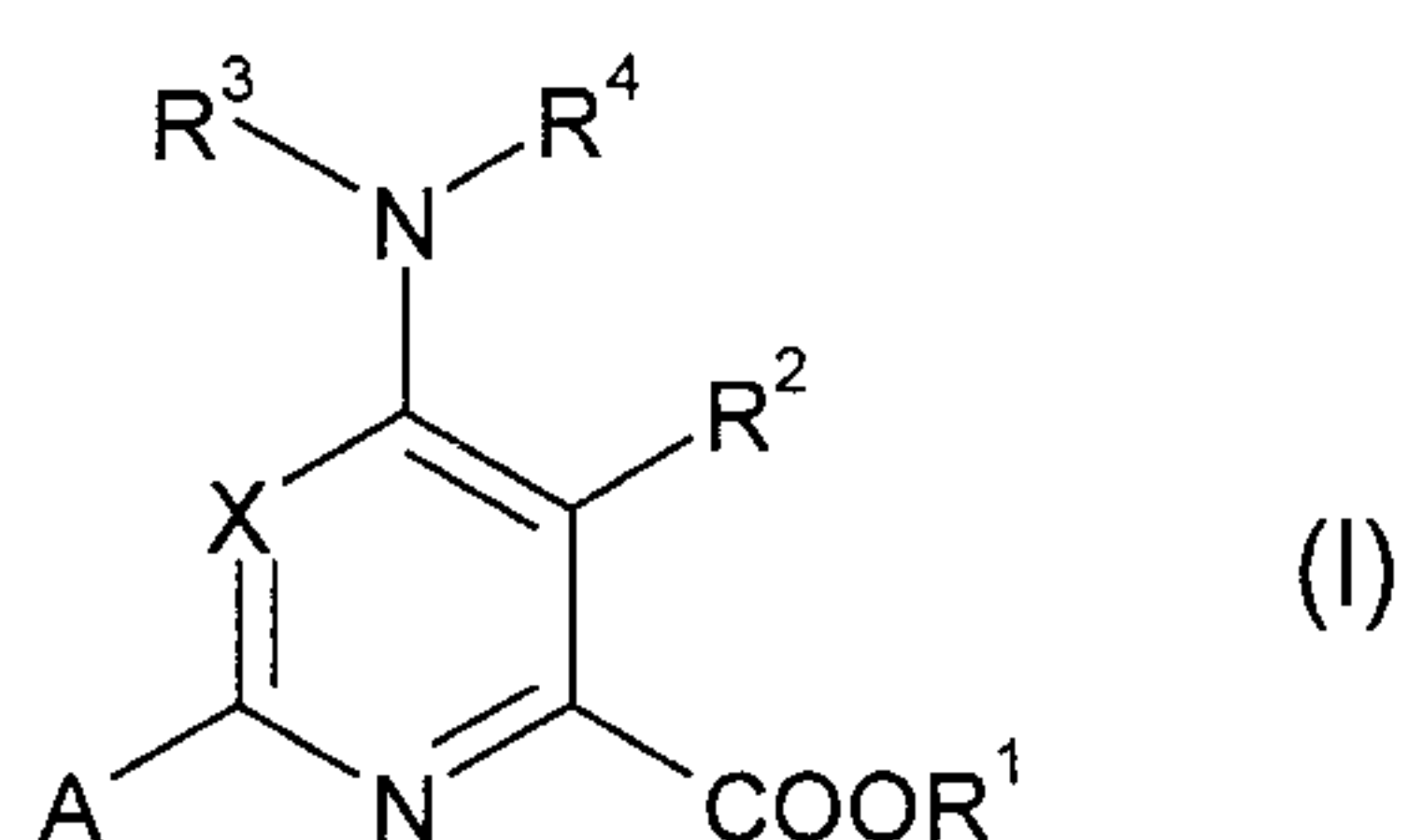
The invention relates to the technical field of herbicides, in particular that of herbicides for the selective control of broad-leaved weeds and weed grasses in crops of useful plants.

- 10 Various publications disclose that substituted picolinic acid derivatives and pyrimidine-4-carboxylic acid derivatives have herbicidal properties: WO 2003/011853 A1 discloses polysubstituted 6-phenylpicolinic acid derivatives having herbicidal action. WO2009/029735 A1 and WO2010/125332 A1 describe herbicidal effects for polysubstituted 2-phenyl-4-pyrimidinecarboxylic acid derivatives. Heteroaromatically
- 15 substituted picoline- and pyrimidinecarboxylic acids having herbicidal properties are disclosed in WO 2009/138712 A2. WO 2007/080382 A1 and WO 2009/007751 A2 describe heteroaromatically substituted picoline- and pyrimidinecarboxylic acids having pharmacological activities.
- 20 However, the compounds described in these publications frequently have insufficient herbicidal activity and/or insufficient selectivity in crops of useful plants.

We have found substituted picolinic acids and pyrimidine-4-carboxylic acids which are particularly suitable as herbicides.

25

The present invention provides picolinic acids and pyrimidine-4-carboxylic acids of the general formula (I), their N-oxides or their salts

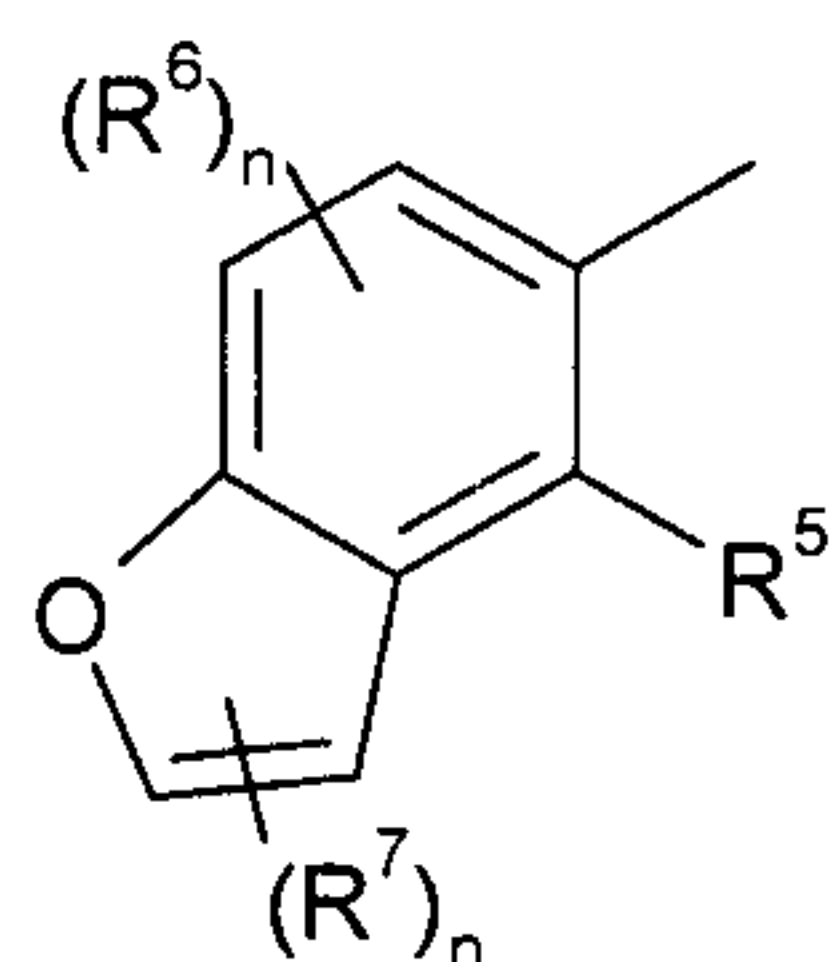


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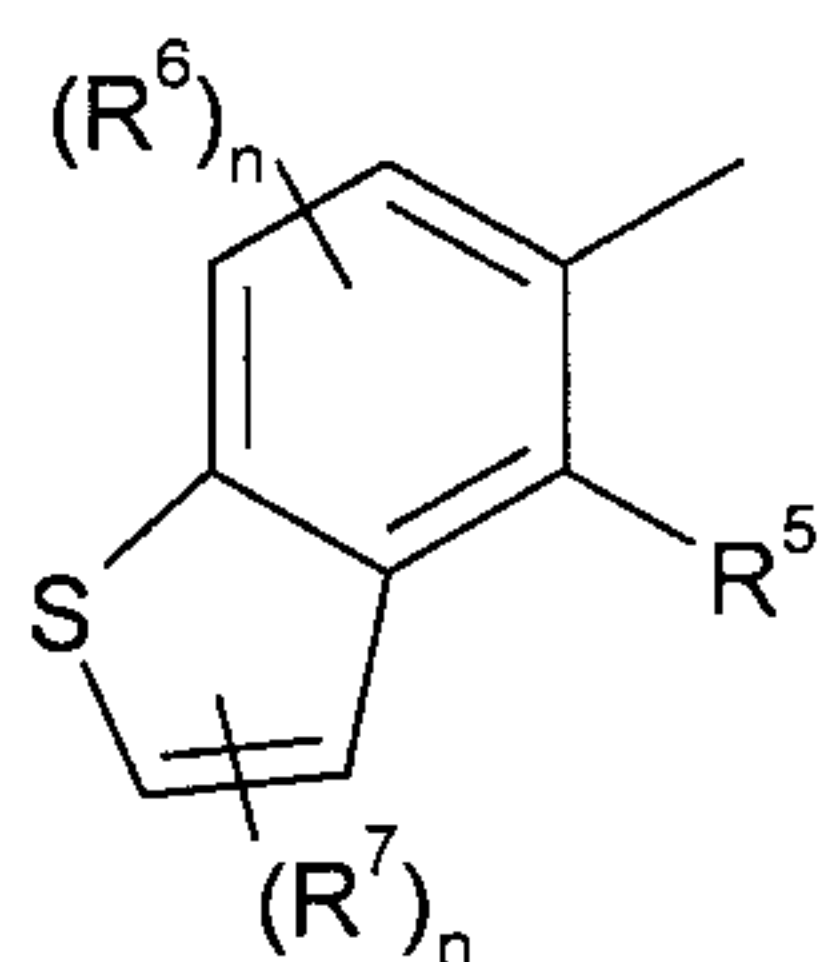
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A represents a radical from the group consisting of A1 to A20,

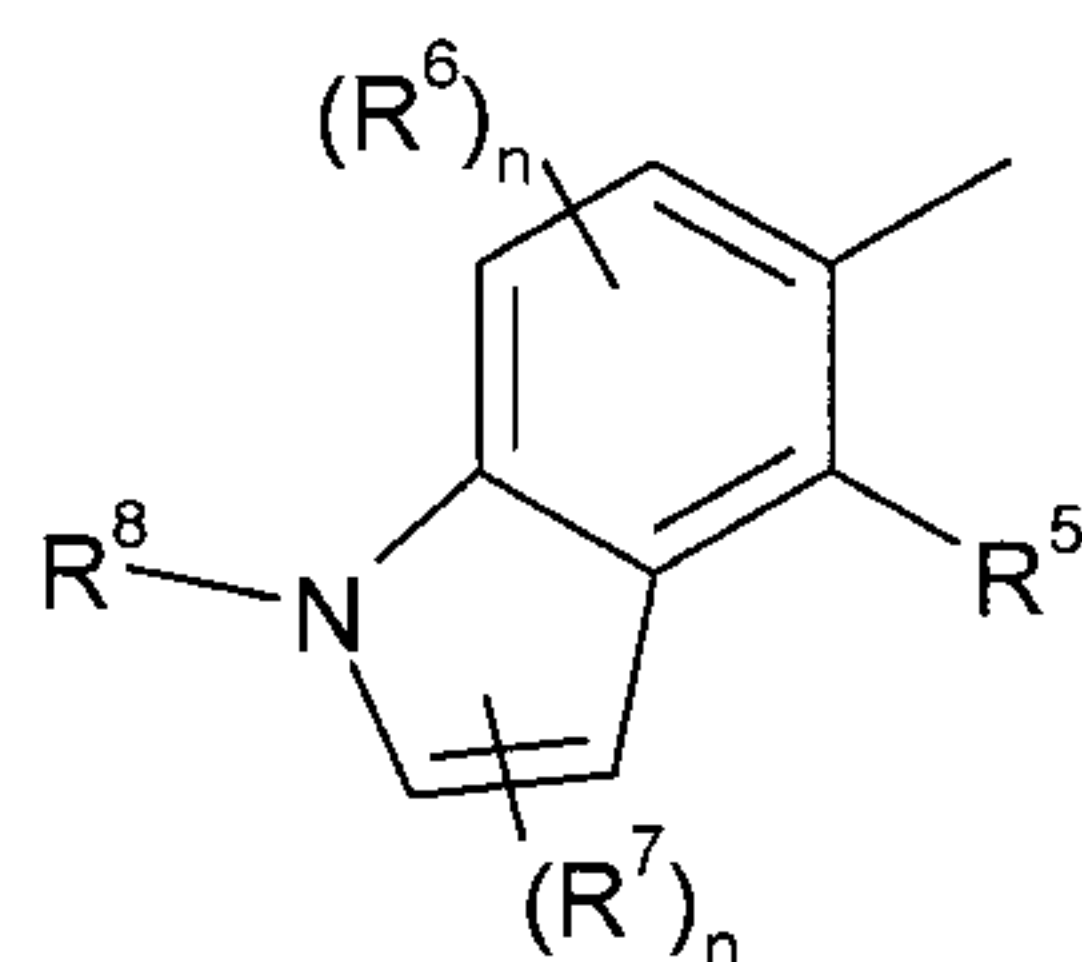


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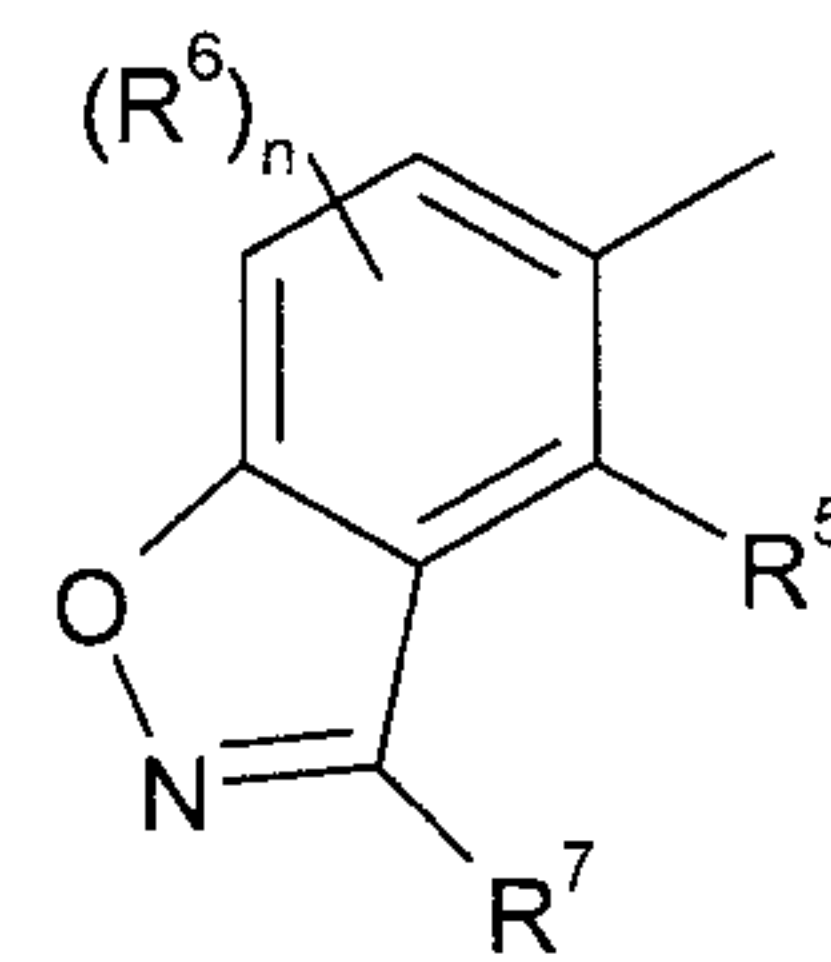
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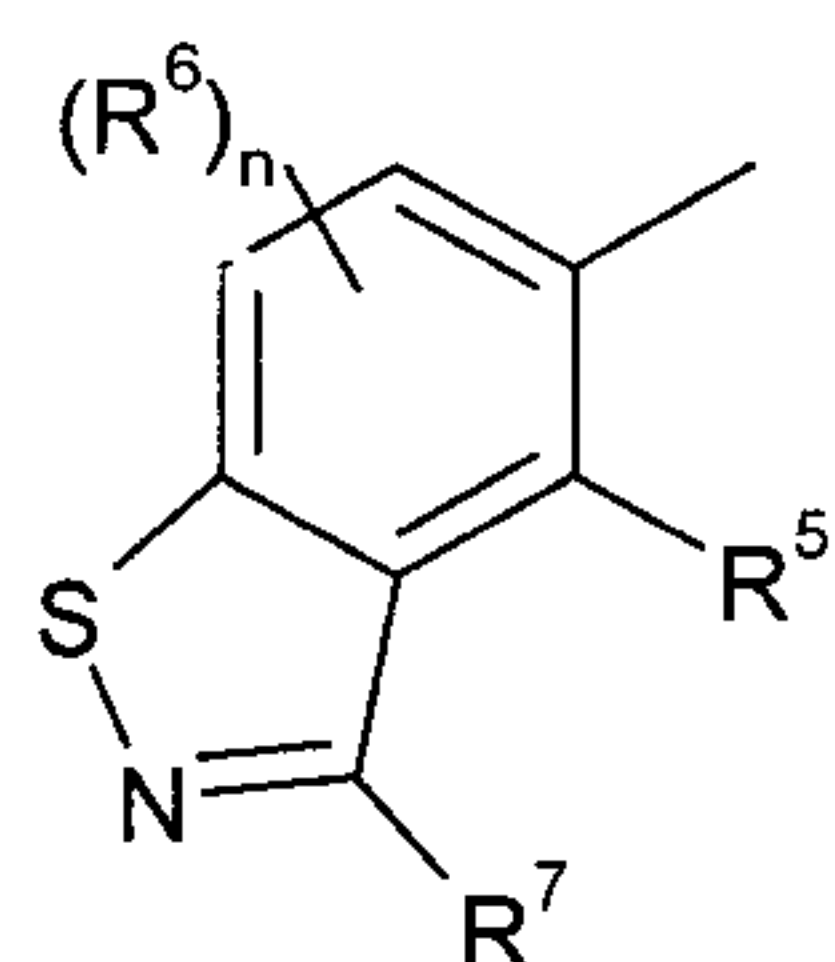
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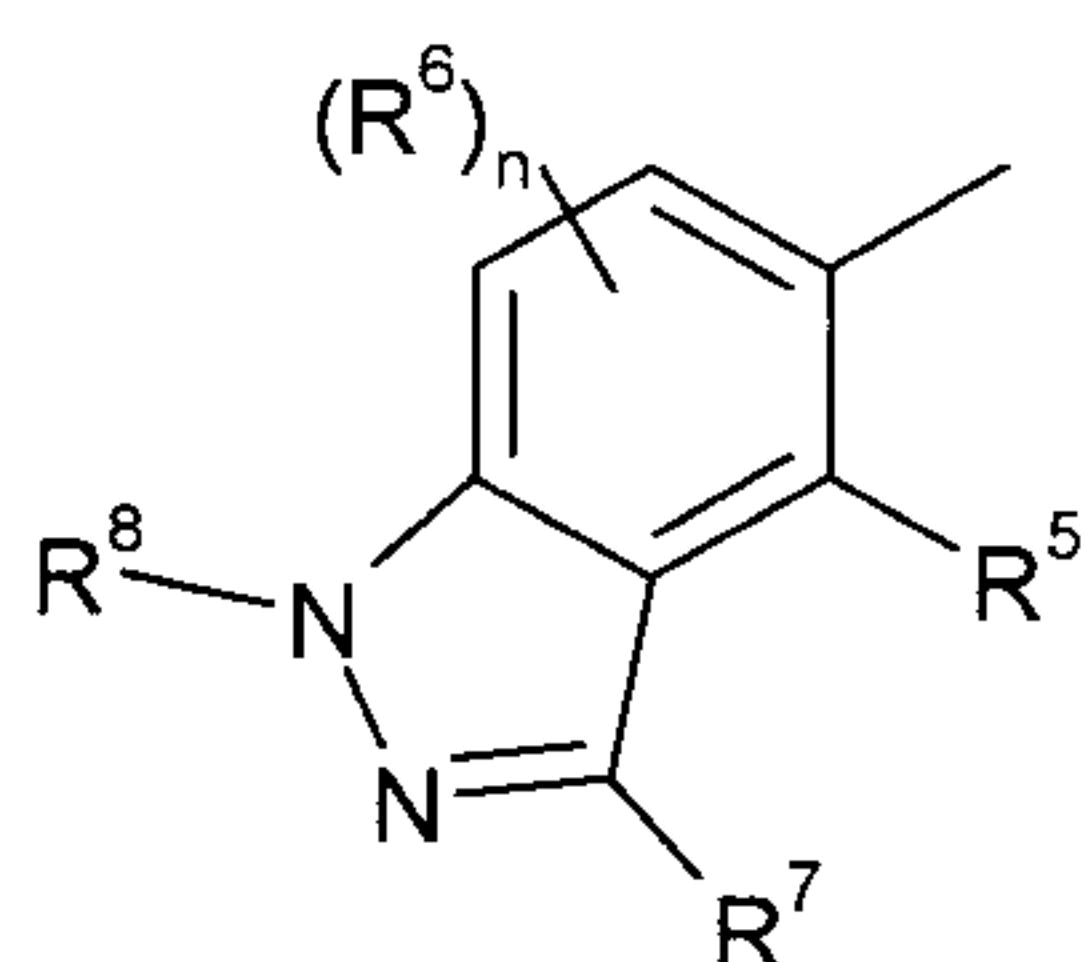
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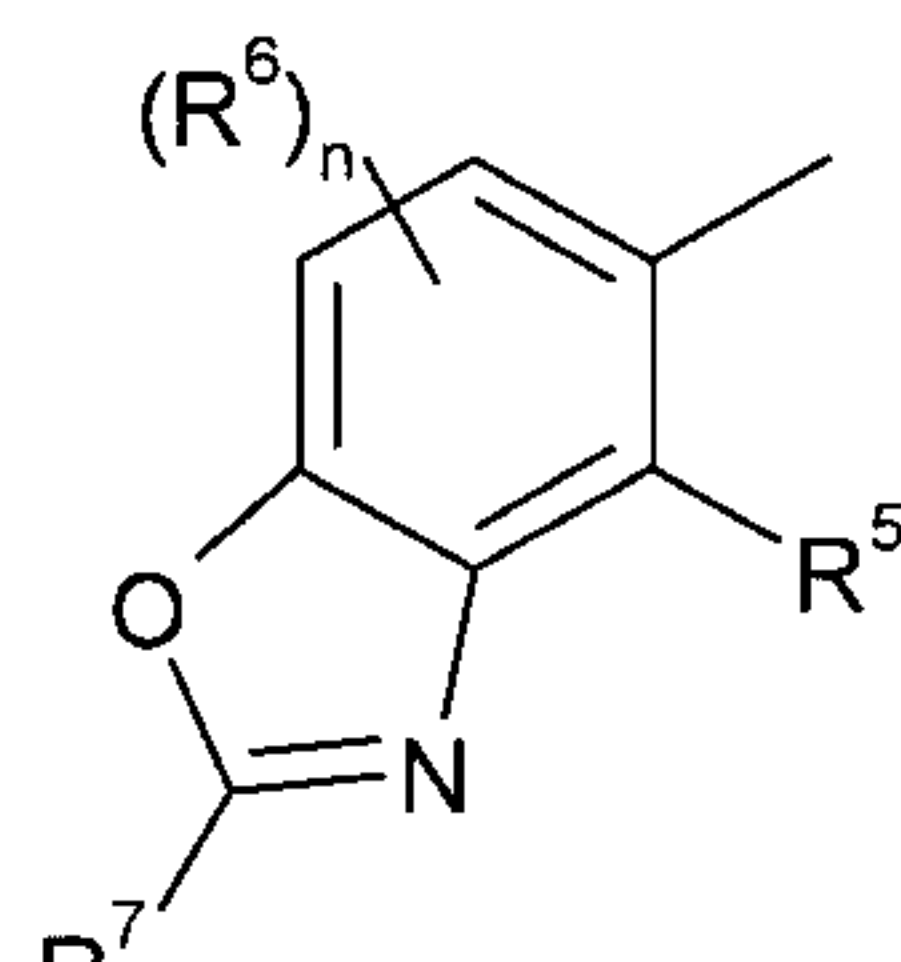
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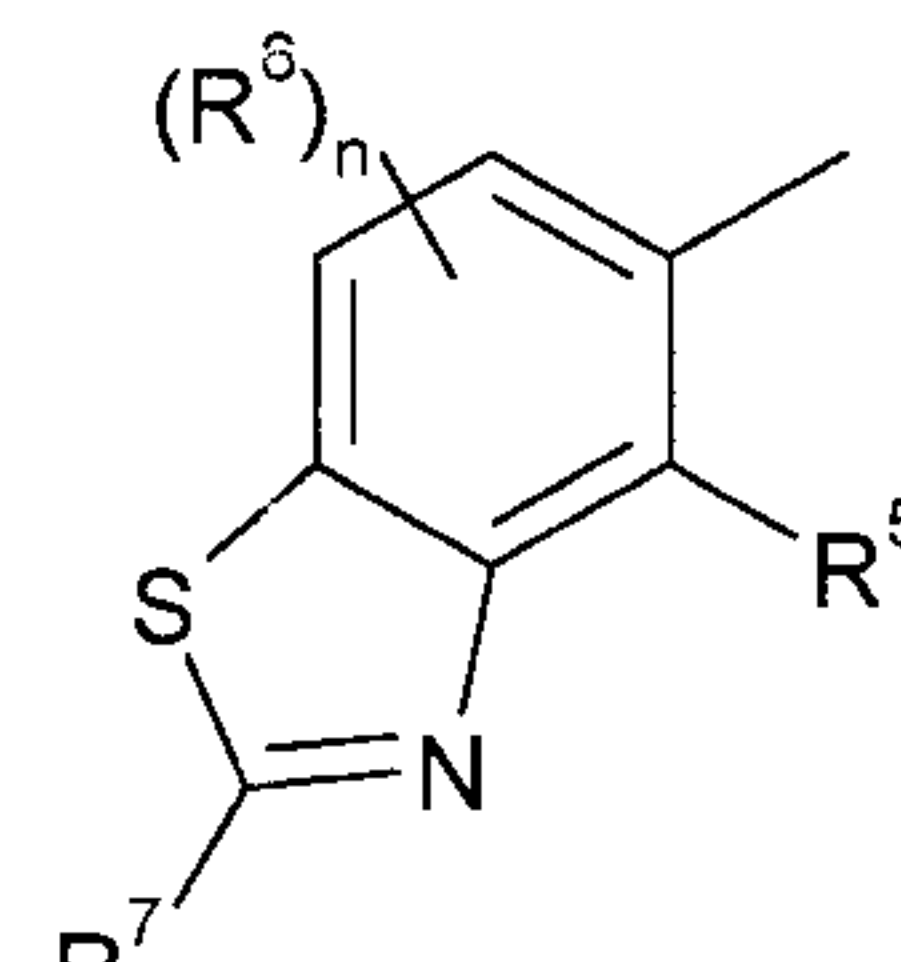
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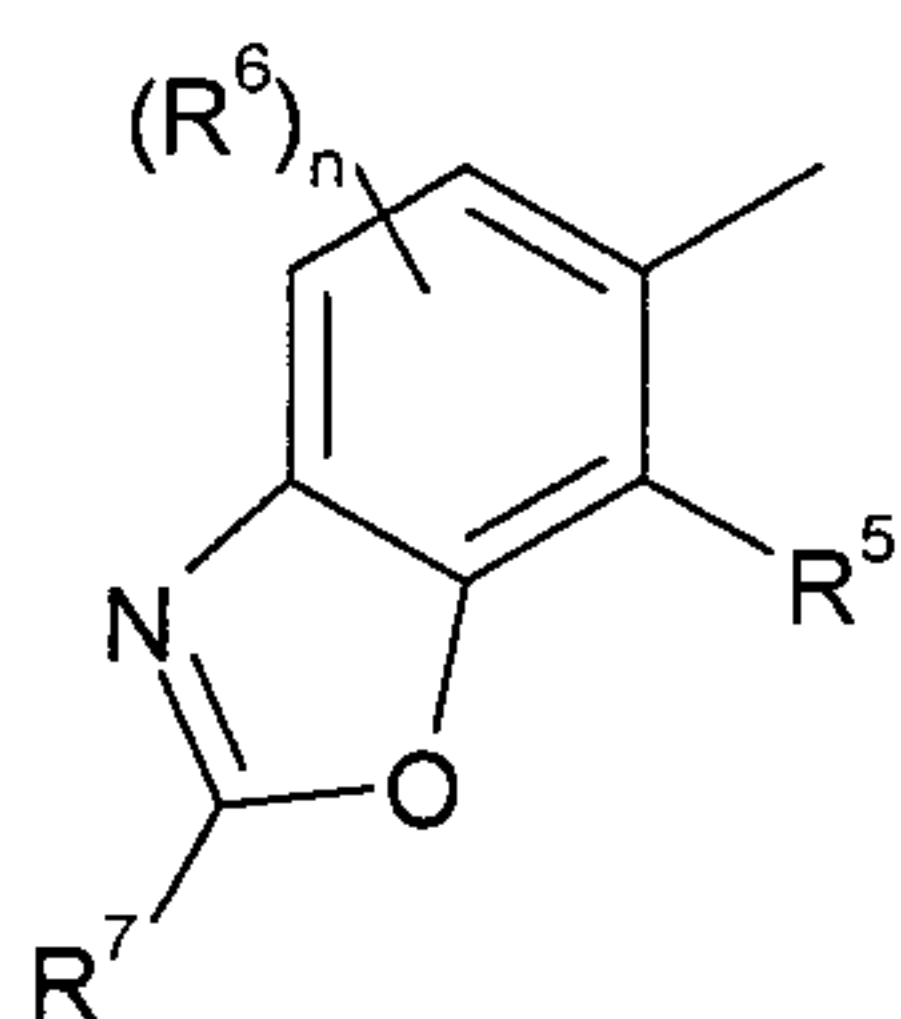
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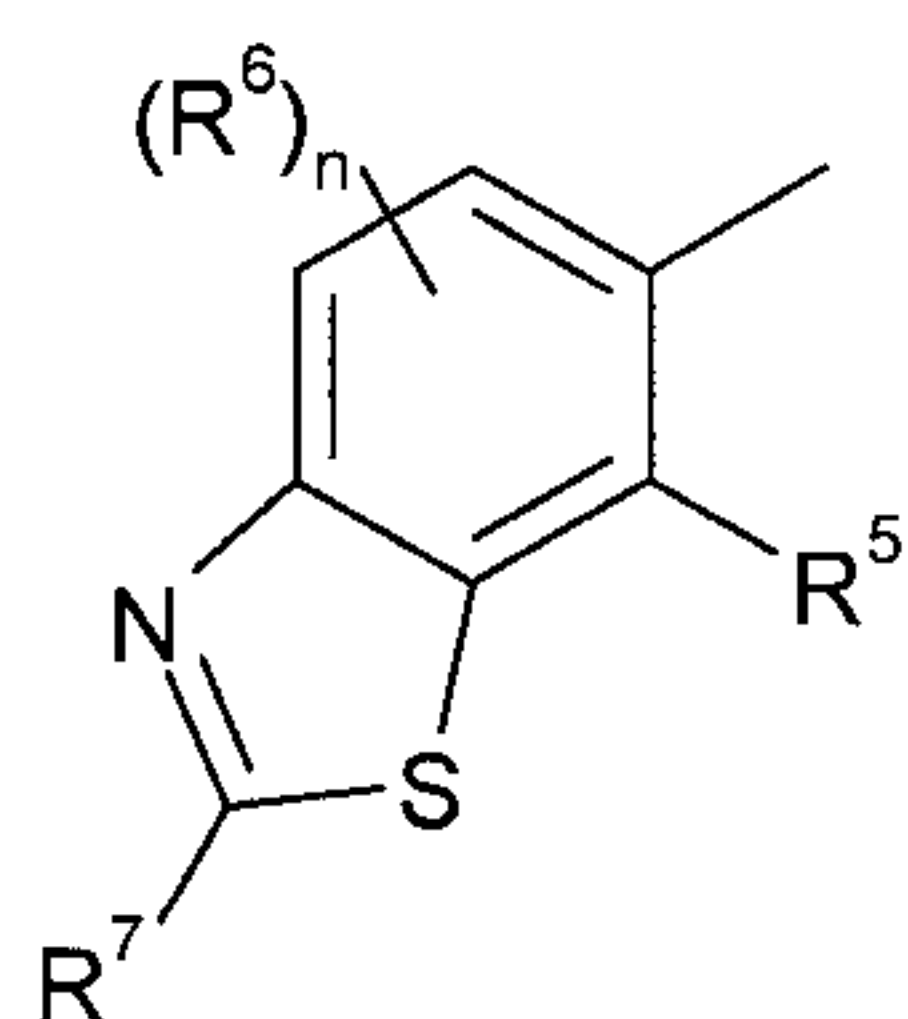
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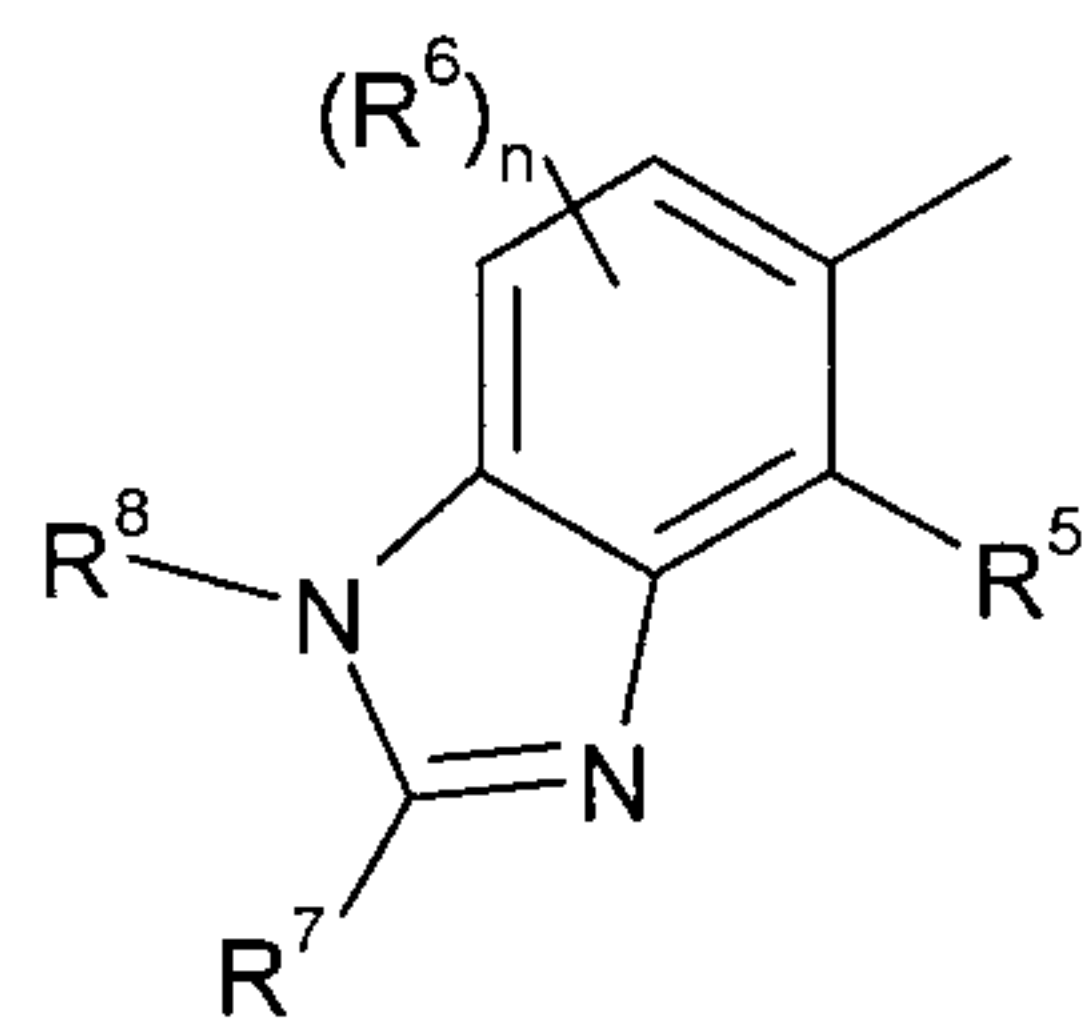
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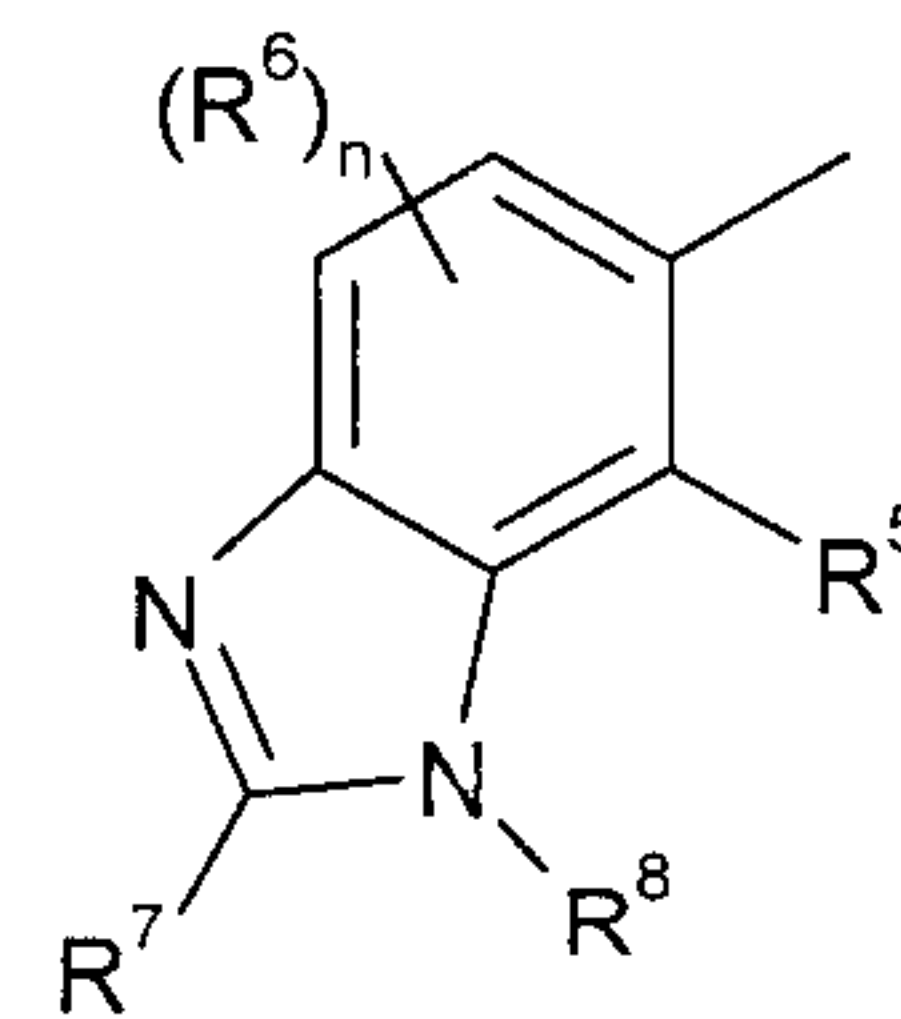
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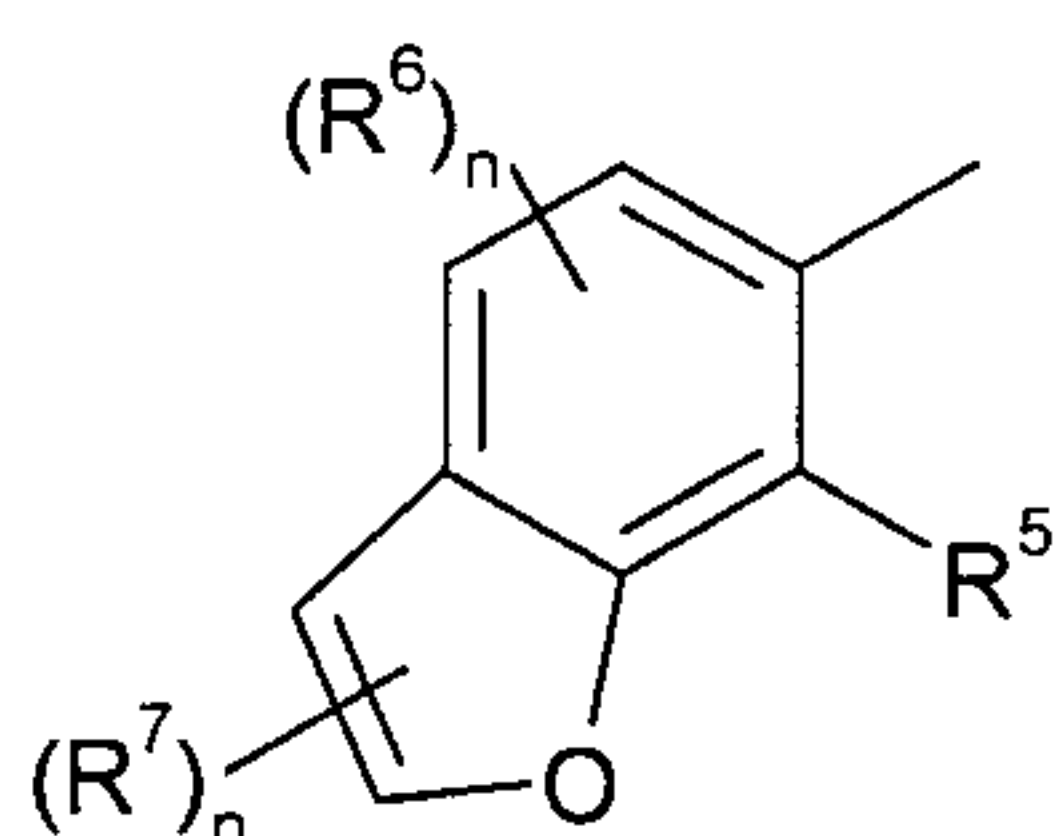
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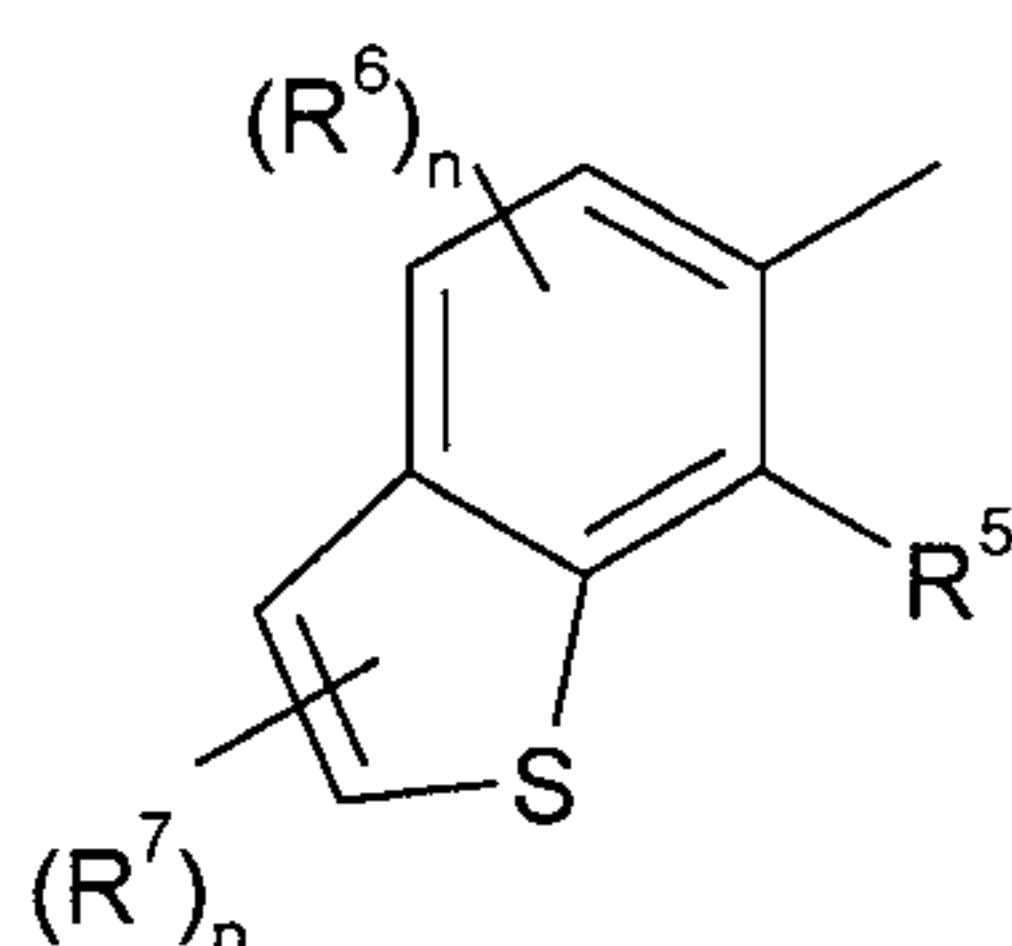
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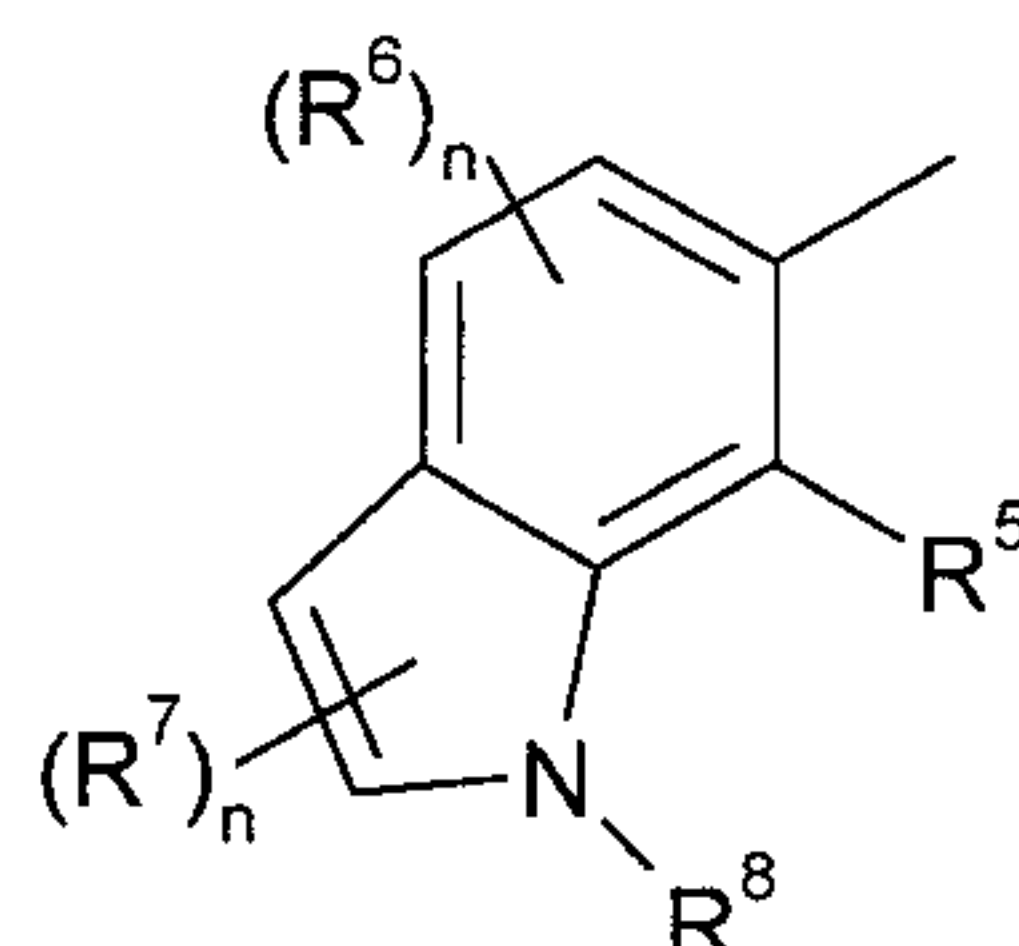
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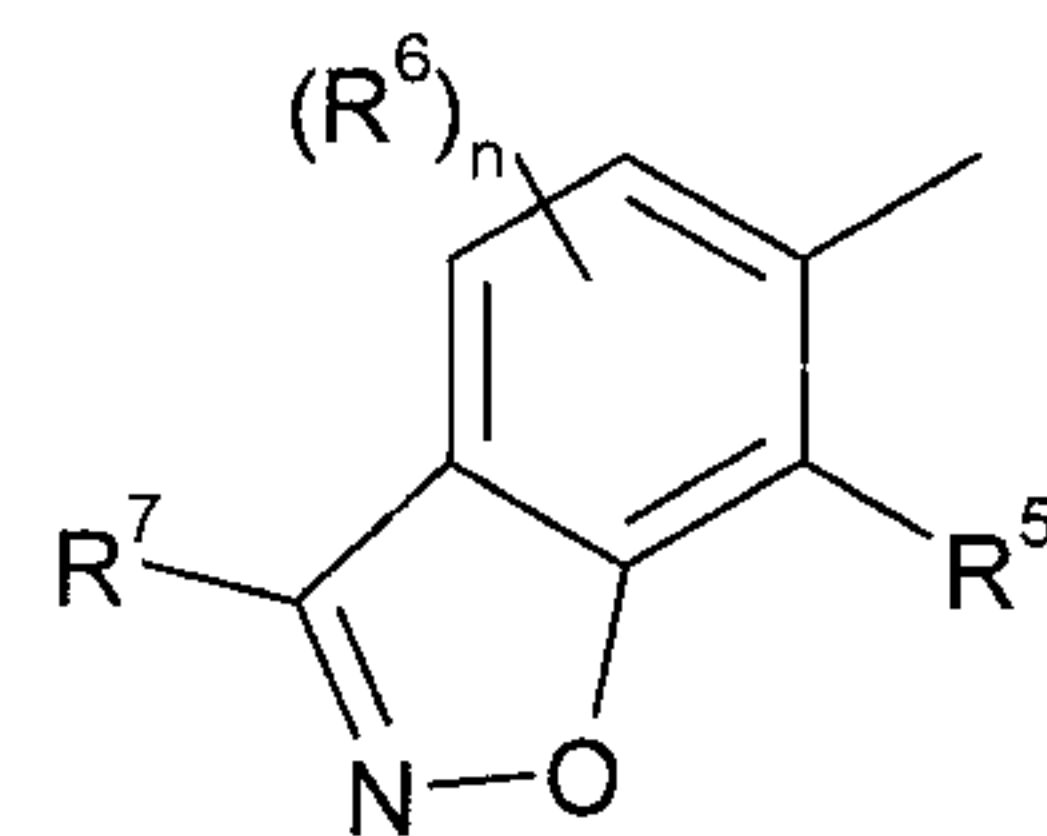
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A15



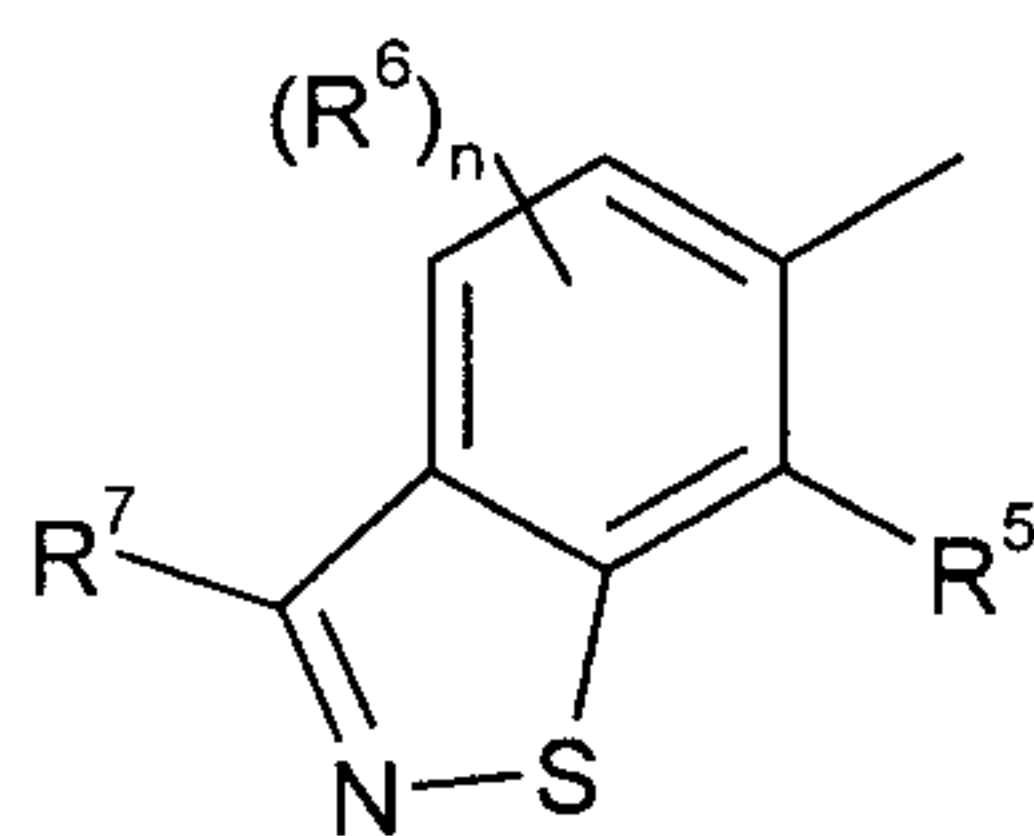
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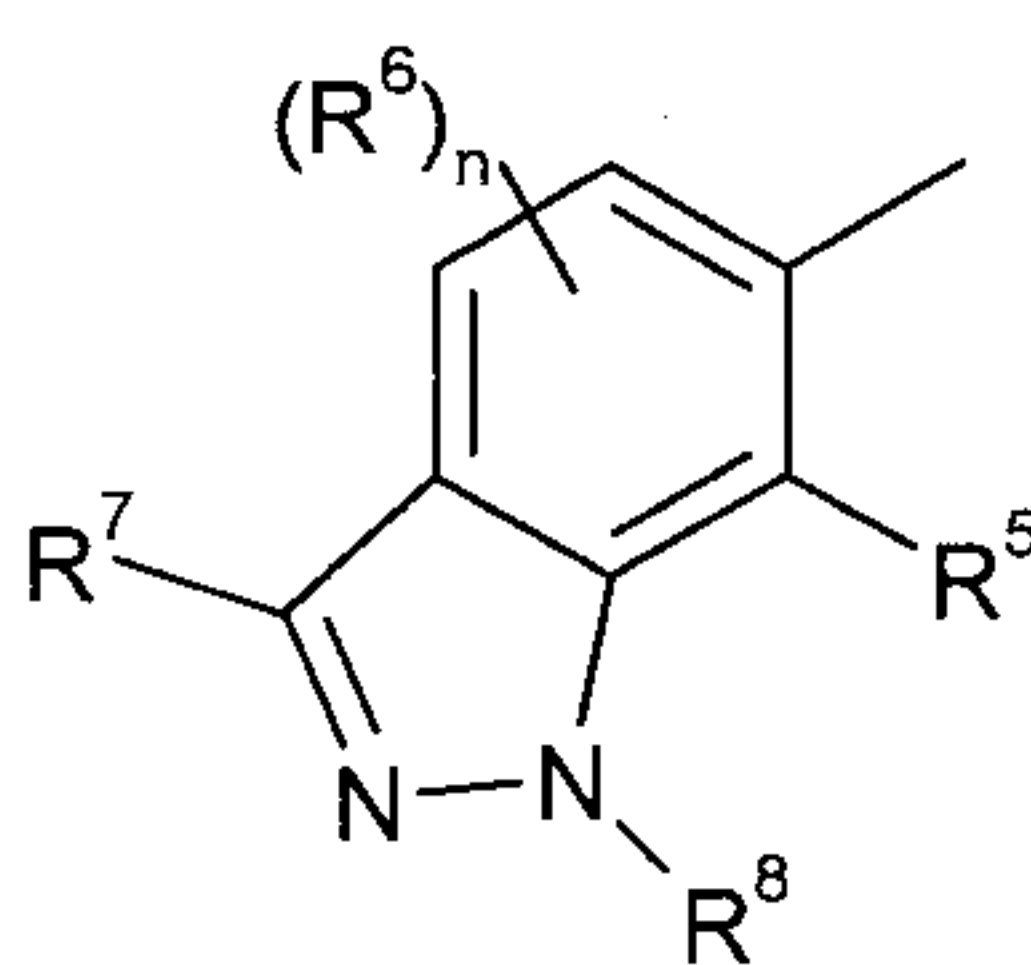
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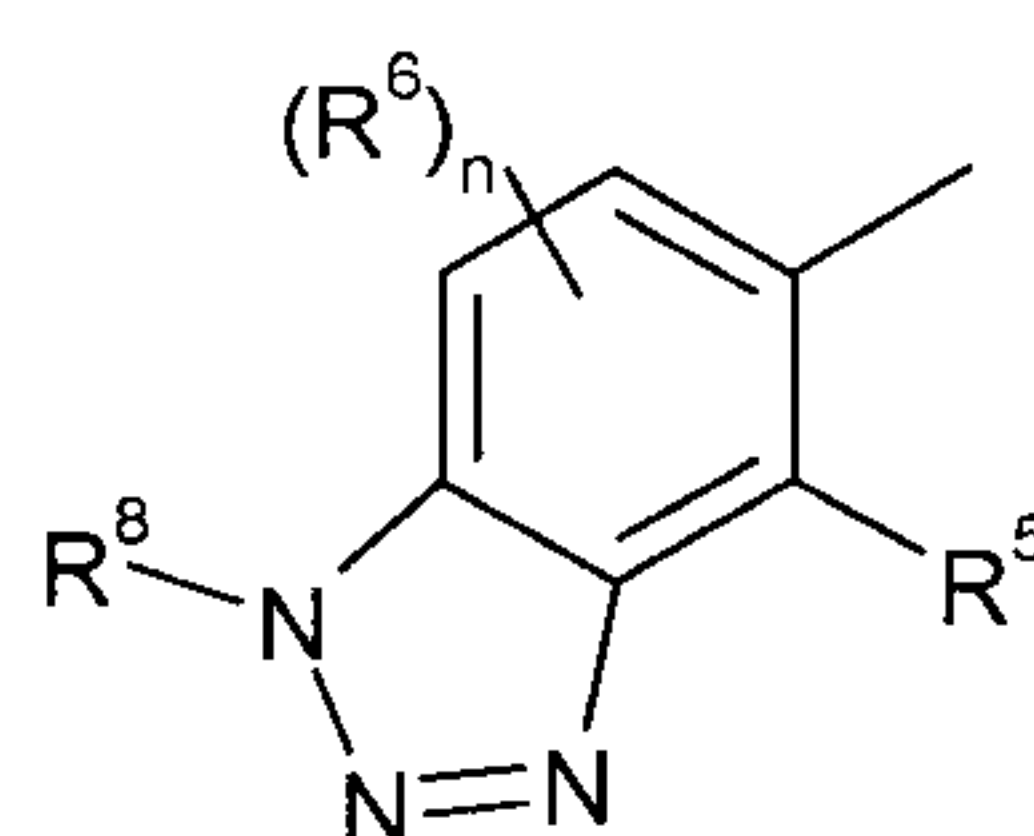
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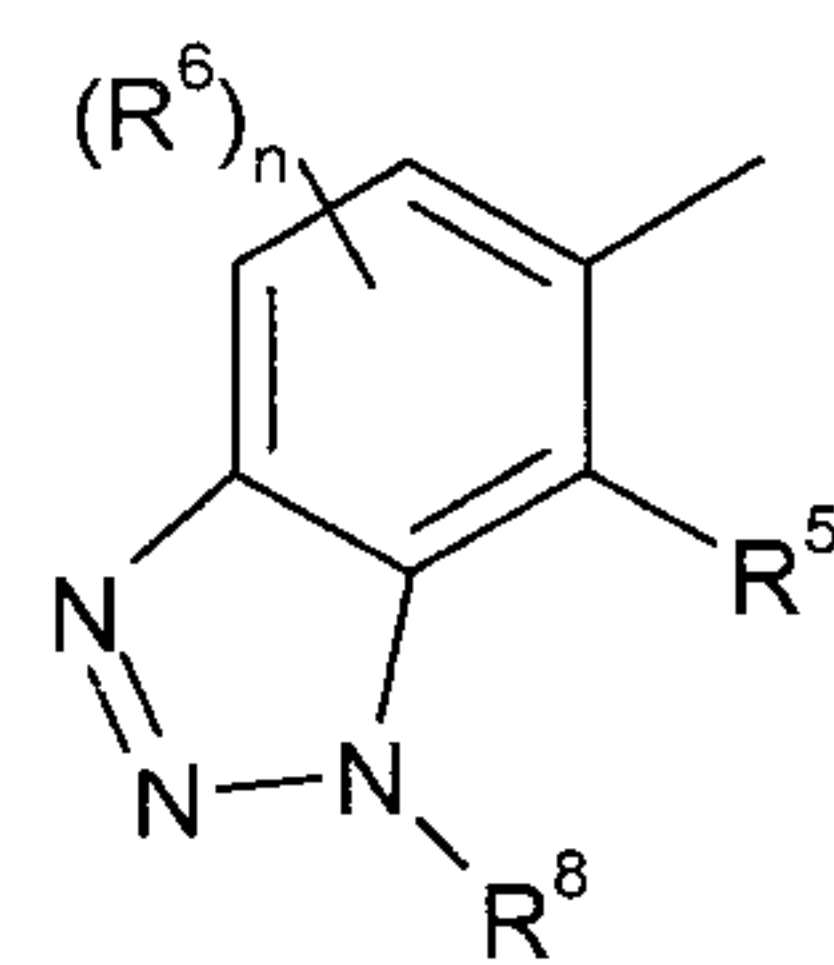
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R^1 represents hydrogen or (C₁-C₄)-alkyl,

5 R^2 represents chlorine,

R^3 represents hydrogen,

R^4 represents hydrogen,

10

R^5 represents hydrogen, halogen, OH, NH₂, CN, (C₁-C₃)-alkyl, (C₁-C₃)-alkoxy, C₁-C₃-alkylamino or cyclopropyl,

R^6 represents hydrogen, halogen, OH, NH₂, CN, (C₁-C₃)-alkyl, (C₁-C₃)-alkoxy,

15 cyclopropyl or vinyl,

R^7 represents hydrogen, halogen, (C₁-C₃)-alkyl, (C₁-C₃)-alkoxy, (C₁-C₃)-alkylthio, cyclopropyl, (C₁-C₃)-alkylamino or phenyl,

20 R^8 represents hydrogen, (C₁-C₃)-alkyl, phenyl or (C₁-C₃)-alkylcarbonyl,

X represents N, CH, CCl, CF or CBr,

n represents 0, 1 or 2.

25

Alkyl means saturated, straight-chain or branched hydrocarbon radicals having 1 to 10 carbon atoms, for example C₁-C₆-alkyl such as methyl, ethyl, propyl, 1-methylethyl, butyl, 1-methylpropyl, 2-methylpropyl, 1,1-dimethylethyl, pentyl, 1-methylbutyl, 2-

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methylbutyl, 3-methylbutyl, 2,2-dimethylpropyl, 1-ethylpropyl, hexyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl and 1-ethyl-2-methylpropyl.

Haloalkyl means straight-chain or branched alkyl groups having 1 to 8 carbon atoms, where in these groups some or all of the hydrogen atoms may be replaced by halogen atoms, for example C₁-C₂-haloalkyl such as chloromethyl, bromomethyl, dichloromethyl, trichloromethyl, fluoromethyl, difluoromethyl, trifluoromethyl, chlorofluoromethyl, dichlorofluoromethyl, chlorodifluoromethyl, 1-chloroethyl, 1-bromoethyl, 1-fluoroethyl, 2-fluoroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 2-chloro-2-fluoroethyl, 2-chloro,2-difluoroethyl, 2,2-dichloro-2-fluoroethyl, 2,2,2-trichloroethyl, pentafluoroethyl and 1,1,1-trifluoroprop-2-yl.

15

Alkenyl means unsaturated, straight-chain or branched hydrocarbon radicals having 2 to 8 carbon atoms and a double bond in any position, for example C₂-C₆-alkenyl such as ethenyl, 1-propenyl, 2-propenyl, 1-methylethenyl, 1-butenyl, 2-butenyl, 3-butenyl, 1-methyl-1-propenyl, 2-methyl-1-propenyl, 1-methyl-2-propenyl, 2-methyl-2-propenyl, 1-pentenyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 1-methyl-1-butenyl, 2-methyl-1-butenyl, 3-methyl-1-butenyl, 1-methyl-2-butenyl, 2-methyl-2-butenyl, 3-methyl-2-butenyl, 1-methyl-3-butenyl, 2-methyl-3-butenyl, 3-methyl-3-butenyl, 1,1-dimethyl-2-propenyl, 1,2-dimethyl-1-propenyl, 1,2-dimethyl-2-propenyl, 1-ethyl-1-propenyl, 1-ethyl-2-propenyl, 1-hexenyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 1-methyl-1-pentenyl, 2-methyl-1-pentenyl, 3-methyl-1-pentenyl, 4-methyl-1-pentenyl, 1-methyl-2-pentenyl, 2-methyl-2-pentenyl, 3-methyl-2-pentenyl, 4-methyl-2-pentenyl, 1-methyl-3-pentenyl, 2-methyl-3-pentenyl, 3-methyl-3-pentenyl, 4-methyl-3-pentenyl, 1-methyl-4-pentenyl, 2-methyl-4-pentenyl, 3-methyl-4-pentenyl, 4-methyl-4-pentenyl, 1,1-dimethyl-2-butenyl, 1,1-dimethyl-3-butenyl, 1,2-dimethyl-1-butenyl, 1,2-dimethyl-2-butenyl, 1,2-dimethyl-3-butenyl, 1,3-dimethyl-1-butenyl, 1,3-dimethyl-2-butenyl, 1,3-dimethyl-3-butenyl, 2,2-dimethyl-3-butenyl, 2,3-dimethyl-1-butenyl, 2,3-dimethyl-2-butenyl, 2,3-dimethyl-3-butenyl, 3,3-dimethyl-1-butenyl, 3,3-dimethyl-2-butenyl, 1-ethyl-1-butenyl, 1-ethyl-2-

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butenyl, 1-ethyl-3-butenyl, 2-ethyl-1-butenyl, 2-ethyl-2-butenyl, 2-ethyl-3-butenyl, 1,1,2-trimethyl-2-propenyl, 1-ethyl-1-methyl-2-propenyl, 1-ethyl-2-methyl-1-propenyl and 1-ethyl-2-methyl-2-propenyl.

- 5 Alkynyl means straight-chain or branched hydrocarbon radicals having 2 to 8 carbon atoms and a triple bond in any position, for example C₂-C₆-alkynyl such as ethynyl, 1-propynyl, 2-propynyl (or propargyl), 1-butyne, 2-butyne, 3-butyne, 1-methyl-2-propynyl, 1-pentyne, 2-pentyne, 3-pentyne, 4-pentyne, 3-methyl-1-butyne, 1-methyl-2-butyne, 1-methyl-3-butyne, 2-methyl-3-butyne, 1,1-dimethyl-2-propynyl, 1-ethyl-2-propynyl, 1-hexynyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 5-hexynyl, 3-methyl-1-pentyne, 4-methyl-1-pentyne, 1-methyl-2-pentyne, 4-methyl-2-pentyne, 1-methyl-3-pentyne, 2-methyl-3-pentyne, 1-methyl-4-pentyne, 2-methyl-4-pentyne, 3-methyl-4-pentyne, 1,1-dimethyl-2-butyne, 1,1-dimethyl-3-butyne, 1,2-dimethyl-3-butyne, 2,2-dimethyl-3-butyne, 3,3-dimethyl-1-butyne, 1-ethyl-2-butyne, 1-ethyl-3-butyne, 2-ethyl-3-butyne and 1-ethyl-1-methyl-2-propynyl.

- Alkoxy means saturated, straight-chain or branched alkoxy radicals having 1 to 8 carbon atoms, for example C₁-C₆-alkoxy such as methoxy, ethoxy, propoxy, 1-methylethoxy, butoxy, 1-methylpropoxy, 2-methylpropoxy, 1,1-dimethylethoxy, 20 pentoxy, 1-methylbutoxy, 2-methylbutoxy, 3-methylbutoxy, 2,2-dimethylpropoxy, 1-ethylpropoxy, hexoxy, 1,1-dimethylpropoxy, 1,2-dimethylpropoxy, 1-methylpentoxy, 2-methylpentoxy, 3-methylpentoxy, 4-methylpentoxy, 1,1-dimethylbutoxy, 1,2-dimethylbutoxy, 1,3-dimethylbutoxy, 2,2-dimethylbutoxy, 2,3-dimethylbutoxy, 3,3-dimethylbutoxy, 1-ethylbutoxy, 2-ethylbutoxy, 1,1,2-trimethylpropoxy, 1,2,2-trimethylpropoxy, 1-ethyl-1-methylpropoxy and 1-ethyl-2-methylpropoxy;
- haloalkoxy means straight-chain or branched alkoxy groups having 1 to 8 carbon atoms (as mentioned above), where in these groups some or all of the hydrogen atoms may be replaced by halogen atoms as mentioned above, for example C₁-C₂-haloalkoxy such as chloromethoxy, bromomethoxy, dichloromethoxy, trichloromethoxy, 30 fluoromethoxy, difluoromethoxy, trifluoromethoxy, chlorofluoromethoxy, dichlorofluoromethoxy, chlorodifluoromethoxy, 1-chloroethoxy, 1-bromoethoxy, 1-fluoroethoxy, 2-fluoroethoxy, 2,2-difluoroethoxy, 2,2,2-trifluoroethoxy, 2-chloro-2-

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fluoroethoxy, 2-chloro,2-difluoroethoxy, 2,2-dichloro-2-fluoroethoxy, 2,2,2-trichloroethoxy, pentafluoroethoxy and 1,1,1-trifluoroprop-2-oxy.

Alkylthio means saturated, straight-chain or branched alkylthio radicals having 1 to 8
 5 carbon atoms, for example C₁-C₆-alkylthio such as methylthio, ethylthio, propylthio, 1-methylethylthio, butylthio, 1-methylpropylthio, 2-methylpropylthio, 1,1-dimethylethylthio, pentylthio, 1-methylbutylthio, 2-methylbutylthio, 3-methylbutylthio, 2,2-dimethylpropylthio, 1-ethylpropylthio, hexylthio, 1,1-dimethylpropylthio, 1,2-dimethylpropylthio, 1-methylpentylthio, 2-methylpentylthio, 3-methylpentylthio, 4-methylpentylthio, 1,1-dimethylbutylthio, 1,2-dimethylbutylthio, 1,3-dimethylbutylthio,
 10 2,2-dimethylbutylthio, 2,3-dimethylbutylthio, 3,3-dimethylbutylthio, 1-ethylbutylthio, 2-ethylbutylthio, 1,1,2-trimethylpropylthio, 1,2,2-trimethylpropylthio, 1-ethyl-1-methylpropylthio and 1-ethyl-2-methylpropylthio;

haloalkylthio means straight-chain or branched alkylthio groups having 1 to 8 carbon
 15 atoms (as mentioned above), where in these groups some or all of the hydrogen atoms may be replaced by halogen atoms as mentioned above, for example C₁-C₂-haloalkylthio such as chloromethylthio, bromomethylthio, dichloromethylthio, trichloromethylthio, fluoromethylthio, difluoromethylthio, trifluoromethylthio, chlorofluoromethylthio, dichlorofluoromethylthio, chlorodifluoromethylthio, 1-chloroethylthio, 1-bromoethylthio, 1-fluoroethylthio, 2-fluoroethylthio, 2,2-difluoroethylthio, 2,2,2-trifluoroethylthio, 2-chloro-2-fluoroethylthio, 2-chloro,2-difluoroethylthio, 2,2-dichloro-2-fluoroethylthio, 2,2,2-trichloroethylthio, pentafluoroethylthio and 1,1,1-trifluoroprop-2-ylthio.

25 Aryl means phenyl or naphthyl.

Depending inter alia on the nature of the substituents, the compounds of the formula (I) can be present as geometrical and/or optical isomers or isomer mixtures of varying composition which, if desired, can be separated in a customary manner. The present
 30 invention provides both the pure isomers and the isomer mixtures, their preparation and use and compositions comprising them. For the sake of simplicity, however, compounds of the formula (I) are always referred to below, although both the pure

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compounds and also, if appropriate, mixtures having different proportions of isomeric compounds are meant.

A metal ion equivalent is a metal ion having a positive charge, such as Na^+ , K^+ ,
5 $(\text{Mg}^{2+})_{1/2}$, $(\text{Ca}^{2+})_{1/2}$, MgH^+ , CaH^+ , $(\text{Al}^{3+})_{1/3}$, $(\text{Fe}^{2+})_{1/2}$ or $(\text{Fe}^{3+})_{1/3}$.

Halogen is fluorine, chlorine, bromine or iodine.

Where a group is substituted by a plurality of radicals, this means that this group is
10 substituted by one or more identical or different representatives of the radicals mentioned.

Depending on the nature of the substituents defined above, the compounds of the formula (I) have acidic or basic properties and can form salts, if appropriate also inner
15 salts, or adducts with inorganic or organic acids or with bases or with metal ions. If the compounds of the formula (I) carry amino, alkylamino or other groups which induce basic properties, these compounds can be reacted with acids to give salts, or they are directly obtained as salts in the synthesis.

20 Examples of inorganic acids are hydrohalic acids, such as hydrogen fluoride, hydrogen chloride, hydrogen bromide and hydrogen iodide, sulfuric acid, phosphoric acid and nitric acid, and acidic salts, such as NaHSO_4 and KHSO_4 . Suitable organic acids are, for example, formic acid, carbonic acid and alkanolic acids, such as acetic acid, trifluoroacetic acid, trichloroacetic acid and propionic acid, and also glycolic acid,
25 thiocyanic acid, lactic acid, succinic acid, citric acid, benzoic acid, cinnamic acid, oxalic acid, alkylsulfonic acids (sulfonic acids having straight-chain or branched alkyl radicals of 1 to 20 carbon atoms), arylsulfonic acids or aryldisulfonic acids (aromatic radicals, such as phenyl and naphthyl, which carry one or two sulfonic acid groups), alkylphosphonic acids (phosphonic acids having straight-chain or branched alkyl
30 radicals of 1 to 20 carbon atoms), arylphosphonic acids or aryldiphosphonic acids (aromatic radicals, such as phenyl and naphthyl, which carry one or two phosphonic acid radicals), where the alkyl and aryl radicals may carry further substituents, for

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example p-toluenesulfonic acid, salicylic acid, p-aminosalicylic acid, 2-phenoxybenzoic acid, 2-acetoxybenzoic acid, etc.

Suitable metal ions are in particular the ions of the elements of the second main group, in particular calcium and magnesium, of the third and fourth main group, in particular
5 aluminum, tin and lead, and also of the first to eighth transition group, in particular chromium, manganese, iron, cobalt, nickel, copper, zinc and others. Particular preference is given to the metal ions of the elements of the fourth period. Here, the metals can be present in the various valencies that they can assume.

10 If the compounds of the formula (I) carry hydroxyl, carboxyl or other groups which induce acidic properties, these compounds can be reacted with bases to give salts. Suitable bases are, for example, hydroxides, carbonates, bicarbonates of the alkali metals and alkaline earth metals, in particular those of sodium, potassium, magnesium and calcium, furthermore ammonia, primary, secondary and tertiary amines having
15 (C₁-C₄)-alkyl groups, mono-, di- and trialkanolamines of (C₁-C₄)-alkanols, choline and also chlorocholine.

Depending on the nature and the attachment of the substituents, the compounds of the general formula (I) may be present as stereoisomers. If, for example, one or more
20 asymmetrically substituted carbon atoms or sulfoxides are present, there may be enantiomers and diastereomers. Stereoisomers may be obtained from the mixtures resulting from the preparation using customary separation methods, for example by chromatographic separation techniques. It is also possible to prepare stereoisomers selectively by using stereoselective reactions employing optically active starting
25 materials and/or auxiliaries. The invention also relates to all stereoisomers and mixtures thereof embraced by the general formula (I) but not specifically defined.

In all of the formulae below, the substituents and symbols have the same definition as described under formula (I), unless otherwise defined.

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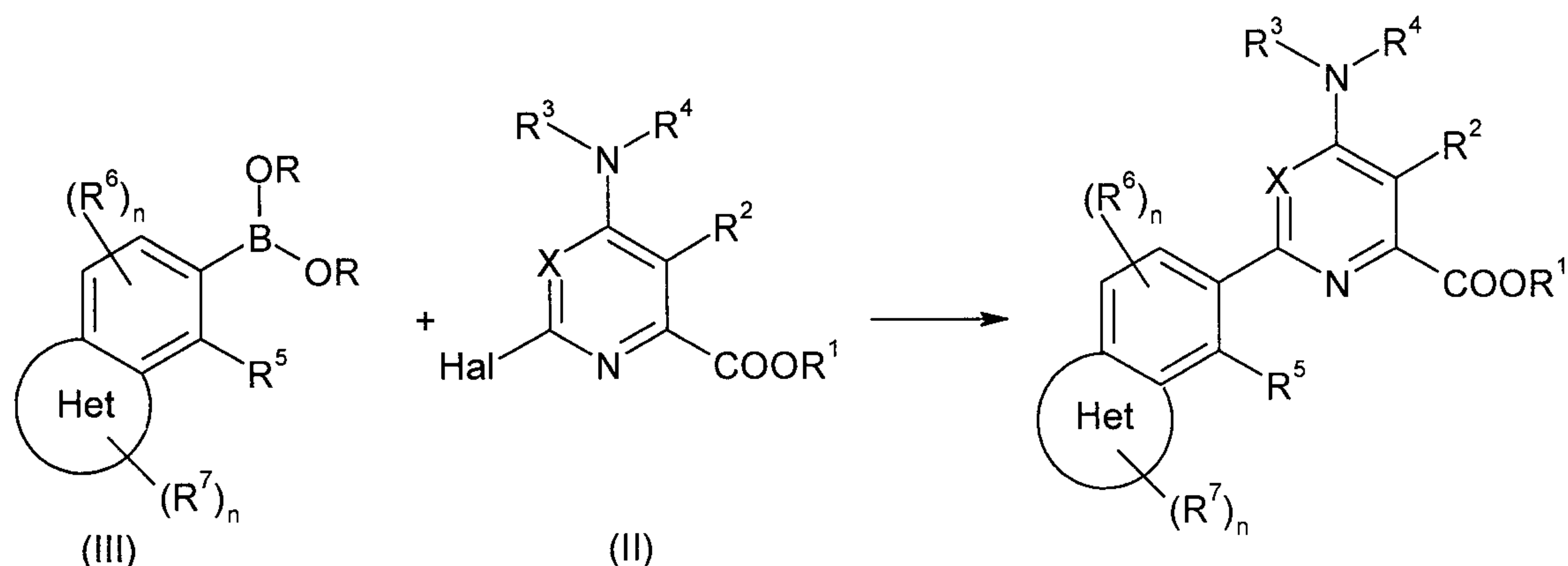
Compounds of the formula (I) can be prepared, for example, according to the scheme below by a palladium-catalyzed coupling reaction of a halogen compound (II) with a

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boronic acid derivative (III). In this scheme, Het represents the heterocycles of groups A1 to A24 fused to the phenyl ring. R represents hydrogen or (C₁-C₃)-alkyl.



The halogen compounds of the formula (II) are known, for example, from
 5 WO2001051468 A1 and WO2007082076 A1, or they can be prepared by methods
 known per se to the person skilled in the art. The boronic acid derivatives of the
 formula (III) are commercially available or can be prepared by methods known per se
 to the person skilled in the art.

10 Preference is given to the compounds of the formula (I) listed in Tables 1 to 44, which
 compounds can be prepared analogously to the methods mentioned herein. The
 abbreviations used denote:

Et = ethyl

Me = methyl

Pr = propyl

Ph = phenyl

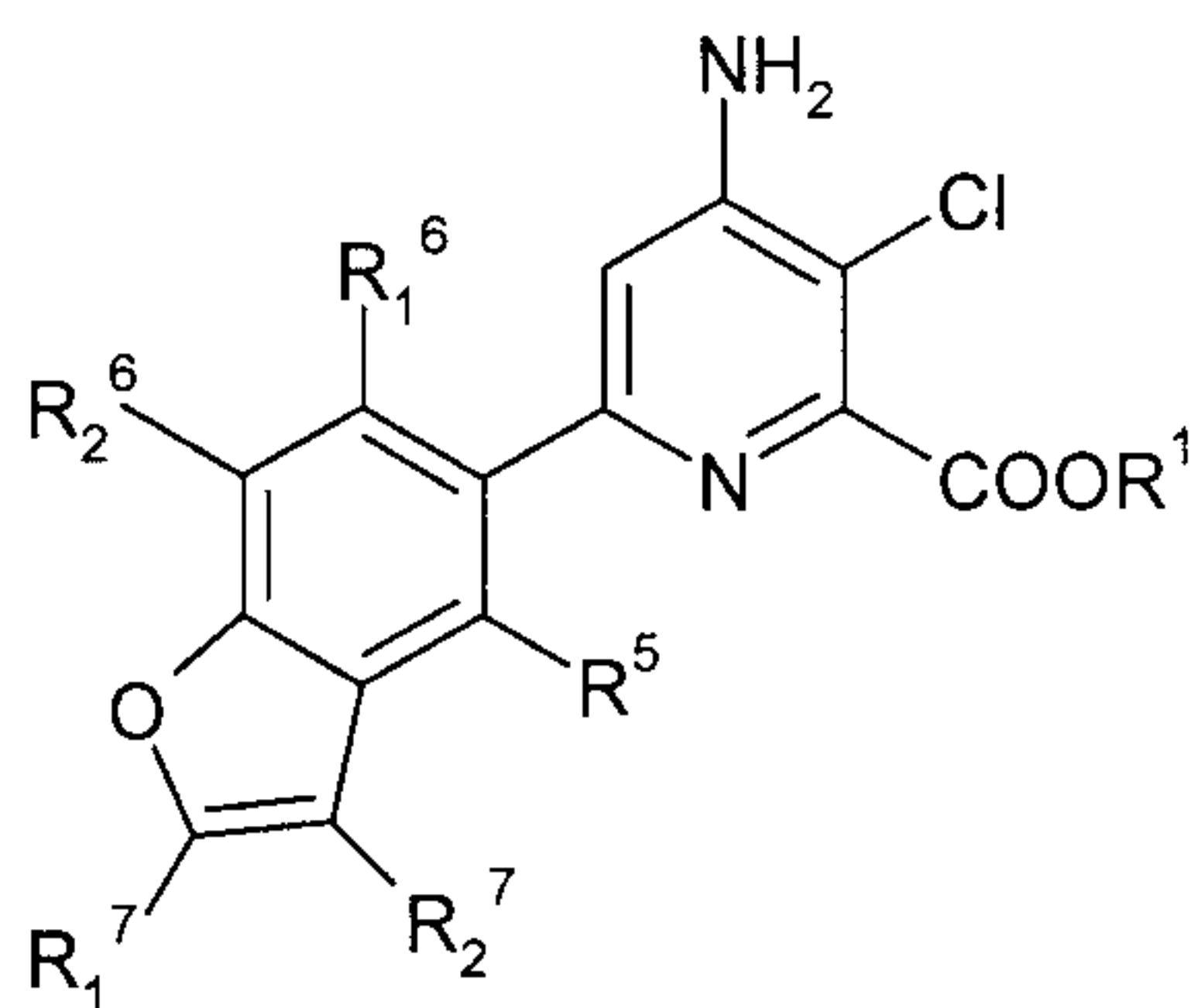
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Table 1: Compounds according to the invention of the formula (I) in which X
 represents CH, A represents A1, R³ and R⁴ each represent hydrogen and R²
 20 represents chlorine:

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Ex. No.	R ¹	R ⁵	R ⁶	R ²	R ¹	R ²
1.001	H	H	H	H	H	H
1.002	H	F	H	H	H	H
1.003	H	F	H	H	Cl	H
1.004	H	F	H	H	H	Cl
1.005	H	F	H	H	Cl	Cl
1.006	H	F	H	H	Ph	H
1.007	H	F	H	H	Ph	Cl
1.008	H	F	H	H	Ph	F
1.009	H	F	H	H	Me	H
1.010	H	F	H	H	Me	Cl
1.011	H	F	H	H	Me	F
1.012	Me	H	H	H	H	H
1.013	Me	F	H	H	H	H
1.014	Me	F	H	H	Cl	H
1.015	Me	F	H	H	H	Cl
1.016	Me	F	H	H	Cl	Cl
1.017	Me	F	H	H	H	F
1.018	Me	F	H	H	Ph	H
1.019	Me	F	H	H	Ph	Cl
1.020	Me	F	H	H	Ph	F
1.021	Me	F	H	H	Me	H
1.022	Me	F	H	H	Me	Cl
1.023	Me	F	H	H	Me	F
1.024	Et	H	H	H	H	H
1.025	Et	Cl	H	H	H	H
1.026	Et	Cl	H	H	Cl	H

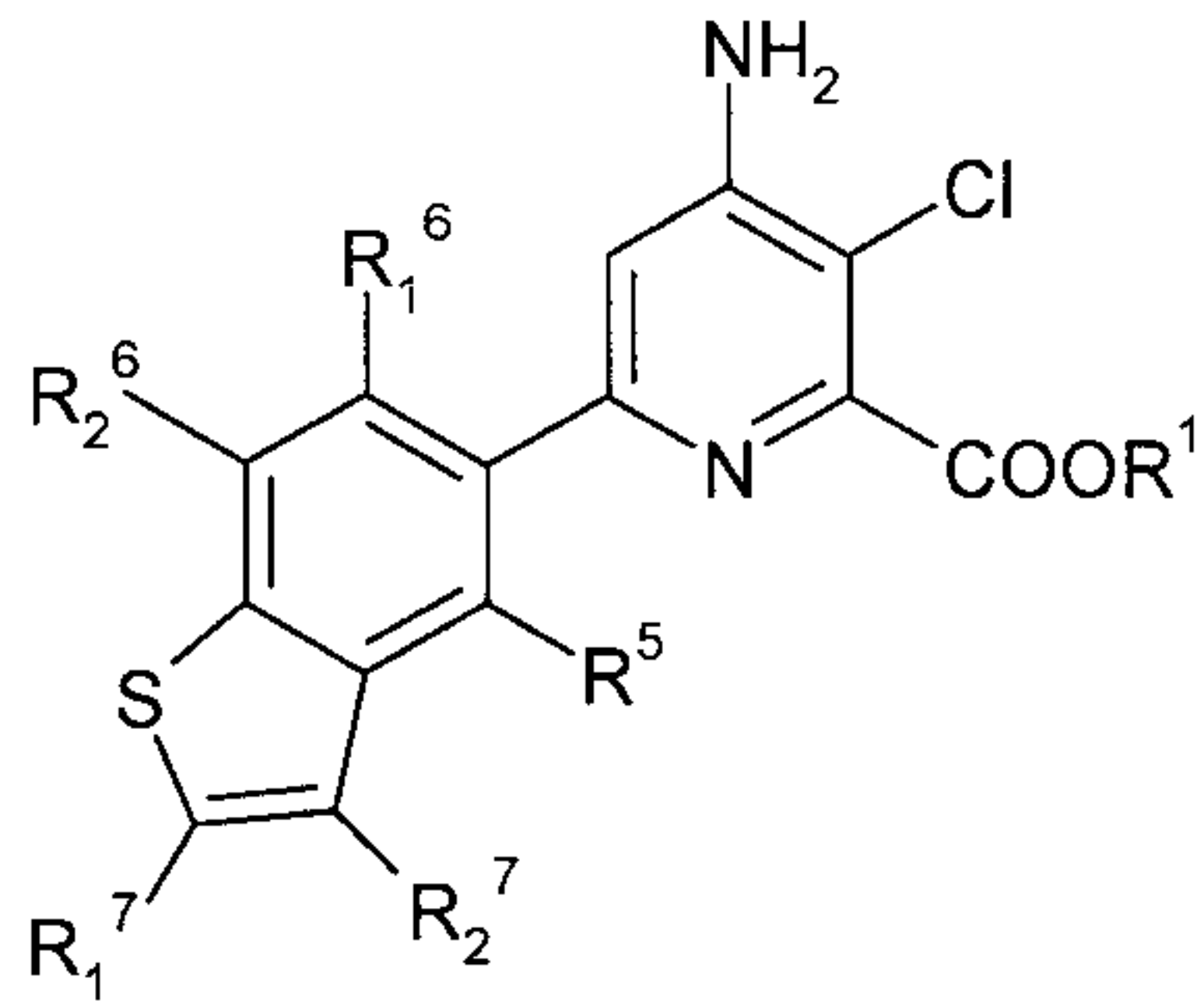
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
1.027	Et	Cl	H	H	H	Cl
1.028	Et	Cl	H	H	Cl	Cl
1.029	Et	Cl	H	H	H	F
1.030	Et	Cl	H	H	Ph	H
1.031	Et	Cl	H	H	Ph	Cl
1.032	Et	Cl	H	H	Ph	F
1.033	Et	Cl	H	H	Me	H
1.034	Et	Cl	H	H	Me	Cl
1.035	Et	Cl	H	H	Me	F
1.036	H	F	F	H	H	H
1.037	H	F	H	F	H	H
1.038	Me	H	F	H	H	H
1.039	H	H	F	H	H	H
1.040	K	H	F	H	H	H
1.041	Me	H	Cl	H	H	H
1.042	H	H	Cl	H	H	H
1.043	K	H	Cl	H	H	H
1.044	Me	H	H	F	H	H
1.045	H	H	H	F	H	H
1.046	K	H	H	F	H	H
1.047	Me	H	H	Cl	H	H
1.048	H	H	H	Cl	H	H
1.049	K	H	H	Cl	H	H
1.050	K	F	H	H	H	H
1.051	Me	Cl	H	H	H	H
1.052	H	Cl	H	H	H	H
1.053	Na	Cl	H	H	H	H

Table 2: Compounds according to the invention of the formula (I) in which X represents CH, A represents A2, R³ and R⁴ each represent hydrogen and R² represents chlorine:



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Ex. No.	R ¹	R ⁵	R ⁶	R ⁶ ₂	R ⁷ ₁	R ⁷ ₂
2.001	H	H	H	H	H	H
2.002	H	F	H	H	H	H
2.003	H	F	H	H	Cl	H
2.004	H	F	H	H	H	Cl
2.005	H	F	H	H	Cl	Cl
2.006	H	F	H	H	Ph	H
2.007	H	F	H	H	Ph	Cl
2.008	H	F	H	H	Ph	F
2.009	H	F	H	H	Me	H
2.010	H	F	H	H	Me	Cl
2.011	H	F	H	H	Me	F
2.012	Me	H	H	H	H	H
2.013	Me	F	H	H	H	H
2.014	Me	F	H	H	Cl	H
2.015	Me	F	H	H	H	Cl
2.016	Me	F	H	H	Cl	Cl
2.017	Me	F	H	H	H	F
2.018	Me	F	H	H	Ph	H
2.019	Me	F	H	H	Ph	Cl
2.020	Me	F	H	H	Ph	F
2.021	Me	F	H	H	Me	H
2.022	Me	F	H	H	Me	Cl
2.023	Me	F	H	H	Me	F

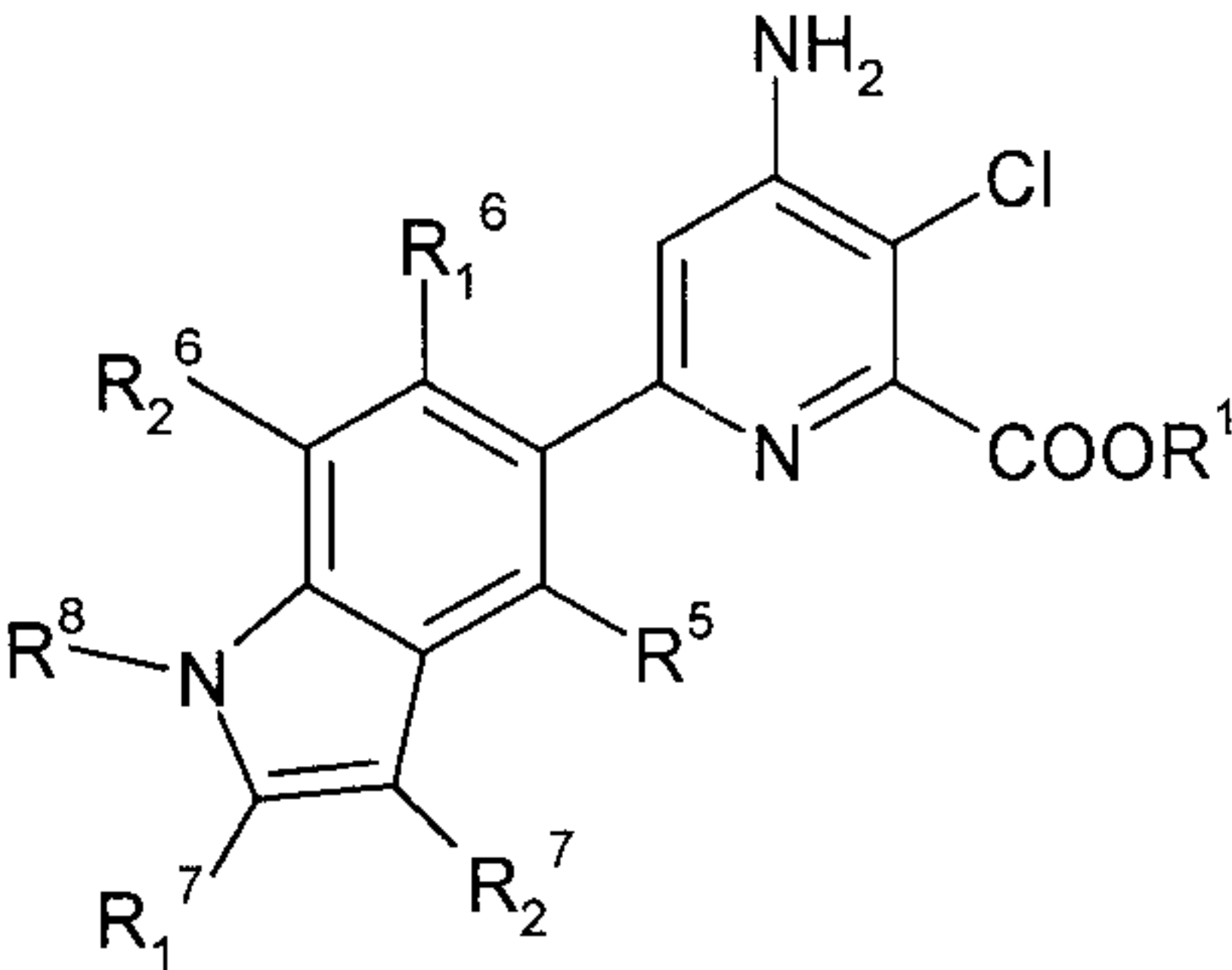
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
2.024	Et	H	H	H	H	H
2.025	Et	Cl	H	H	H	H
2.026	Et	Cl	H	H	Cl	H
2.027	Et	Cl	H	H	H	Cl
2.028	Et	Cl	H	H	Cl	Cl
2.029	Et	Cl	H	H	H	F
2.030	Et	Cl	H	H	Ph	H
2.031	Et	Cl	H	H	Ph	Cl
2.032	Et	Cl	H	H	Ph	F
2.033	Et	Cl	H	H	Me	H
2.034	Et	Cl	H	H	Me	Cl
2.035	Et	Cl	H	H	Me	F
2.036	H	F	F	H	H	H
2.037	H	F	H	F	H	H
2.038	Me	H	F	H	H	H
2.039	H	H	F	H	H	H
2.040	K	H	F	H	H	H
2.041	Me	H	Cl	H	H	H
2.042	H	H	Cl	H	H	H
2.043	K	H	Cl	H	H	H
2.044	Me	H	H	F	H	H
2.045	H	H	H	F	H	H
2.046	K	H	H	F	H	H
2.047	Me	H	H	Cl	H	H
2.048	H	H	H	Cl	H	H
2.049	K	H	H	Cl	H	H
2.050	K	F	H	H	H	H
2.051	Me	Cl	H	H	H	H
2.052	H	Cl	H	H	H	H
2.053	K	Cl	H	H	H	H

Table 3: Compounds according to the invention of the formula (I) in which X represents CH, A represents A3, R³ and R⁴ each represent hydrogen and R² represents chlorine:

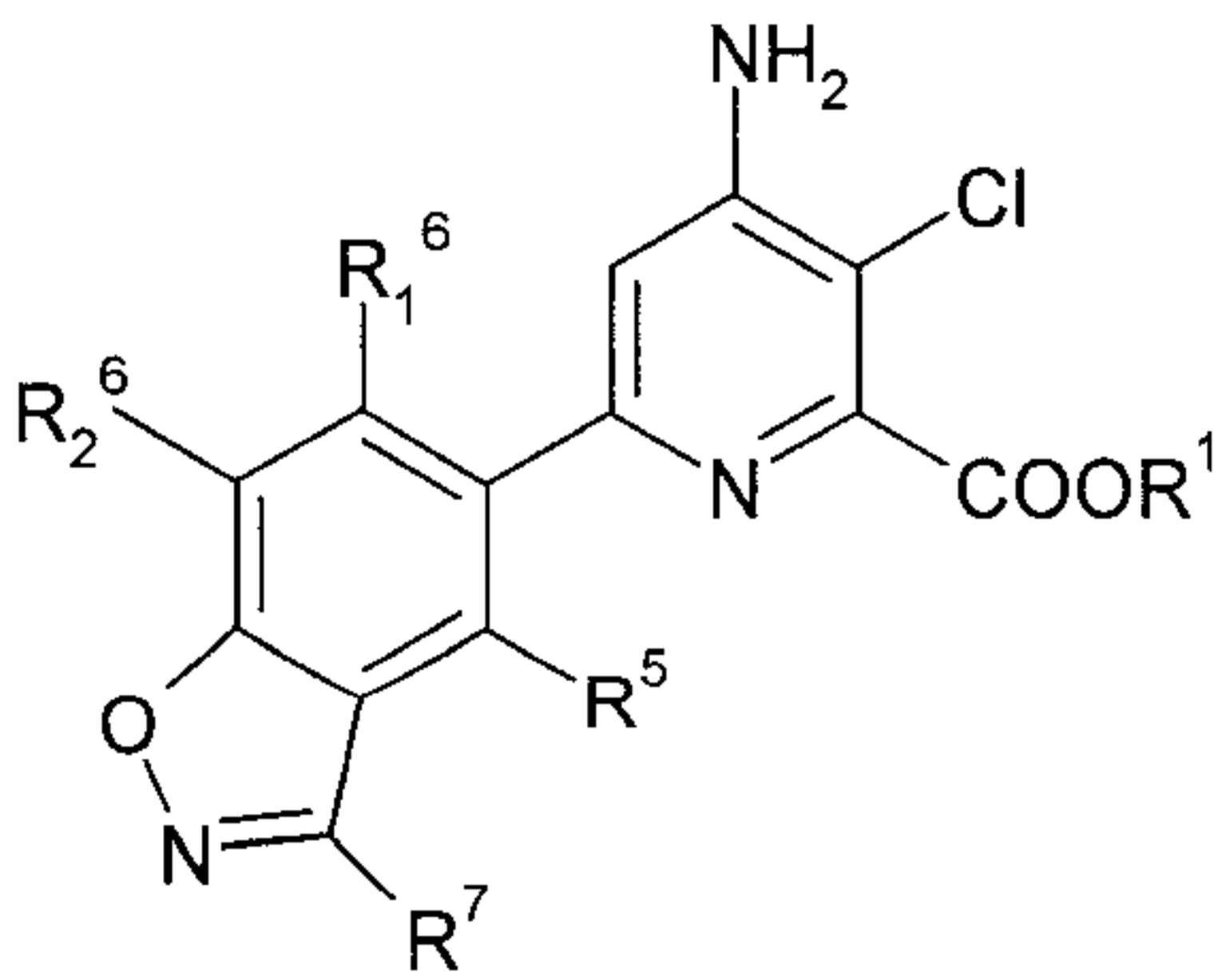


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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷	R ⁸
3.001	H	H	H	H	H	H	H
3.002	H	F	H	H	H	H	Me
3.003	H	F	H	H	Cl	H	H
3.004	H	F	H	H	H	Cl	Me
3.005	H	F	H	H	Cl	Cl	Me
3.006	H	F	H	H	Ph	H	Me
3.007	H	F	H	H	Ph	Cl	H
3.008	H	F	H	H	Ph	F	H
3.009	H	F	H	H	Me	H	H
3.010	H	F	H	H	Me	Cl	Me
3.011	H	F	H	H	Me	F	Me
3.012	Me	H	H	H	H	H	Me
3.013	Me	F	H	H	H	H	H
3.014	Me	F	H	H	Cl	H	H
3.015	Me	F	H	H	H	Cl	Me
3.016	Me	F	H	H	Cl	Cl	Me
3.017	Me	F	H	H	H	F	Me
3.018	Me	F	H	H	Ph	H	H
3.019	Me	F	H	H	Ph	Cl	H
3.020	Me	F	H	H	Ph	F	H
3.021	Me	F	H	H	Me	H	H
3.022	Me	F	H	H	Me	Cl	Me
3.023	Me	F	H	H	Me	F	H
3.024	Et	H	H	H	H	H	Me

Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷	R ⁸
3.025	Et	Cl	H	H	H	H	Me
3.026	Et	Cl	H	H	Cl	H	Me
3.027	Et	Cl	H	H	H	Cl	Me
3.028	Et	Cl	H	H	Cl	Cl	Me
3.029	Et	Cl	H	H	H	F	Me
3.030	Et	Cl	H	H	Ph	H	H
3.031	Et	Cl	H	H	Ph	Cl	H
3.032	Et	Cl	H	H	Ph	F	H
3.033	Et	Cl	H	H	Me	H	H
3.034	Et	Cl	H	H	Me	Cl	H
3.035	Et	Cl	H	H	Me	F	Me
3.036	H	F	F	H	H	H	H
3.037	H	F	H	F	H	H	H

Table 4: Compounds according to the invention of the formula (I) in which X represents CH, A represents A4, R³ and R⁴ each represent hydrogen and R² represents chlorine:



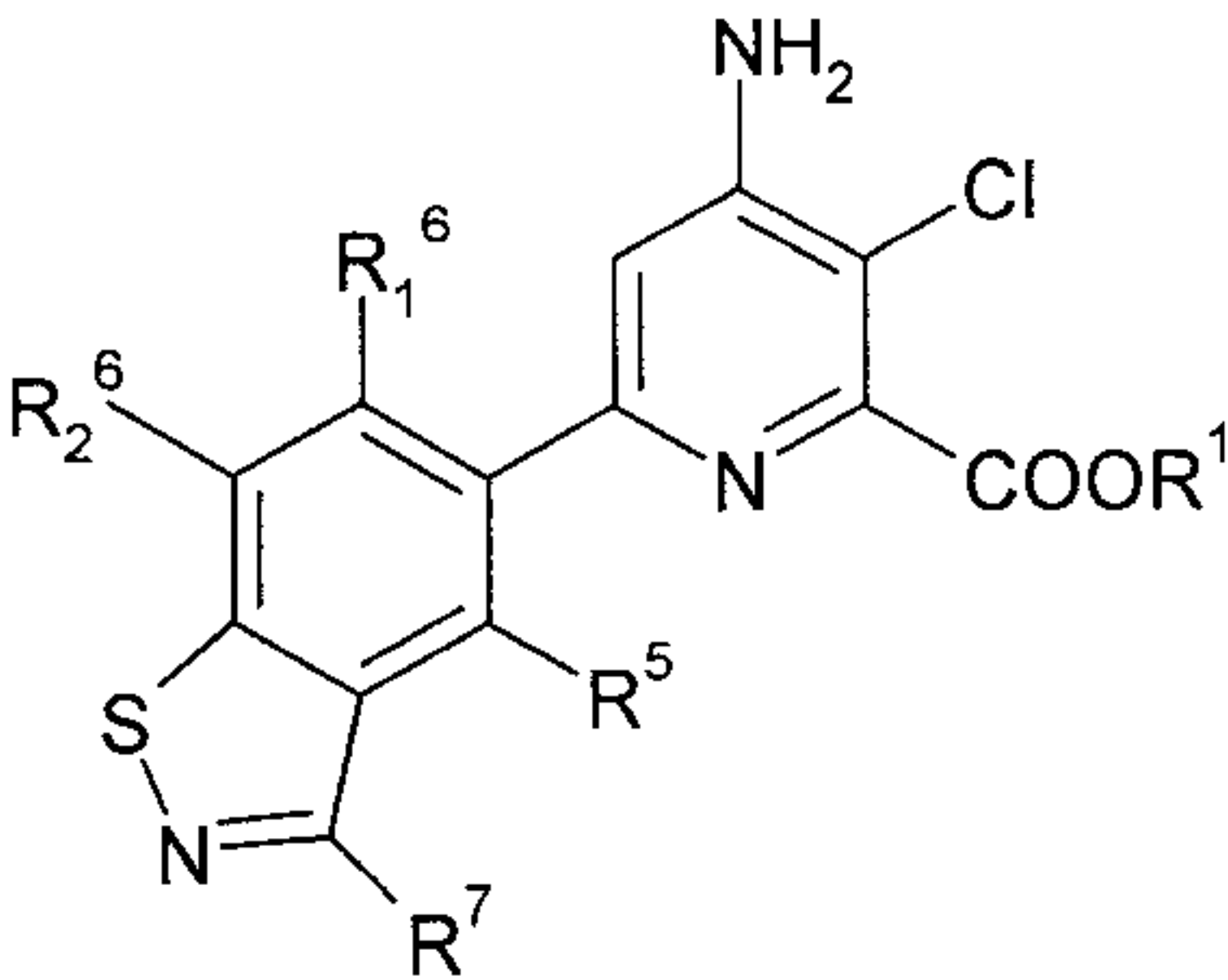
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
4.001	H	H	H	H	H
4.002	H	F	H	H	H
4.003	H	F	H	H	F
4.004	H	F	H	H	Cl
4.005	H	F	H	H	Me
4.006	H	Cl	H	H	H
4.007	H	Cl	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
4.008	H	Cl	H	H	Cl
4.009	H	Cl	H	H	Me
4.010	Me	H	H	H	H
4.011	Me	F	H	H	H
4.012	Me	F	H	H	F
4.013	Me	F	H	H	Cl
4.014	Me	Cl	H	H	H
4.015	Me	Cl	H	H	F
4.016	Me	Cl	H	H	Cl
4.017	Me	Cl	H	H	Me
4.018	Et	H	H	H	H
4.019	Et	F	H	H	H
4.020	Et	Cl	H	H	H
4.021	Et	F	H	H	Me
4.022	Et	Cl	H	H	Me
4.023	H	F	F	H	H
4.024	H	F	H	F	H

Table 5: Compounds according to the invention of the formula (I) in which X represents CH, A represents A5, R³ and R⁴ each represent hydrogen and R² represents chlorine:



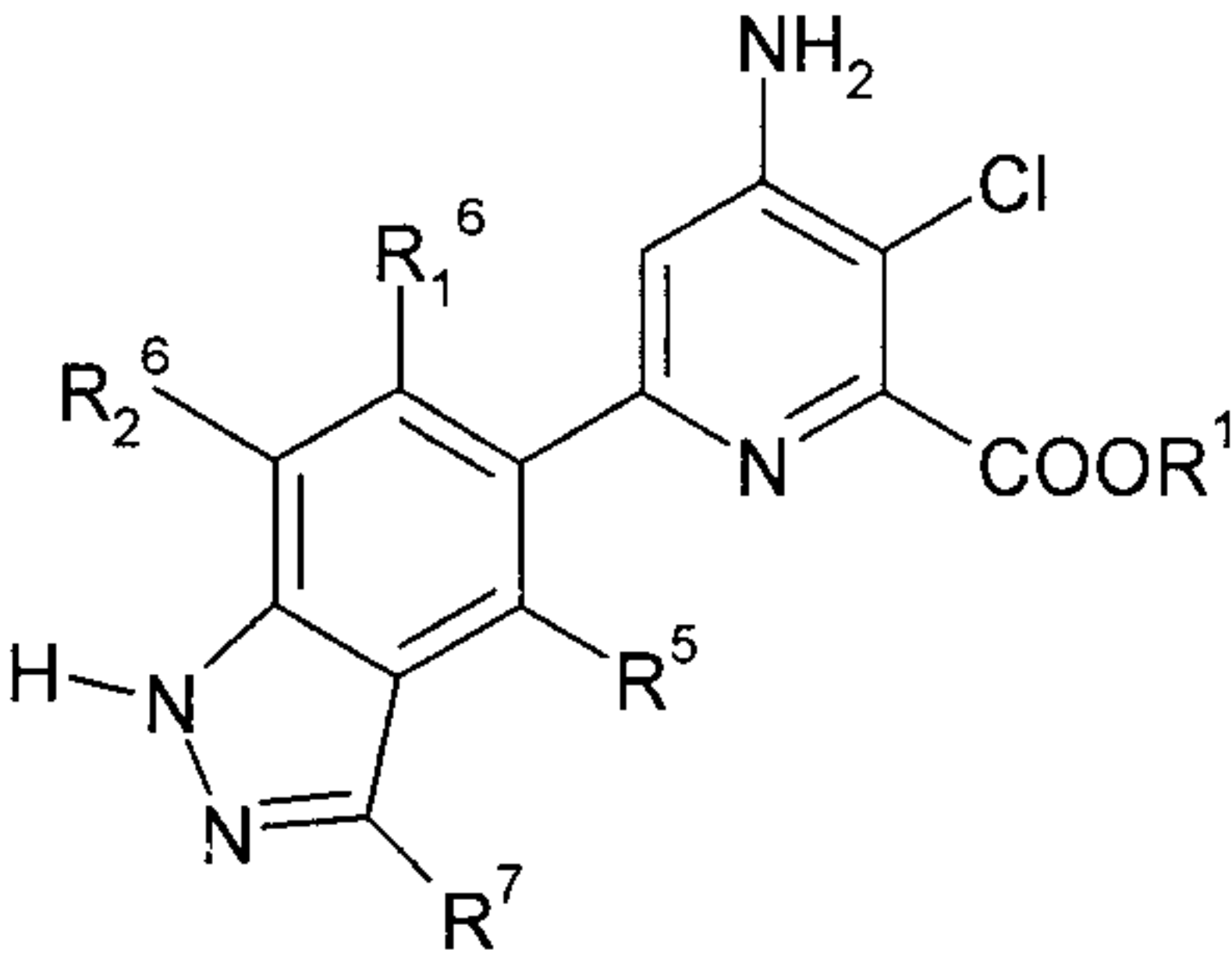
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
5.001	H	H	H	H	H
5.002	H	F	H	H	H
5.003	H	F	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
5.004	H	F	H	H	Cl
5.005	H	F	H	H	F
5.006	H	Cl	H	H	H
5.007	H	Cl	H	H	F
5.008	H	Cl	H	H	Cl
5.009	H	Cl	H	H	Me
5.010	Me	H	H	H	H
5.011	Me	F	H	H	H
5.012	Me	F	H	H	Cl
5.013	Me	Cl	H	H	H
5.014	Me	Cl	H	H	F
5.015	Me	Cl	H	H	Cl
5.016	Me	Cl	H	H	Me
5.017	Et	H	H	H	H
5.018	Et	F	H	H	H
5.019	Et	Cl	H	H	H
5.020	Et	F	H	H	Me
5.021	Et	Cl	H	H	Me
5.022	H	F	F	H	H
5.023	H	F	H	F	H

Table 6: Compounds according to the invention of the formula (I) in which X represents CH, A represents A6, R⁸, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
6.001	H	H	H	H	H

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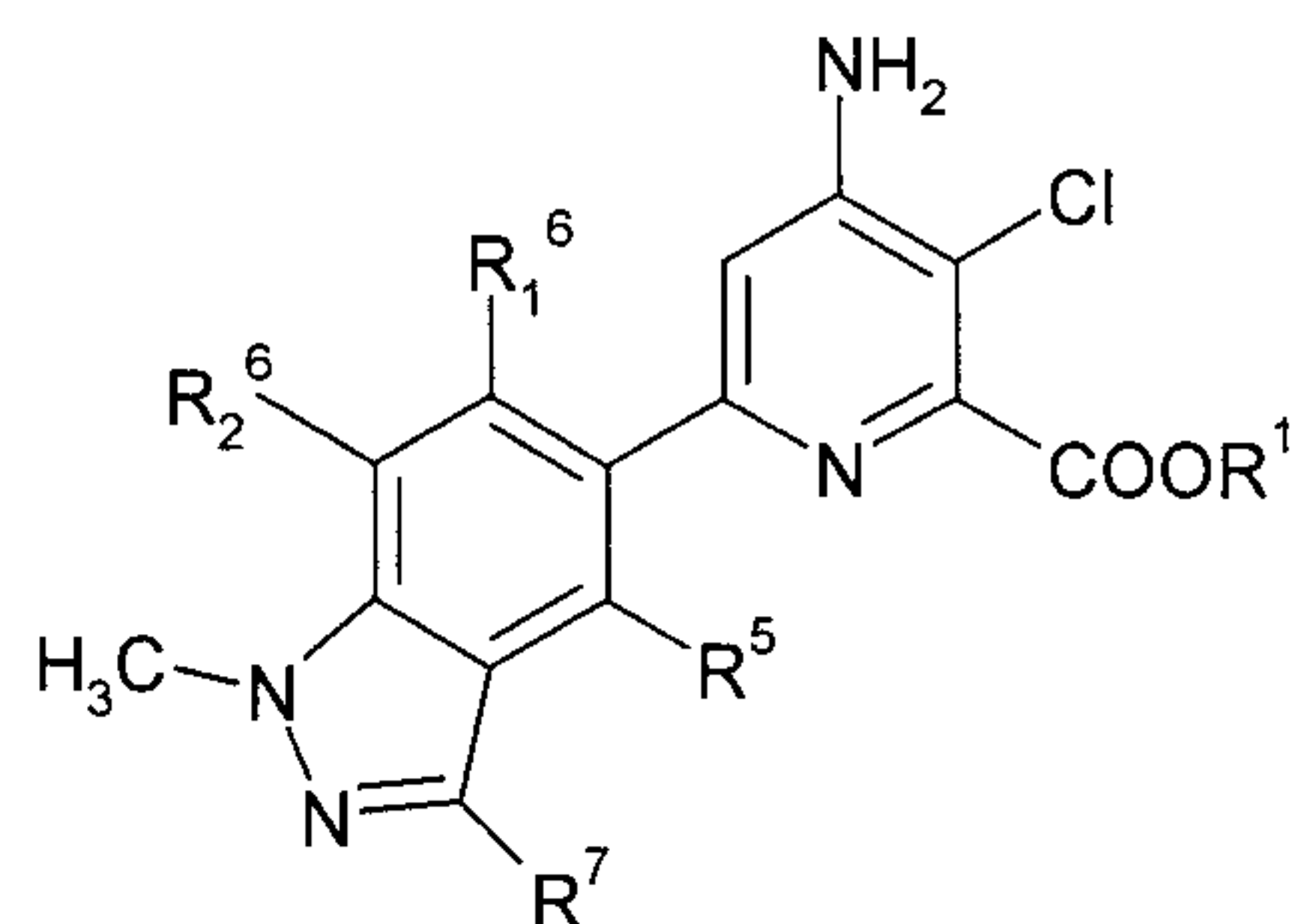
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
6.002	H	F	H	H	H
6.003	H	F	H	H	Me
6.004	H	F	H	H	Et
6.005	H	H	H	H	Me
6.006	H	Cl	H	H	H
6.007	H	Cl	H	H	Me
6.008	H	Cl	H	H	Et
6.009	Me	H	H	H	H
6.010	Me	H	H	H	Me
6.011	Me	F	H	H	H
6.012	Me	F	H	H	Me
6.013	Me	F	H	H	Et
6.014	Me	Cl	H	H	H
6.015	Me	Cl	H	H	Me
6.016	Me	Cl	H	H	Et
6.017	Me	H	H	H	Me
6.018	Et	H	H	H	H
6.019	Et	H	H	H	Me
6.020	Et	H	H	H	Et
6.021	Et	F	H	H	H
6.022	Et	F	H	H	Me
6.023	Et	F	H	H	Et
6.024	Et	Cl	H	H	H
6.025	Et	Cl	H	H	Me
6.026	Et	Cl	H	H	Et
6.027	H	F	F	H	H
6.028	H	F	H	F	H

Table 7: Compounds according to the invention of the formula (I) in which X represents CH, A represents A6, R³ and R⁴ each represent hydrogen, R⁸ represents
5 methyl and R² represents chlorine:

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
7.001	H	H	H	H	H
7.002	H	F	H	H	H
7.003	H	F	H	H	Me
7.004	H	F	H	H	Et
7.005	H	H	H	H	Me
7.006	H	Cl	H	H	H
7.007	H	Cl	H	H	Me
7.008	H	Cl	H	H	Et
7.009	Me	H	H	H	H
7.010	Me	H	H	H	Me
7.011	Me	F	H	H	H
7.012	Me	F	H	H	Me
7.013	Me	F	H	H	Et
7.014	Me	Cl	H	H	H
7.015	Me	Cl	H	H	Me
7.016	Me	Cl	H	H	Et
7.017	Me	H	H	H	Me
7.018	Et	H	H	H	H
7.019	Et	H	H	H	Me
7.020	Et	H	H	H	Et
7.021	Et	F	H	H	H
7.022	Et	F	H	H	Me
7.023	Et	F	H	H	Et
7.024	Et	Cl	H	H	H
7.025	Et	Cl	H	H	Me
7.026	Et	Cl	H	H	Et

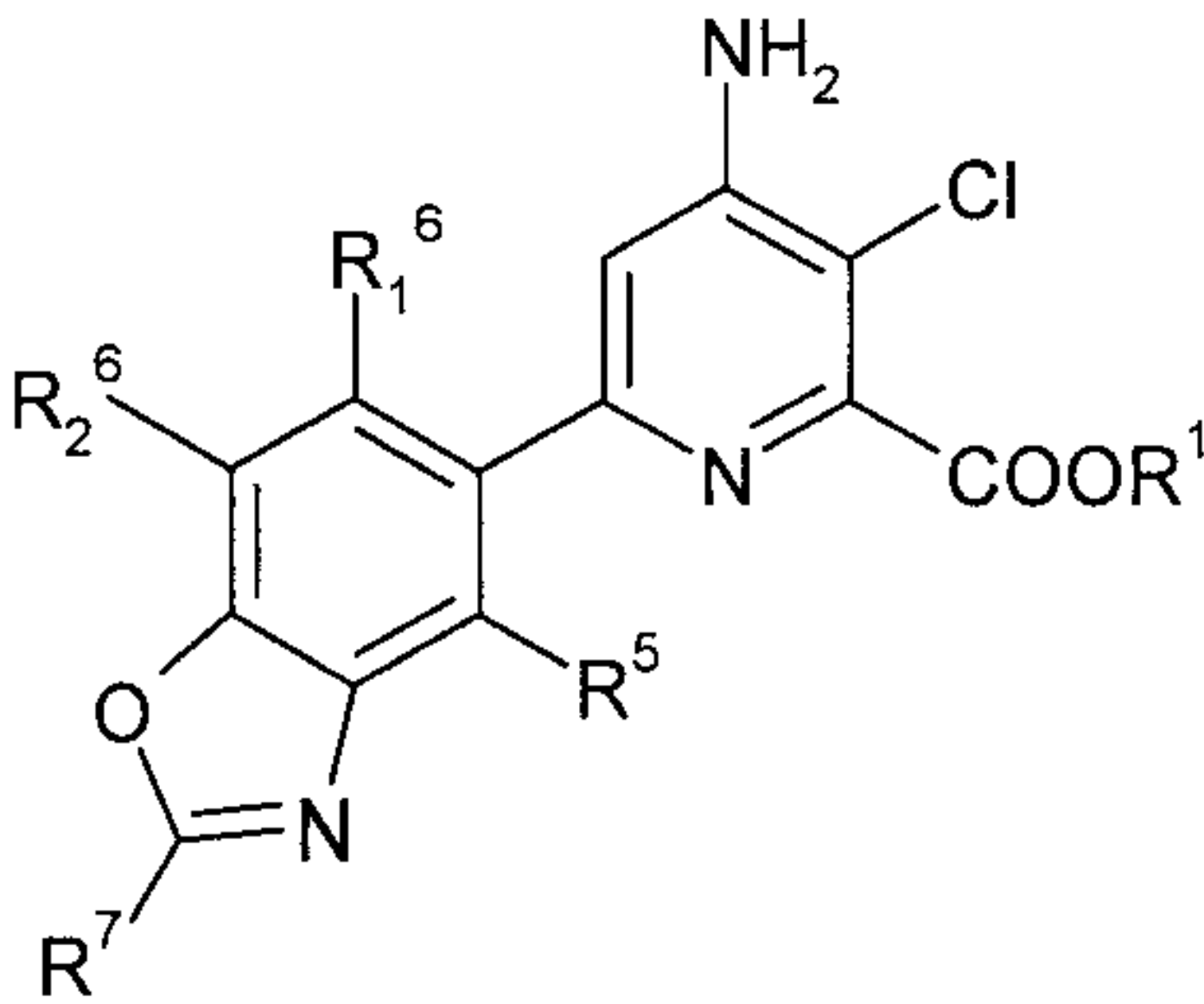
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
7.027	H	F	F	H	H
7.028	H	F	H	F	H

Table 8: Compounds according to the invention of the formula (I) in which X represents CH, A represents A7, R³ and R⁴ each represent hydrogen and R² represents chlorine:



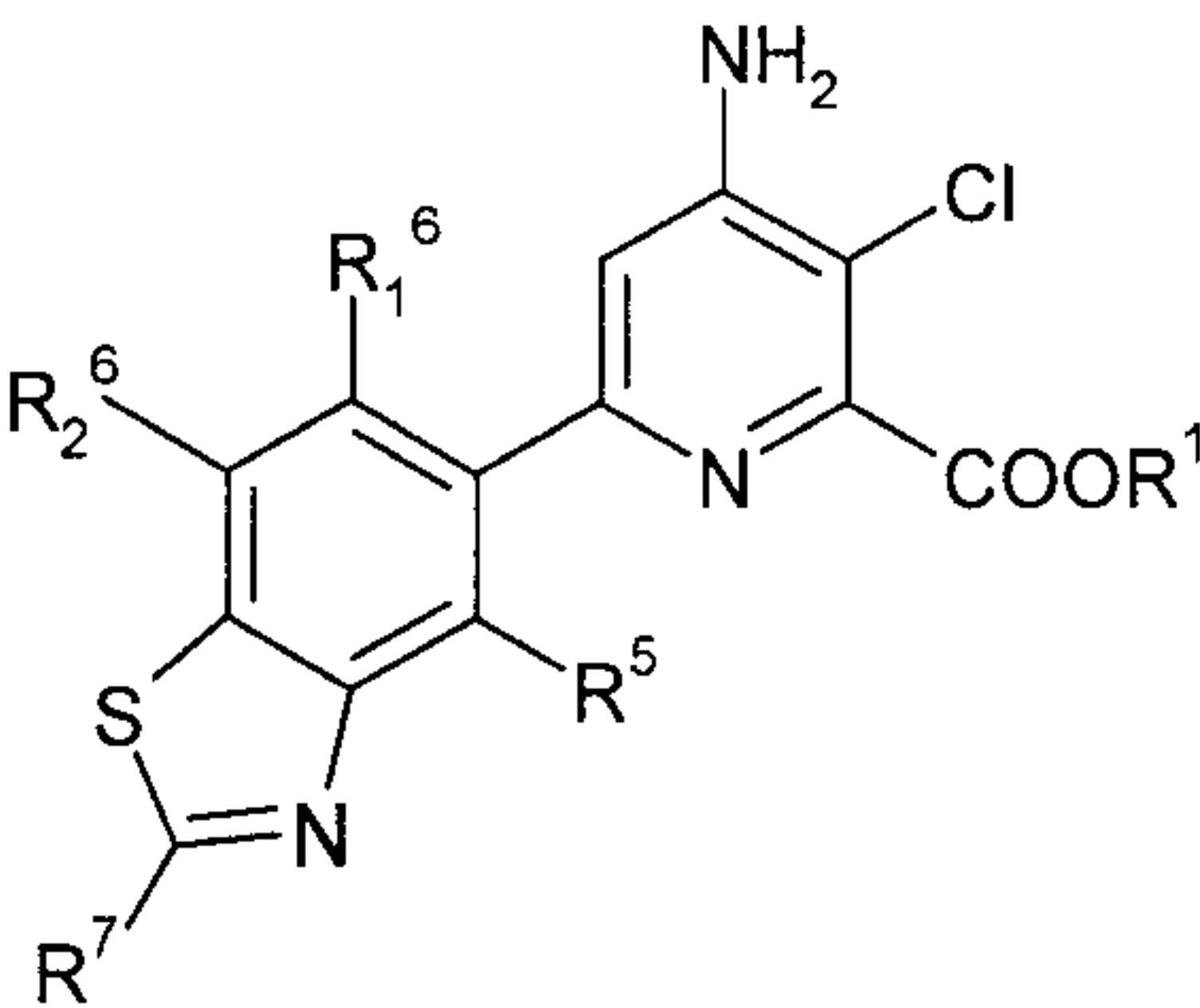
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
8.001	H	H	H	H	H
8.002	H	H	H	H	Me
8.003	H	H	H	H	Ph
8.004	H	H	H	H	SMe
8.005	H	F	H	H	H
8.006	H	F	H	H	Me
8.007	H	F	H	H	Ph
8.008	H	F	H	H	SMe
8.009	H	Cl	H	H	H
8.010	H	Cl	H	H	Me
8.011	H	Cl	H	H	Ph
8.012	H	Cl	H	H	SMe
8.013	Me	H	H	H	H
8.014	Me	H	H	H	Me
8.015	Me	H	H	H	Ph
8.016	Me	H	H	H	SMe
8.017	Me	F	H	H	H
8.018	Me	F	H	H	Me

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
8.019	Me	F	H	H	Ph
8.020	Me	F	H	H	SMe
8.021	Me	Cl	H	H	H
8.022	Me	Cl	H	H	Me
8.023	Me	Cl	H	H	Ph
8.024	Me	Cl	H	H	SMe
8.025	Et	H	H	H	H
8.026	Et	H	H	H	Me
8.027	Et	H	H	H	Ph
8.028	Et	H	H	H	SMe
8.029	Et	F	H	H	H
8.030	Et	F	H	H	Me
8.031	Et	F	H	H	Ph
8.032	Et	F	H	H	SMe
8.033	Et	Cl	H	H	H
8.034	Et	Cl	H	H	Me
8.035	Et	Cl	H	H	Ph
8.036	Et	Cl	H	H	SMe
8.037	H	F	F	H	H
8.038	H	F	H	F	H

Table 9: Compounds according to the invention of the formula (I) in which X represents CH, A represents A8, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
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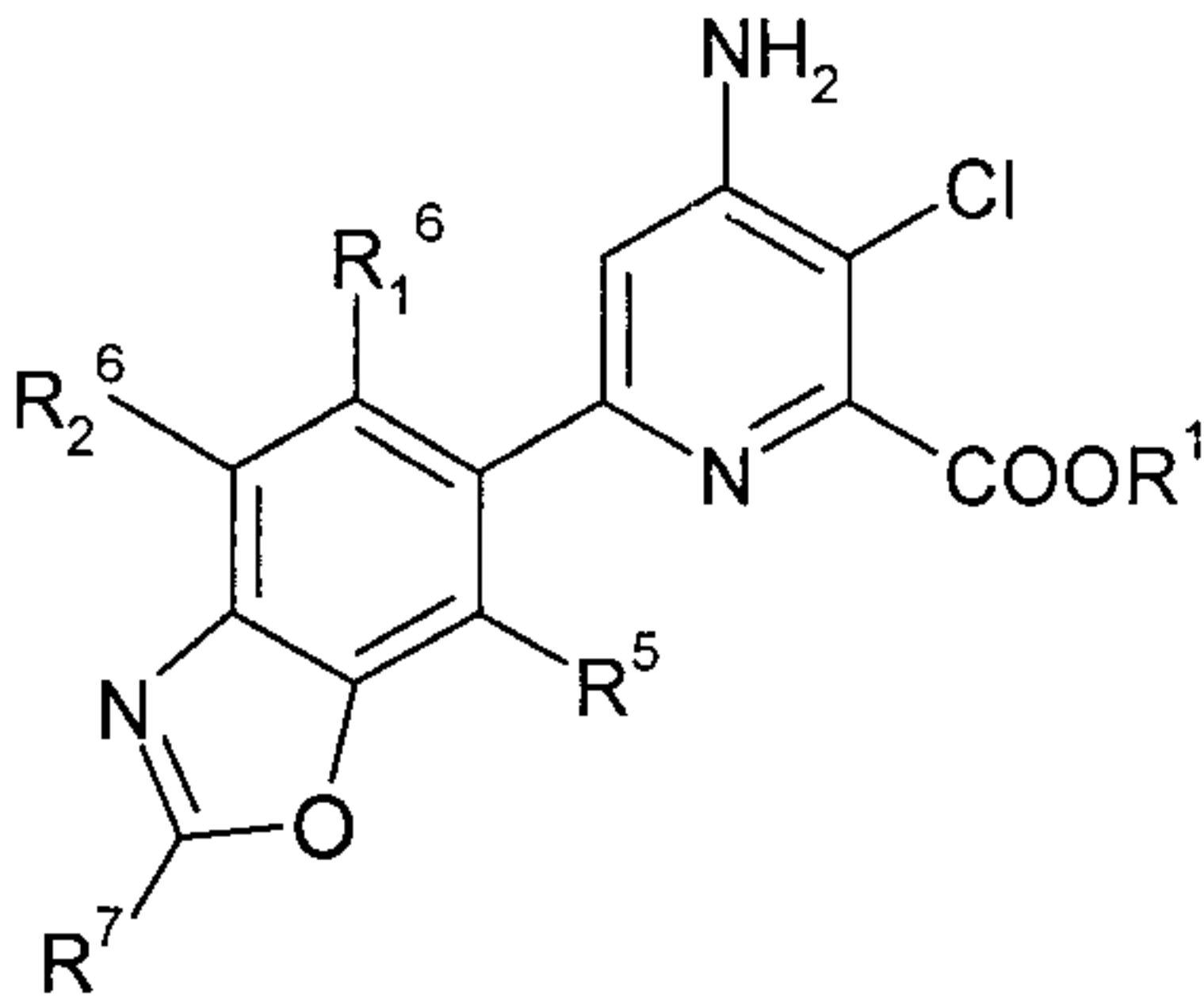
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
9.001	H	H	H	H	H
9.002	H	H	H	H	Me
9.003	H	H	H	H	Ph
9.004	H	H	H	H	SMe
9.005	H	F	H	H	H
9.006	H	F	H	H	Me
9.007	H	F	H	H	Ph
9.008	H	F	H	H	SMe
9.009	H	Cl	H	H	H
9.010	H	Cl	H	H	Me
9.011	H	Cl	H	H	Ph
9.012	H	Cl	H	H	SMe
9.013	Me	H	H	H	H
9.014	Me	H	H	H	Me
9.015	Me	H	H	H	Ph
9.016	Me	H	H	H	SMe
9.017	Me	F	H	H	H
9.018	Me	F	H	H	Me
9.019	Me	F	H	H	Ph
9.020	Me	F	H	H	SMe
9.021	Me	Cl	H	H	H
9.022	Et	H	H	H	H
9.023	Et	H	H	H	Me
9.024	Et	H	H	H	Ph
9.025	Et	H	H	H	SMe
9.026	Et	F	H	H	H
9.027	Et	F	H	H	Me
9.028	Et	F	H	H	Ph
9.029	Et	F	H	H	SMe
9.030	Et	Cl	H	H	H
9.031	Et	Cl	H	H	Me
9.032	Et	Cl	H	H	Ph
9.033	Et	Cl	H	H	SMe
9.034	H	F	F	H	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
9.035	H	F	H	F	H

Table 10: Compounds according to the invention of the formula (I) in which X represents CH, A represents A9, R³ and R⁴ each represent hydrogen and R² represents chlorine:



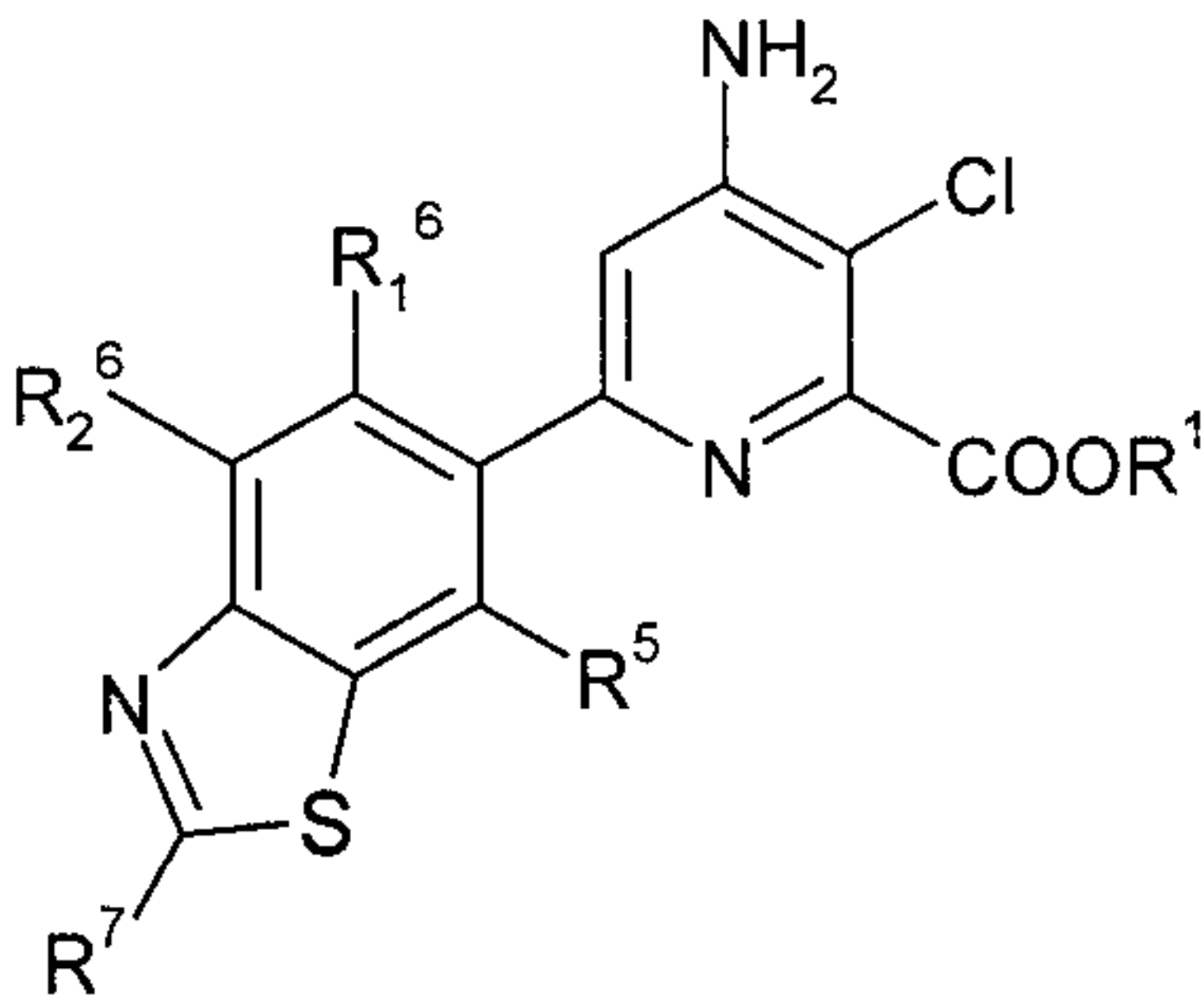
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
10.001	H	H	H	H	H
10.002	H	H	H	H	Me
10.003	H	H	H	H	Ph
10.004	H	H	H	H	SMe
10.005	H	F	H	H	H
10.006	H	F	H	H	Me
10.007	H	F	H	H	Ph
10.008	H	F	H	H	SMe
10.009	H	Cl	H	H	H
10.010	H	Cl	H	H	Me
10.011	H	Cl	H	H	Ph
10.012	H	Cl	H	H	SMe
10.013	Me	H	H	H	H
10.014	Me	H	H	H	Me
10.015	Me	H	H	H	Ph
10.016	Me	H	H	H	SMe
10.017	Me	F	H	H	H
10.018	Me	F	H	H	Me
10.019	Me	F	H	H	Ph

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
10.020	Me	F	H	H	SMe
10.021	Me	Cl	H	H	H
10.022	Me	Cl	H	H	Me
10.023	Me	Cl	H	H	Ph
10.024	Me	Cl	H	H	SMe
10.025	Et	H	H	H	H
10.026	Et	H	H	H	Me
10.027	Et	H	H	H	Ph
10.028	Et	H	H	H	SMe
10.029	Et	F	H	H	H
10.030	Et	F	H	H	Me
10.031	Et	F	H	H	Ph
10.032	Et	F	H	H	SMe
10.033	Et	Cl	H	H	H
10.034	Et	Cl	H	H	Me
10.035	Et	Cl	H	H	Ph
10.036	Et	Cl	H	H	SMe
10.037	H	F	F	H	H
10.038	H	F	H	F	H

Table 11: Compounds according to the invention of the formula (I) in which X represents CH, A represents A10, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
11.001	H	H	H	H	H

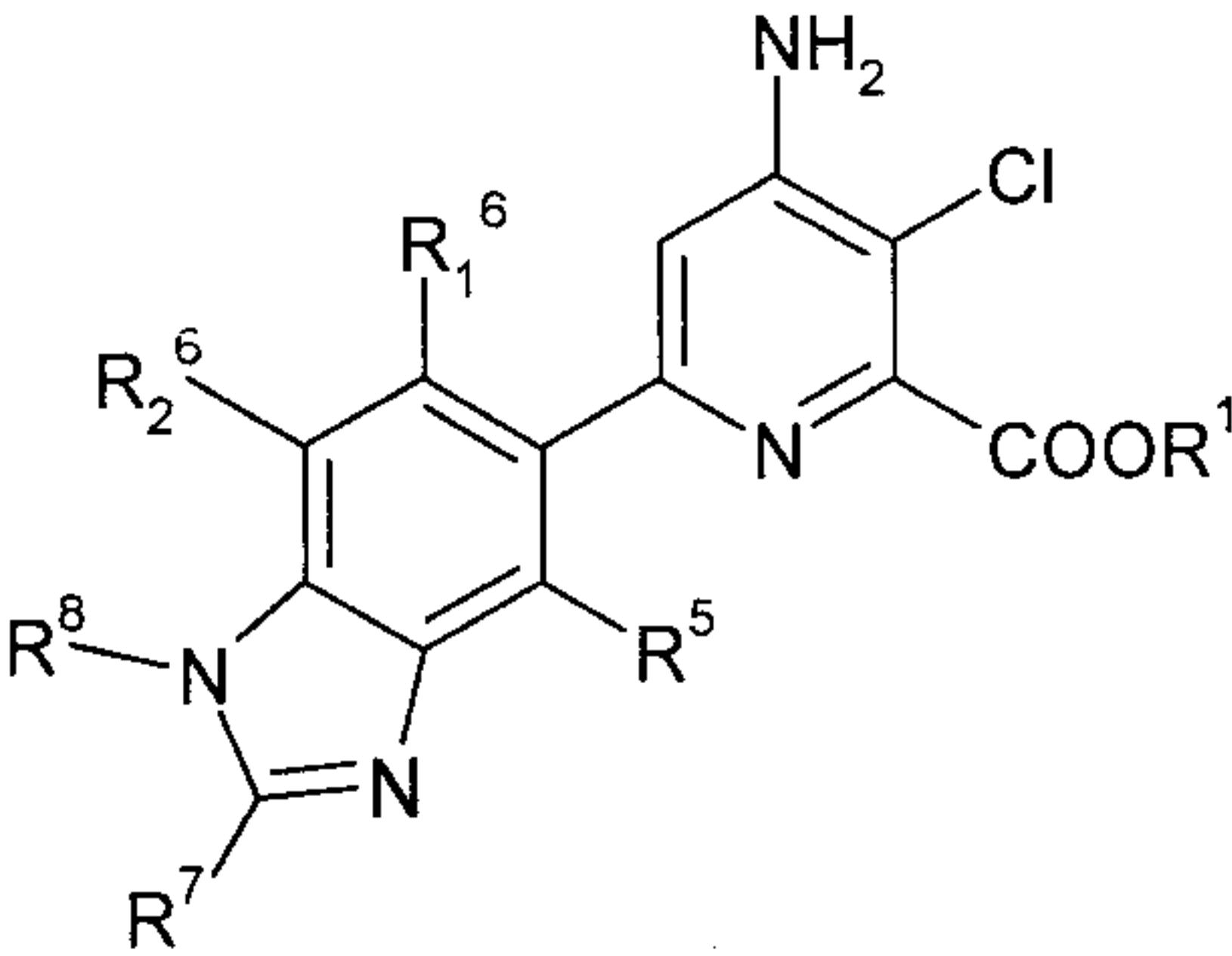
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
11.002	H	H	H	H	Me
11.003	H	H	H	H	Ph
11.004	H	H	H	H	SMe
11.005	H	F	H	H	H
11.006	H	F	H	H	Me
11.007	H	F	H	H	Ph
11.008	H	F	H	H	SMe
11.009	H	Cl	H	H	H
11.010	H	Cl	H	H	Me
11.011	H	Cl	H	H	Ph
11.012	H	Cl	H	H	SMe
11.013	Me	H	H	H	H
11.014	Me	H	H	H	Me
11.015	Me	H	H	H	Ph
11.016	Me	H	H	H	SMe
11.017	Me	F	H	H	H
11.018	Me	F	H	H	Me
11.019	Me	F	H	H	Ph
11.020	Me	F	H	H	SMe
11.021	Me	Cl	H	H	H
11.022	Et	H	H	H	H
11.023	Et	H	H	H	Me
11.024	Et	H	H	H	Ph
11.025	Et	H	H	H	SMe
11.026	Et	F	H	H	H
11.027	Et	F	H	H	Me
11.028	Et	F	H	H	Ph
11.029	Et	F	H	H	SMe
11.030	Et	Cl	H	H	H
11.031	Et	Cl	H	H	Me
11.032	Et	Cl	H	H	Ph
11.033	Et	Cl	H	H	SMe
11.034	H	F	F	H	H
11.035	H	F	H	F	H

Table 12: Compounds according to the invention of the formula (I) in which X represents CH, A represents A11, R³ and R⁴ each represent hydrogen and R² represents chlorine:



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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
12.001	H	H	H	H	H	H
12.002	H	F	H	H	H	H
12.003	H	F	H	H	H	Me
12.004	H	F	H	H	Me	H
12.005	H	F	H	H	Me	Me
12.006	H	Cl	H	H	H	H
12.007	H	Cl	H	H	H	Me
12.008	H	Cl	H	H	Me	H
12.009	H	Cl	H	H	Me	Me
12.010	H	H	H	H	Ph	H
12.011	H	H	H	H	Ph	Me
12.012	H	F	H	H	Ph	H
12.013	H	F	H	H	Ph	Me
12.014	H	Cl	H	H	Ph	H
12.015	H	Cl	H	H	Ph	Me
12.016	H	H	H	H	Me	H
12.017	H	H	H	H	H	Me
12.018	H	H	H	H	Me	Me
12.019	Me	H	H	H	H	H
12.020	Me	F	H	H	H	H
12.021	Me	F	H	H	H	Me
12.022	Me	F	H	H	Me	H
12.023	Me	F	H	H	Me	Me

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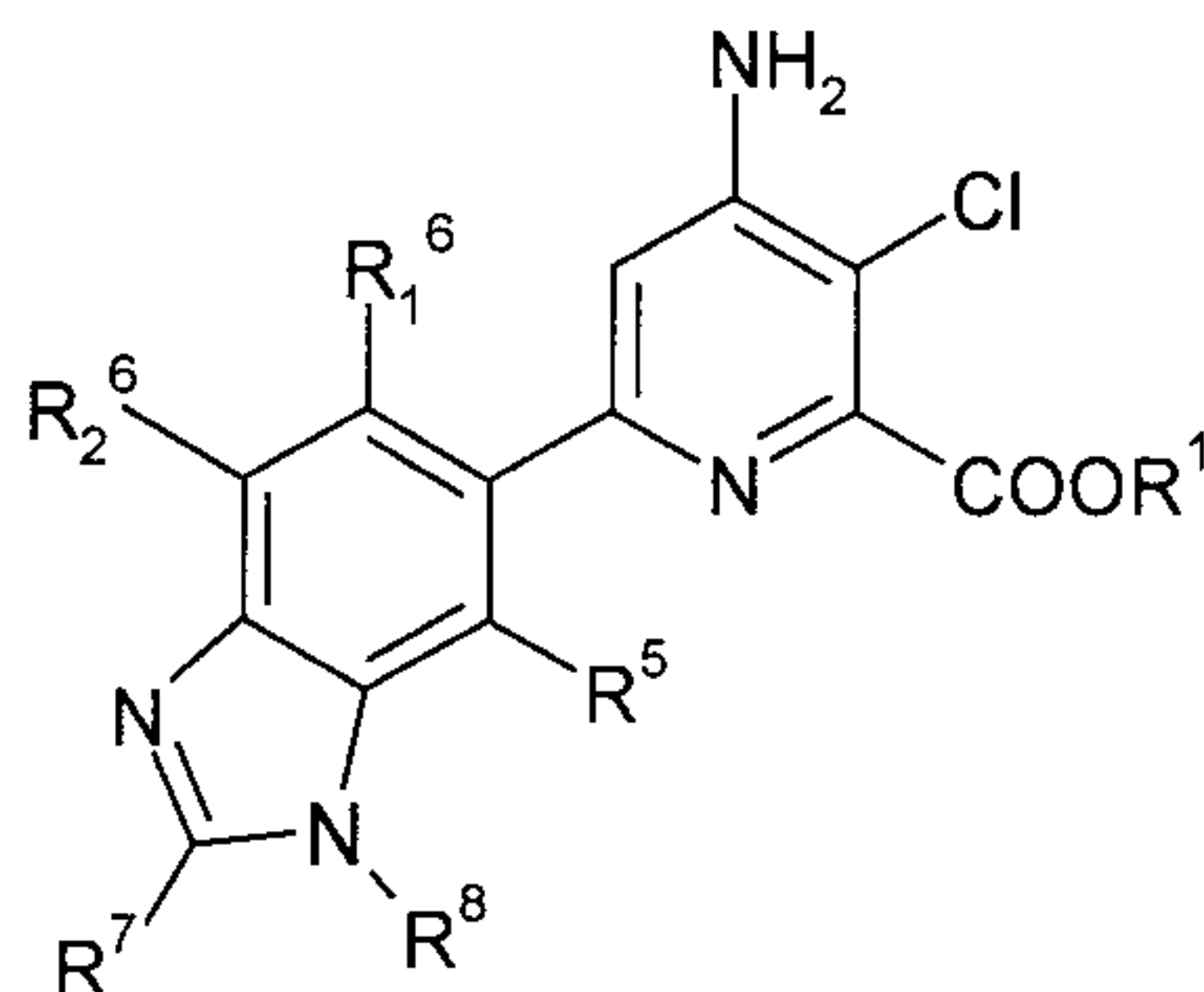
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
12.024	Me	Cl	H	H	H	H
12.025	Me	Cl	H	H	H	Me
12.026	Me	Cl	H	H	Me	H
12.027	Me	Cl	H	H	Me	Me
12.028	Me	H	H	H	Ph	H
12.029	Me	H	H	H	Ph	Me
12.030	Me	F	H	H	Ph	H
12.031	Me	F	H	H	Ph	Me
12.032	Me	Cl	H	H	Ph	H
12.033	Me	Cl	H	H	Ph	Me
12.034	Me	H	H	H	Me	H
12.035	Me	H	H	H	H	Me
12.036	Me	H	H	H	Me	Me
12.037	Et	H	H	H	H	H
12.038	Et	F	H	H	H	H
12.039	Et	F	H	H	H	Me
12.040	Et	F	H	H	Me	H
12.041	Et	F	H	H	Me	Me
12.042	Et	Cl	H	H	H	H
12.043	Et	Cl	H	H	H	Me
12.044	Et	Cl	H	H	Me	H
12.045	Et	H	H	H	Ph	H
12.046	Et	H	H	H	Ph	Me
12.047	Et	F	H	H	Ph	H
12.048	Et	F	H	H	Ph	Me
12.049	Et	Cl	H	H	Ph	H
12.050	Et	Cl	H	H	Ph	Me
12.051	Et	H	H	H	Me	H
12.052	Et	H	H	H	H	Me
12.053	Me	H	H	H	Me	Me
12.054	H	F	F	H	H	H
12.055	H	F	H	F	H	H

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Table 13: Compounds according to the invention of the formula (I) in which X represents CH, A represents A12, R³ and R⁴ each represent hydrogen and R² represents chlorine:



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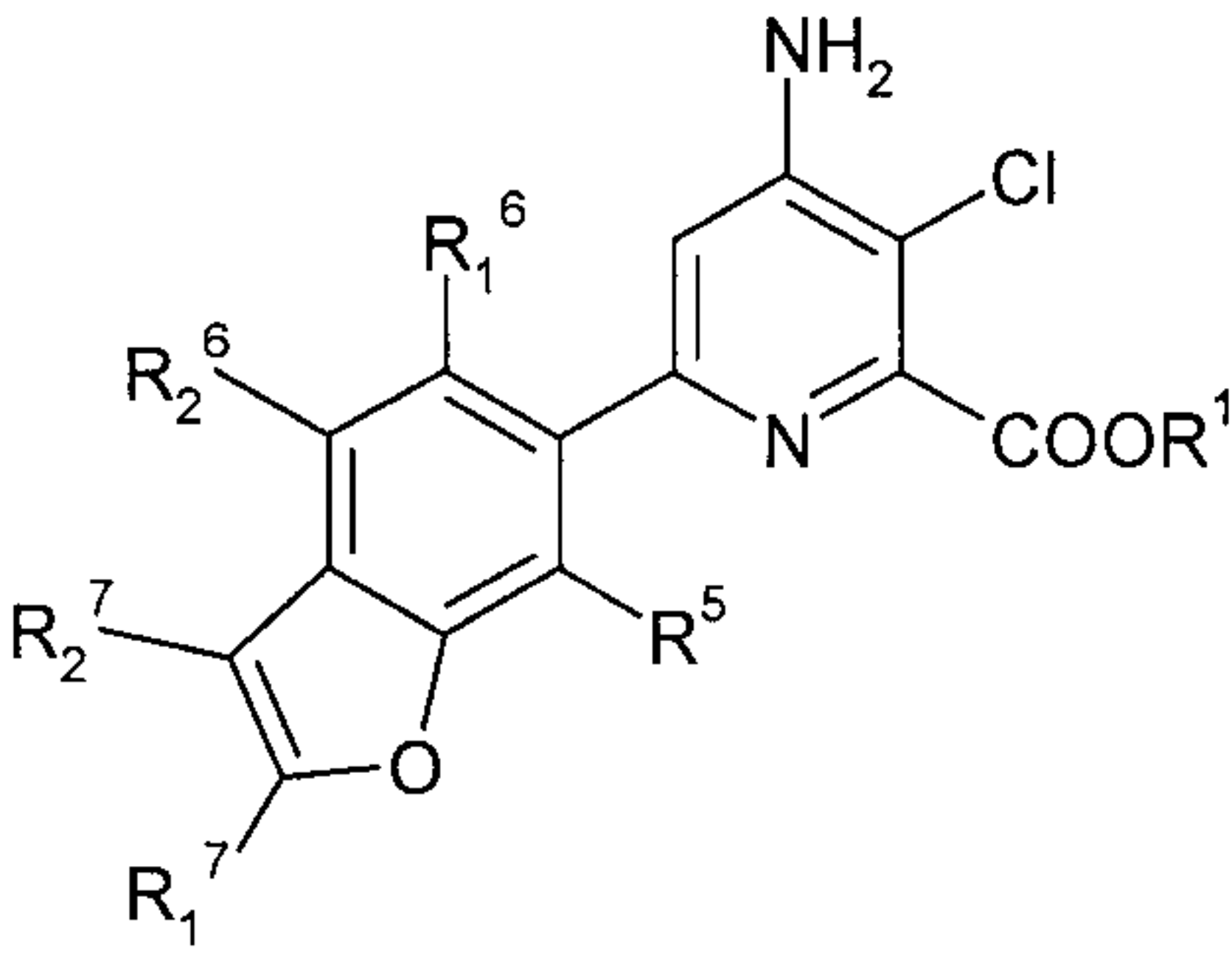
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
13.001	H	H	H	H	H	Me
13.002	H	F	H	H	H	Me
13.003	H	F	H	H	Me	Me
13.004	H	Cl	H	H	H	Me
13.005	H	Cl	H	H	Me	Me
13.006	H	H	H	H	Ph	Me
13.007	H	F	H	H	Ph	Me
13.008	H	Cl	H	H	Ph	Me
13.009	H	H	H	H	H	Me
13.010	Me	H	H	H	H	Me
13.011	Me	F	H	H	H	Me
13.012	Me	H	H	H	Me	Me
13.013	Me	F	H	H	Me	Me
13.014	Me	Cl	H	H	H	Me
13.015	Me	Cl	H	H	Me	Me
13.016	Me	H	H	H	Ph	Me
13.017	Me	F	H	H	Ph	Me
13.018	Me	Cl	H	H	Ph	Me
13.019	Et	F	H	H	H	Me
13.020	Et	F	H	H	Me	Me
13.021	Et	Cl	H	H	H	Me
13.022	Et	H	H	H	Ph	Me

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
13.023	Et	F	H	H	Ph	Me
13.024	Et	Cl	H	H	Ph	Me
13.025	Et	H	H	H	H	Me
13.026	Me	H	H	H	Me	Me
13.027	Et	Cl	H	H	Me	Me
13.028	H	F	F	H	H	H
13.029	H	F	H	F	H	H

Table 14: Compounds according to the invention of the formula (I) in which X represents CH, A represents A13, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
14.001	H	H	H	H	H	H
14.002	H	H	H	H	H	Cl
14.003	H	H	H	H	H	F
14.004	H	H	H	H	H	Me
14.005	H	H	H	H	F	H
14.006	H	H	H	H	F	Cl
14.007	H	H	H	H	F	F
14.008	H	H	H	H	F	Me
14.009	H	H	H	H	Cl	H
14.010	H	H	H	H	Cl	F
14.011	H	H	H	H	Cl	Cl
14.012	H	H	H	H	Cl	Me
14.013	H	H	H	H	Me	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
14.014	H	H	H	H	Me	Cl
14.015	H	H	H	H	Me	F
14.016	H	H	H	H	Me	Me
14.017	H	H	H	H	Ph	H
14.018	H	H	H	H	Ph	Cl
14.019	H	H	H	H	Ph	F
14.020	H	H	H	H	Ph	Me
14.021	H	F	H	H	H	H
14.022	H	F	H	H	H	Cl
14.023	H	F	H	H	H	F
14.024	H	F	H	H	H	Me
14.025	H	F	H	H	F	H
14.026	H	F	H	H	F	F
14.027	H	F	H	H	F	Cl
14.028	H	F	H	H	F	Me
14.029	H	F	H	H	Cl	H
14.030	H	F	H	H	Cl	Cl
14.031	H	F	H	H	Cl	F
14.032	H	F	H	H	Cl	Me
14.033	H	F	H	H	Me	H
14.034	H	F	H	H	Me	Cl
14.035	H	F	H	H	Me	F
14.036	H	F	H	H	Me	Me
14.037	H	F	H	H	Ph	H
14.038	H	F	H	H	Ph	Cl
14.039	H	F	H	H	Ph	F
14.040	H	F	H	H	Ph	Me
14.041	H	Cl	H	H	H	H
14.042	H	Cl	H	H	H	Cl
14.043	H	Cl	H	H	H	F
14.044	H	Cl	H	H	H	Me
14.045	H	Cl	H	H	F	H
14.046	H	Cl	H	H	F	Cl
14.047	H	Cl	H	H	F	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
14.048	H	Cl	H	H	F	Me
14.049	H	Cl	H	H	Cl	H
14.050	H	Cl	H	H	Cl	F
14.051	H	Cl	H	H	Cl	Cl
14.052	H	Cl	H	H	Cl	Me
14.053	H	Cl	H	H	Me	H
14.054	H	Cl	H	H	Me	Cl
14.055	H	Cl	H	H	Me	F
14.056	H	Cl	H	H	Me	Me
14.057	H	Cl	H	H	Ph	H
14.058	H	Cl	H	H	Ph	Cl
14.059	H	Cl	H	H	Ph	F
14.060	H	Cl	H	H	Ph	Me
14.061	Me	H	H	H	H	H
14.062	Me	H	H	H	H	Cl
14.063	Me	H	H	H	H	F
14.064	Me	H	H	H	H	Me
14.065	Me	H	H	H	F	H
14.066	Me	H	H	H	F	Cl
14.067	Me	H	H	H	F	F
14.068	Me	H	H	H	F	Me
14.069	Me	H	H	H	Cl	H
14.070	Me	H	H	H	Cl	F
14.071	Me	H	H	H	Cl	Cl
14.072	Me	H	H	H	Cl	Me
14.073	Me	H	H	H	Me	H
14.074	Me	H	H	H	Me	Cl
14.075	Me	H	H	H	Me	F
14.076	Me	H	H	H	Me	Me
14.077	Me	H	H	H	Ph	H
14.078	Me	H	H	H	Ph	Cl
14.079	Me	H	H	H	Ph	F
14.080	Me	H	H	H	Ph	Me
14.081	Me	F	H	H	H	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
14.082	Me	F	H	H	H	Cl
14.083	Me	F	H	H	H	F
14.084	Me	F	H	H	H	Me
14.085	Me	F	H	H	F	H
14.086	Me	F	H	H	F	Cl
14.087	Me	F	H	H	F	F
14.088	Me	F	H	H	F	Me
14.089	Me	F	H	H	Cl	H
14.090	Me	F	H	H	Cl	F
14.091	Me	F	H	H	Cl	Cl
14.092	Me	F	H	H	Cl	Me
14.093	Me	F	H	H	Me	H
14.094	Me	F	H	H	Me	Cl
14.095	Me	F	H	H	Me	F
14.096	Me	F	H	H	Me	Me
14.097	Me	F	H	H	Ph	H
14.098	Me	F	H	H	Ph	Cl
14.099	Me	F	H	H	Ph	F
14.100	Me	F	H	H	Ph	Me
14.101	Me	Cl	H	H	H	H
14.102	Me	Cl	H	H	H	Cl
14.103	Me	Cl	H	H	H	F
14.104	Me	Cl	H	H	H	Me
14.105	Me	Cl	H	H	F	H
14.106	Me	Cl	H	H	F	Cl
14.107	Me	Cl	H	H	F	F
14.108	Me	Cl	H	H	F	Me
14.109	Me	Cl	H	H	Cl	H
14.110	Me	Cl	H	H	Cl	F
14.111	Me	Cl	H	H	Cl	Cl
14.112	Me	Cl	H	H	Cl	Me
14.113	Me	Cl	H	H	Me	H
14.114	Me	Cl	H	H	Me	Cl
14.115	Me	Cl	H	H	Me	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
14.116	Me	Cl	H	H	Me	Me
14.117	Me	Cl	H	H	Ph	H
14.118	Me	Cl	H	H	Ph	Cl
14.119	Me	Cl	H	H	Ph	F
14.120	Me	Cl	H	H	Ph	Me
14.121	Et	H	H	H	H	H
14.122	Et	H	H	H	H	Cl
14.123	Et	H	H	H	H	F
14.124	Et	H	H	H	H	Me
14.125	Et	H	H	H	F	H
14.126	Et	H	H	H	F	Cl
14.127	Et	H	H	H	F	F
14.128	Et	H	H	H	F	Me
14.129	Et	H	H	H	Cl	H
14.130	Et	H	H	H	Cl	F
14.131	Et	H	H	H	Cl	Cl
14.132	Et	H	H	H	Cl	Me
14.133	Et	H	H	H	Me	H
14.134	Et	H	H	H	Me	Cl
14.135	Et	H	H	H	Me	F
14.136	Et	H	H	H	Me	Me
14.137	Et	H	H	H	Ph	H
14.138	Et	H	H	H	Ph	Cl
14.139	Et	H	H	H	Ph	F
14.140	Et	H	H	H	Ph	Me
14.141	Et	F	H	H	H	H
14.142	Et	F	H	H	H	Cl
14.143	Et	F	H	H	H	F
14.144	Et	F	H	H	H	Me
14.145	Et	F	H	H	F	H
14.146	Et	F	H	H	F	Cl
14.147	Et	F	H	H	F	F
14.148	Et	F	H	H	F	Me
14.149	Et	F	H	H	Cl	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
14.150	Et	F	H	H	Cl	F
14.151	Et	F	H	H	Cl	Cl
14.152	Et	F	H	H	Cl	Me
14.153	Et	F	H	H	Me	H
14.154	Et	F	H	H	Me	Cl
14.155	Et	F	H	H	Me	F
14.156	Et	F	H	H	Me	Me
14.157	Et	F	H	H	Ph	H
14.158	Et	F	H	H	Ph	Cl
14.159	Et	F	H	H	Ph	F
14.160	Et	F	H	H	Ph	Me
14.161	Et	Cl	H	H	H	H
14.162	Et	Cl	H	H	H	Cl
14.163	Et	Cl	H	H	H	F
14.164	Et	Cl	H	H	H	Me
14.165	Et	Cl	H	H	F	H
14.166	Et	Cl	H	H	F	Cl
14.167	Et	Cl	H	H	F	F
14.168	Et	Cl	H	H	F	Me
14.169	Et	Cl	H	H	Cl	H
14.170	Et	Cl	H	H	Cl	F
14.171	Et	Cl	H	H	Cl	Cl
14.172	Et	Cl	H	H	Cl	Me
14.173	Et	Cl	H	H	Me	H
14.174	Et	Cl	H	H	Me	Cl
14.175	Et	Cl	H	H	Me	F
14.176	Et	Cl	H	H	Me	Me
14.177	Et	Cl	H	H	Ph	H
14.178	Et	Cl	H	H	Ph	Cl
14.179	Et	Cl	H	H	Ph	F
14.180	Et	Cl	H	H	Ph	Me
14.181	H	F	F	H	H	H
14.182	H	F	H	F	H	H
14.183	Me	H	F	H	H	H

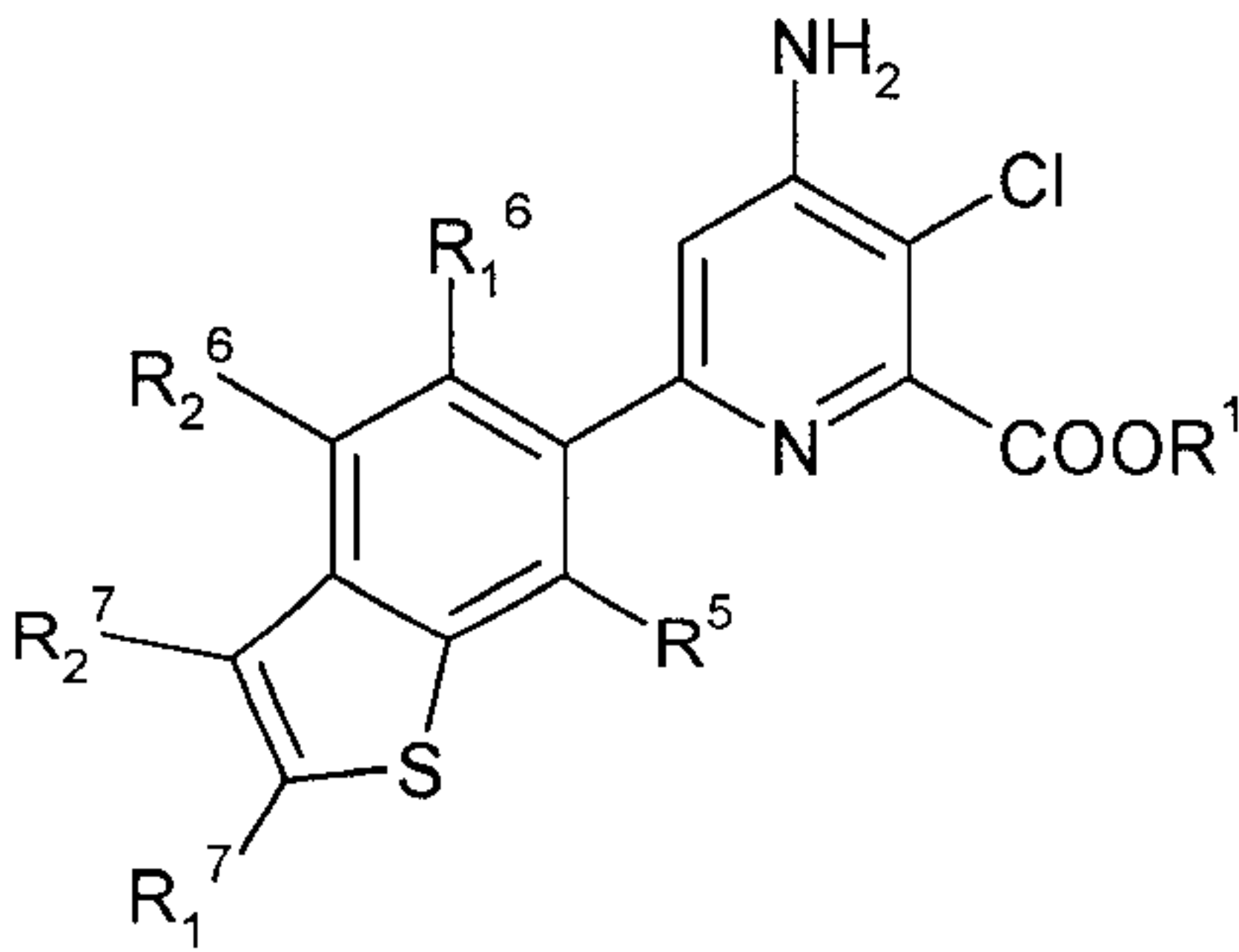
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
14.184	H	H	F	H	H	H
14.185	K	H	F	H	H	H
14.186	Me	H	Cl	H	H	H
14.187	H	H	Cl	H	H	H
14.188	K	H	Cl	H	H	H
14.189	Me	H	H	F	H	H
14.190	H	H	H	F	H	H
14.191	K	H	H	F	H	H
14.192	Me	H	H	Cl	H	H
14.193	H	H	H	Cl	H	H
14.194	K	H	H	Cl	H	H
14.195	K	F	H	H	H	H
14.196	K	Cl	H	H	H	H

Table 15: Compounds according to the invention of the formula (I) in which X represents CH, A represents A14, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
15.001	H	H	H	H	H	H
15.002	H	H	H	H	H	Cl
15.003	H	H	H	H	H	F
15.004	H	H	H	H	H	Me
15.005	H	H	H	H	F	H
15.006	H	H	H	H	F	Cl
15.007	H	H	H	H	F	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
15.008	H	H	H	H	F	Me
15.009	H	H	H	H	Cl	H
15.010	H	H	H	H	Cl	F
15.011	H	H	H	H	Cl	Cl
15.012	H	H	H	H	Cl	Me
15.013	H	H	H	H	Me	H
15.014	H	H	H	H	Me	Cl
15.015	H	H	H	H	Me	F
15.016	H	H	H	H	Me	Me
15.017	H	H	H	H	Ph	H
15.018	H	H	H	H	Ph	Cl
15.019	H	H	H	H	Ph	F
15.020	H	H	H	H	Ph	Me
15.021	H	F	H	H	H	H
15.022	H	F	H	H	H	Cl
15.023	H	F	H	H	H	F
15.024	H	F	H	H	H	Me
15.025	H	F	H	H	F	H
15.026	H	F	H	H	F	Cl
15.027	H	F	H	H	F	F
15.028	H	F	H	H	F	Me
15.029	H	F	H	H	Cl	H
15.030	H	F	H	H	Cl	F
15.031	H	F	H	H	Cl	Cl
15.032	H	F	H	H	Cl	Me
15.033	H	F	H	H	Me	H
15.034	H	F	H	H	Me	Cl
15.035	H	F	H	H	Me	F
15.036	H	F	H	H	Me	Me
15.037	H	F	H	H	Ph	H
15.038	H	F	H	H	Ph	Cl
15.039	H	F	H	H	Ph	F
15.040	H	F	H	H	Ph	Me
15.041	H	Cl	H	H	H	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
15.042	H	Cl	H	H	H	Cl
15.043	H	Cl	H	H	H	F
15.044	H	Cl	H	H	H	Me
15.045	H	Cl	H	H	F	H
15.046	H	Cl	H	H	F	Cl
15.047	H	Cl	H	H	F	F
15.048	H	Cl	H	H	F	Me
15.049	H	Cl	H	H	Cl	H
15.050	H	Cl	H	H	Cl	F
15.051	H	Cl	H	H	Cl	Cl
15.052	H	Cl	H	H	Cl	Me
15.053	H	Cl	H	H	Me	H
15.054	H	Cl	H	H	Me	Cl
15.055	H	Cl	H	H	Me	F
15.056	H	Cl	H	H	Me	Me
15.057	H	Cl	H	H	Ph	H
15.058	H	Cl	H	H	Ph	Cl
15.059	H	Cl	H	H	Ph	F
15.060	H	Cl	H	H	Ph	Me
15.061	Me	H	H	H	H	H
15.062	Me	H	H	H	H	Cl
15.063	Me	H	H	H	H	F
15.064	Me	H	H	H	H	Me
15.065	Me	H	H	H	F	H
15.066	Me	H	H	H	F	Cl
15.067	Me	H	H	H	F	F
15.068	Me	H	H	H	F	Me
15.069	Me	H	H	H	Cl	H
15.070	Me	H	H	H	Cl	F
15.071	Me	H	H	H	Cl	Cl
15.072	Me	H	H	H	Cl	Me
15.073	Me	H	H	H	Me	H
15.074	Me	H	H	H	Me	Cl
15.075	Me	H	H	H	Me	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
15.076	Me	H	H	H	Me	Me
15.077	Me	H	H	H	Ph	H
15.078	Me	H	H	H	Ph	Cl
15.079	Me	H	H	H	Ph	F
15.080	Me	H	H	H	Ph	Me
15.081	Me	F	H	H	H	H
15.082	Me	F	H	H	H	Cl
15.083	Me	F	H	H	H	F
15.084	Me	F	H	H	H	Me
15.085	Me	F	H	H	F	H
15.086	Me	F	H	H	F	Cl
15.087	Me	F	H	H	F	F
15.088	Me	F	H	H	F	Me
15.089	Me	F	H	H	Cl	H
15.090	Me	F	H	H	Cl	F
15.091	Me	F	H	H	Cl	Cl
15.092	Me	F	H	H	Cl	Me
15.093	Me	F	H	H	Me	H
15.094	Me	F	H	H	Me	Cl
15.095	Me	F	H	H	Me	F
15.096	Me	F	H	H	Me	Me
15.097	Me	F	H	H	Ph	H
15.098	Me	F	H	H	Ph	Cl
15.099	Me	F	H	H	Ph	F
15.100	Me	F	H	H	Ph	Me
15.101	Me	Cl	H	H	H	H
15.102	Me	Cl	H	H	H	Cl
15.103	Me	Cl	H	H	H	F
15.104	Me	Cl	H	H	H	Me
15.105	Me	Cl	H	H	F	H
15.106	Me	Cl	H	H	F	Cl
15.107	Me	Cl	H	H	F	F
15.108	Me	Cl	H	H	F	Me
15.109	Me	Cl	H	H	Cl	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
15.110	Me	Cl	H	H	Cl	F
15.111	Me	Cl	H	H	Cl	Cl
15.112	Me	Cl	H	H	Cl	Me
15.113	Me	Cl	H	H	Me	H
15.114	Me	Cl	H	H	Me	Cl
15.115	Me	Cl	H	H	Me	F
15.116	Me	Cl	H	H	Me	Me
15.117	Me	Cl	H	H	Ph	H
15.118	Me	Cl	H	H	Ph	Cl
15.119	Me	Cl	H	H	Ph	F
15.120	Me	Cl	H	H	Ph	Me
15.121	Et	H	H	H	H	H
15.122	Et	H	H	H	H	Cl
15.123	Et	H	H	H	H	F
15.124	Et	H	H	H	H	Me
15.125	Et	H	H	H	F	H
15.126	Et	H	H	H	F	Cl
15.127	Et	H	H	H	F	F
15.128	Et	H	H	H	F	Me
15.129	Et	H	H	H	Cl	H
15.130	Et	H	H	H	Cl	F
15.131	Et	H	H	H	Cl	Cl
15.132	Et	H	H	H	Cl	Me
15.133	Et	H	H	H	Me	H
15.134	Et	H	H	H	Me	Cl
15.135	Et	H	H	H	Me	F
15.136	Et	H	H	H	Me	Me
15.137	Et	H	H	H	Ph	H
15.138	Et	H	H	H	Ph	Cl
15.139	Et	H	H	H	Ph	F
15.140	Et	H	H	H	Ph	Me
15.141	Et	F	H	H	H	H
15.142	Et	F	H	H	H	Cl
15.143	Et	F	H	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
15.144	Et	F	H	H	H	Me
15.145	Et	F	H	H	F	H
15.146	Et	F	H	H	F	Cl
15.147	Et	F	H	H	F	F
15.148	Et	F	H	H	F	Me
15.149	Et	F	H	H	Cl	H
15.150	Et	F	H	H	Cl	F
15.151	Et	F	H	H	Cl	Cl
15.152	Et	F	H	H	Cl	Me
15.153	Et	F	H	H	Me	H
15.154	Et	F	H	H	Me	Cl
15.155	Et	F	H	H	Me	F
15.156	Et	F	H	H	Me	Me
15.157	Et	F	H	H	Ph	H
15.158	Et	F	H	H	Ph	Cl
15.159	Et	F	H	H	Ph	F
15.160	Et	F	H	H	Ph	Me
15.161	Et	Cl	H	H	H	H
15.162	Et	Cl	H	H	H	Cl
15.163	Et	Cl	H	H	H	F
15.164	Et	Cl	H	H	H	Me
15.165	Et	Cl	H	H	F	H
15.166	Et	Cl	H	H	F	Cl
15.167	Et	Cl	H	H	F	F
15.168	Et	Cl	H	H	F	Me
15.169	Et	Cl	H	H	Cl	H
15.170	Et	Cl	H	H	Cl	F
15.171	Et	Cl	H	H	Cl	Cl
15.172	Et	Cl	H	H	Cl	Me
15.173	Et	Cl	H	H	Me	H
15.174	Et	Cl	H	H	Me	Cl
15.175	Et	Cl	H	H	Me	F
15.176	Et	Cl	H	H	Me	Me
15.177	Et	Cl	H	H	Ph	H

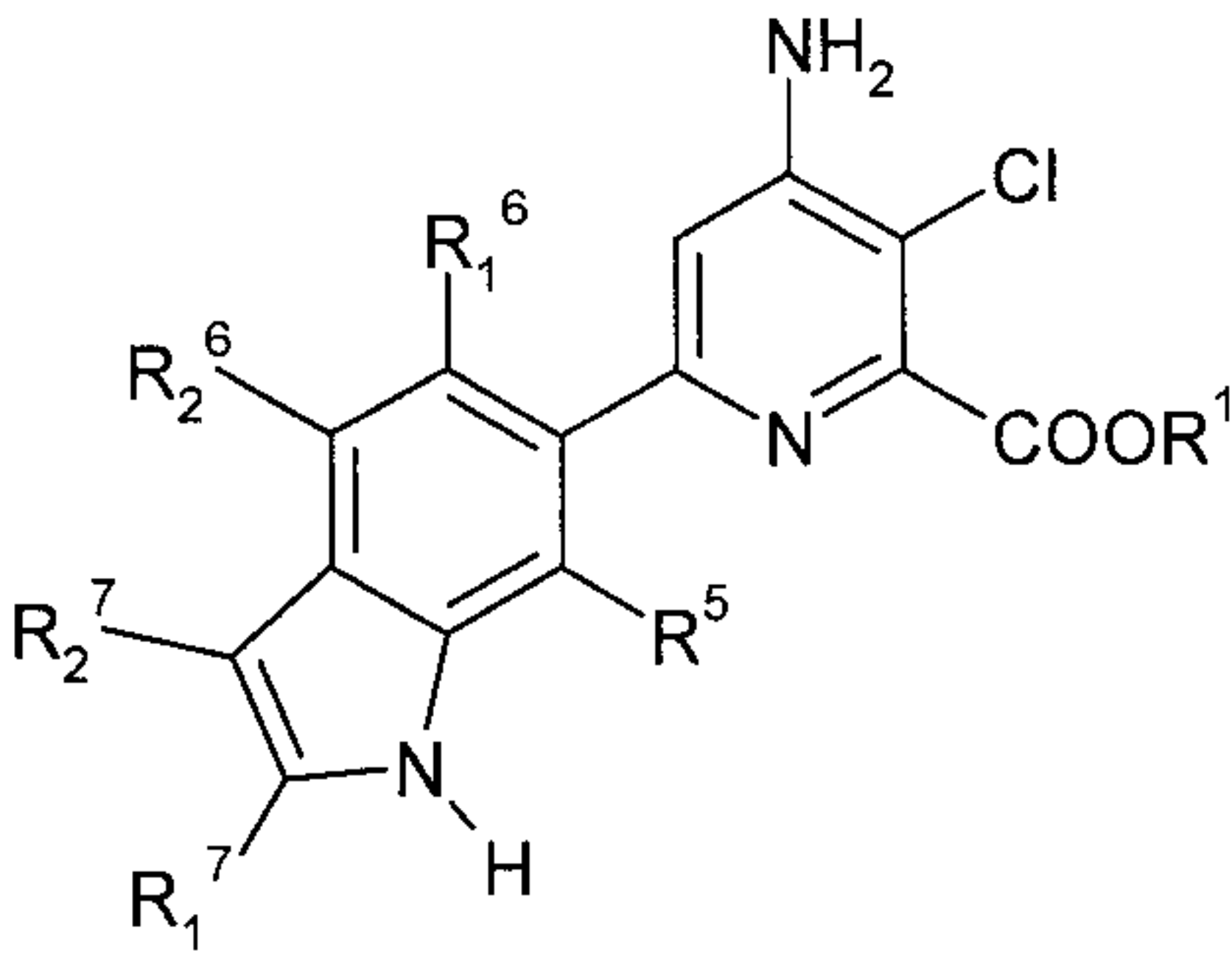
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
15.178	Et	Cl	H	H	Ph	Cl
15.179	Et	Cl	H	H	Ph	F
15.180	Et	Cl	H	H	Ph	Me
15.181	H	F	F	H	H	H
15.182	H	F	H	F	H	H
15.183	Me	H	F	H	H	H
15.184	H	H	F	H	H	H
15.185	K	H	F	H	H	H
15.186	Me	H	Cl	H	H	H
15.187	H	H	Cl	H	H	H
15.188	K	H	Cl	H	H	H
15.189	Me	H	H	F	H	H
15.190	H	H	H	F	H	H
15.191	K	H	H	F	H	H
15.192	Me	H	H	Cl	H	H
15.193	H	H	H	Cl	H	H
15.194	K	H	H	Cl	H	H
15.195	K	F	H	H	H	H
15.196	K	Cl	H	H	H	H

Table 16: Compounds according to the invention of the formula (I) in which X represents CH, A represents A15, R⁸, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
16.001	H	H	H	H	H	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
16.002	H	H	H	H	H	Cl
16.003	H	H	H	H	H	F
16.004	H	H	H	H	H	Me
16.005	H	H	H	H	F	H
16.006	H	H	H	H	F	Cl
16.007	H	H	H	H	F	F
16.008	H	H	H	H	F	Me
16.009	H	H	H	H	Cl	H
16.010	H	H	H	H	Cl	F
16.011	H	H	H	H	Cl	Cl
16.012	H	H	H	H	Cl	Me
16.013	H	H	H	H	Me	H
16.014	H	H	H	H	Me	Cl
16.015	H	H	H	H	Me	F
16.016	H	H	H	H	Me	Me
16.017	H	H	H	H	Ph	H
16.018	H	H	H	H	Ph	Cl
16.019	H	H	H	H	Ph	F
16.020	H	H	H	H	Ph	Me
16.021	H	F	H	H	H	H
16.022	H	F	H	H	H	Cl
16.023	H	F	H	H	H	F
16.024	H	F	H	H	H	Me
16.025	H	F	H	H	F	H
16.026	H	F	H	H	F	Cl
16.027	H	F	H	H	F	F
16.028	H	F	H	H	F	Me
16.029	H	F	H	H	Cl	H
16.030	H	F	H	H	Cl	F
16.031	H	F	H	H	Cl	Cl
16.032	H	F	H	H	Cl	Me
16.033	H	F	H	H	Me	H
16.034	H	F	H	H	Me	Cl
16.035	H	F	H	H	Me	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
16.036	H	F	H	H	Me	Me
16.037	H	F	H	H	Ph	H
16.038	H	F	H	H	Ph	Cl
16.039	H	F	H	H	Ph	F
16.040	H	F	H	H	Ph	Me
16.041	H	Cl	H	H	H	H
16.042	H	Cl	H	H	H	Cl
16.043	H	Cl	H	H	H	F
16.044	H	Cl	H	H	H	Me
16.045	H	Cl	H	H	F	H
16.046	H	Cl	H	H	F	Cl
16.047	H	Cl	H	H	F	F
16.048	H	Cl	H	H	F	Me
16.049	H	Cl	H	H	Cl	H
16.050	H	Cl	H	H	Cl	F
16.051	H	Cl	H	H	Cl	Cl
16.052	H	Cl	H	H	Cl	Me
16.053	H	Cl	H	H	Me	H
16.054	H	Cl	H	H	Me	Cl
16.055	H	Cl	H	H	Me	F
16.056	H	Cl	H	H	Me	Me
16.057	H	Cl	H	H	Ph	H
16.058	H	Cl	H	H	Ph	Cl
16.059	H	Cl	H	H	Ph	F
16.060	H	Cl	H	H	Ph	Me
16.061	Me	H	H	H	H	H
16.062	Me	H	H	H	H	Cl
16.063	Me	H	H	H	H	F
16.064	Me	H	H	H	H	Me
16.065	Me	H	H	H	F	H
16.066	Me	H	H	H	F	Cl
16.067	Me	H	H	H	F	F
16.068	Me	H	H	H	F	Me
16.069	Me	H	H	H	Cl	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
16.070	Me	H	H	H	Cl	F
16.071	Me	H	H	H	Cl	Cl
16.072	Me	H	H	H	Cl	Me
16.073	Me	H	H	H	Me	H
16.074	Me	H	H	H	Me	Cl
16.075	Me	H	H	H	Me	F
16.076	Me	H	H	H	Me	Me
16.077	Me	H	H	H	Ph	H
16.078	Me	H	H	H	Ph	Cl
16.079	Me	H	H	H	Ph	F
16.080	Me	H	H	H	Ph	Me
16.081	Me	F	H	H	H	H
16.082	Me	F	H	H	H	Cl
16.083	Me	F	H	H	H	F
16.084	Me	F	H	H	H	Me
16.085	Me	F	H	H	F	H
16.086	Me	F	H	H	F	Cl
16.087	Me	F	H	H	F	F
16.088	Me	F	H	H	F	Me
16.089	Me	F	H	H	Cl	H
16.090	Me	F	H	H	Cl	F
16.091	Me	F	H	H	Cl	Cl
16.092	Me	F	H	H	Cl	Me
16.093	Me	F	H	H	Me	H
16.094	Me	F	H	H	Me	Cl
16.095	Me	F	H	H	Me	F
16.096	Me	F	H	H	Me	Me
16.097	Me	F	H	H	Ph	H
16.098	Me	F	H	H	Ph	Cl
16.099	Me	F	H	H	Ph	F
16.100	Me	F	H	H	Ph	Me
16.101	Me	Cl	H	H	H	H
16.102	Me	Cl	H	H	H	Cl
16.103	Me	Cl	H	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
16.104	Me	Cl	H	H	H	Me
16.105	Me	Cl	H	H	F	H
16.106	Me	Cl	H	H	F	Cl
16.107	Me	Cl	H	H	F	F
16.108	Me	Cl	H	H	F	Me
16.109	Me	Cl	H	H	Cl	H
16.110	Me	Cl	H	H	Cl	F
16.111	Me	Cl	H	H	Cl	Cl
16.112	Me	Cl	H	H	Cl	Me
16.113	Me	Cl	H	H	Me	H
16.114	Me	Cl	H	H	Me	Cl
16.115	Me	Cl	H	H	Me	F
16.116	Me	Cl	H	H	Me	Me
16.117	Me	Cl	H	H	Ph	H
16.118	Me	Cl	H	H	Ph	Cl
16.119	Me	Cl	H	H	Ph	F
16.120	Me	Cl	H	H	Ph	Me
16.121	Et	H	H	H	H	H
16.122	Et	H	H	H	H	Cl
16.123	Et	H	H	H	H	F
16.124	Et	H	H	H	H	Me
16.125	Et	H	H	H	F	H
16.126	Et	H	H	H	F	Cl
16.127	Et	H	H	H	F	F
16.128	Et	H	H	H	F	Me
16.129	Et	H	H	H	Cl	H
16.130	Et	H	H	H	Cl	F
16.131	Et	H	H	H	Cl	Cl
16.132	Et	H	H	H	Cl	Me
16.133	Et	H	H	H	Me	H
16.134	Et	H	H	H	Me	Cl
16.135	Et	H	H	H	Me	F
16.136	Et	H	H	H	Me	Me
16.137	Et	H	H	H	Ph	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
16.138	Et	H	H	H	Ph	Cl
16.139	Et	H	H	H	Ph	F
16.140	Et	H	H	H	Ph	Me
16.141	Et	F	H	H	H	H
16.142	Et	F	H	H	H	Cl
16.143	Et	F	H	H	H	F
16.144	Et	F	H	H	H	Me
16.145	Et	F	H	H	F	H
16.146	Et	F	H	H	F	Cl
16.147	Et	F	H	H	F	F
16.148	Et	F	H	H	F	Me
16.149	Et	F	H	H	Cl	H
16.150	Et	F	H	H	Cl	F
16.151	Et	F	H	H	Cl	Cl
16.152	Et	F	H	H	Cl	Me
16.153	Et	F	H	H	Me	H
16.154	Et	F	H	H	Me	Cl
16.155	Et	F	H	H	Me	F
16.156	Et	F	H	H	Me	Me
16.157	Et	F	H	H	Ph	H
16.158	Et	F	H	H	Ph	Cl
16.159	Et	F	H	H	Ph	F
16.160	Et	F	H	H	Ph	Me
16.161	Et	Cl	H	H	H	H
16.162	Et	Cl	H	H	H	Cl
16.163	Et	Cl	H	H	H	F
16.164	Et	Cl	H	H	H	Me
16.165	Et	Cl	H	H	F	H
16.166	Et	Cl	H	H	F	Cl
16.167	Et	Cl	H	H	F	F
16.168	Et	Cl	H	H	F	Me
16.169	Et	Cl	H	H	Cl	H
16.170	Et	Cl	H	H	Cl	F
16.171	Et	Cl	H	H	Cl	Cl

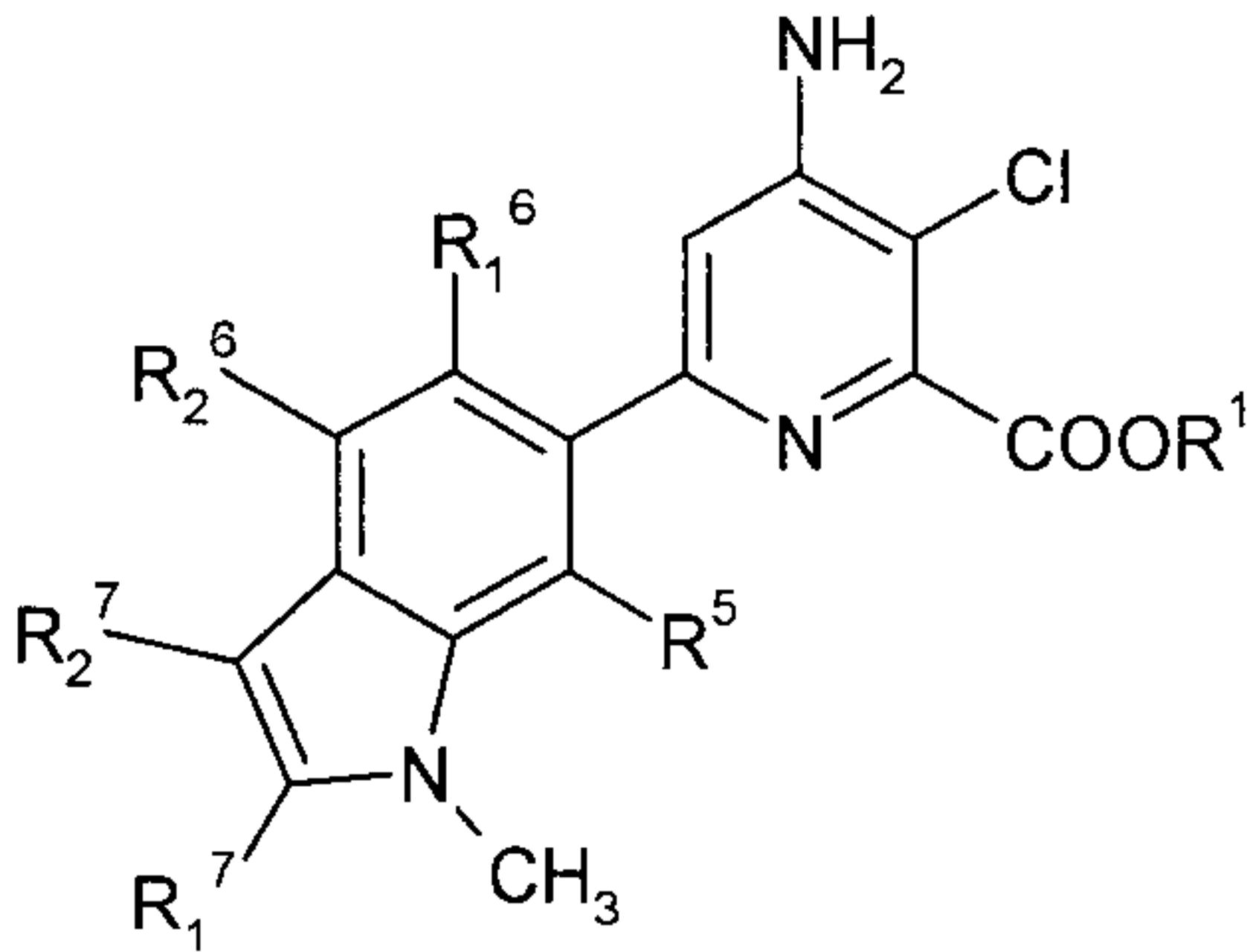
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
16.172	Et	Cl	H	H	Cl	Me
16.173	Et	Cl	H	H	Me	H
16.174	Et	Cl	H	H	Me	Cl
16.175	Et	Cl	H	H	Me	F
16.176	Et	Cl	H	H	Me	Me
16.177	Et	Cl	H	H	Ph	H
16.178	Et	Cl	H	H	Ph	Cl
16.179	Et	Cl	H	H	Ph	F
16.180	Et	Cl	H	H	Ph	Me
16.181	H	F	F	H	H	H
16.182	H	F	H	F	H	H

Table 17: Compounds according to the invention of the formula (I) in which X represents CH, A represents A15, R⁸ represents methyl, R³ and R⁴ each represent
5 hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
17.001	H	H	H	H	H	H
17.002	H	H	H	H	H	Cl
17.003	H	H	H	H	H	F
17.004	H	H	H	H	H	Me
17.005	H	H	H	H	F	H
17.006	H	H	H	H	F	Cl
17.007	H	H	H	H	F	F
17.008	H	H	H	H	F	Me
17.009	H	H	H	H	Cl	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
17.010	H	H	H	H	Cl	F
17.011	H	H	H	H	Cl	Cl
17.012	H	H	H	H	Cl	Me
17.013	H	H	H	H	Me	H
17.014	H	H	H	H	Me	Cl
17.015	H	H	H	H	Me	F
17.016	H	H	H	H	Me	Me
17.017	H	H	H	H	Ph	H
17.018	H	H	H	H	Ph	Cl
17.019	H	H	H	H	Ph	F
17.020	H	H	H	H	Ph	Me
17.021	H	F	H	H	H	H
17.022	H	F	H	H	H	Cl
17.023	H	F	H	H	H	F
17.024	H	F	H	H	H	Me
17.025	H	F	H	H	F	H
17.026	H	F	H	H	F	Cl
17.027	H	F	H	H	F	F
17.028	H	F	H	H	F	Me
17.029	H	F	H	H	Cl	H
17.030	H	F	H	H	Cl	F
17.031	H	F	H	H	Cl	Cl
17.032	H	F	H	H	Cl	Me
17.033	H	F	H	H	Me	H
17.034	H	F	H	H	Me	Cl
17.035	H	F	H	H	Me	F
17.036	H	F	H	H	Me	Me
17.037	H	F	H	H	Ph	H
17.038	H	F	H	H	Ph	Cl
17.039	H	F	H	H	Ph	F
17.040	H	F	H	H	Ph	Me
17.041	H	Cl	H	H	H	H
17.042	H	Cl	H	H	H	Cl
17.043	H	Cl	H	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
17.044	H	Cl	H	H	H	Me
17.045	H	Cl	H	H	F	H
17.046	H	Cl	H	H	F	Cl
17.047	H	Cl	H	H	F	F
17.048	H	Cl	H	H	F	Me
17.049	H	Cl	H	H	Cl	H
17.050	H	Cl	H	H	Cl	F
17.051	H	Cl	H	H	Cl	Cl
17.052	H	Cl	H	H	Cl	Me
17.053	H	Cl	H	H	Me	H
17.054	H	Cl	H	H	Me	Cl
17.055	H	Cl	H	H	Me	F
17.056	H	Cl	H	H	Me	Me
17.057	H	Cl	H	H	Ph	H
17.058	H	Cl	H	H	Ph	Cl
17.059	H	Cl	H	H	Ph	F
17.060	H	Cl	H	H	Ph	Me
17.061	Me	H	H	H	H	H
17.062	Me	H	H	H	H	Cl
17.063	Me	H	H	H	H	F
17.064	Me	H	H	H	H	Me
17.065	Me	H	H	H	F	H
17.066	Me	H	H	H	F	Cl
17.067	Me	H	H	H	F	F
17.068	Me	H	H	H	F	Me
17.069	Me	H	H	H	Cl	H
17.070	Me	H	H	H	Cl	F
17.071	Me	H	H	H	Cl	Cl
17.072	Me	H	H	H	Cl	Me
17.073	Me	H	H	H	Me	H
17.074	Me	H	H	H	Me	Cl
17.075	Me	H	H	H	Me	F
17.076	Me	H	H	H	Me	Me
17.077	Me	H	H	H	Ph	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
17.078	Me	H	H	H	Ph	Cl
17.079	Me	H	H	H	Ph	F
17.080	Me	H	H	H	Ph	Me
17.081	Me	F	H	H	H	H
17.082	Me	F	H	H	H	Cl
17.083	Me	F	H	H	H	F
17.084	Me	F	H	H	H	Me
17.085	Me	F	H	H	F	H
17.086	Me	F	H	H	F	Cl
17.087	Me	F	H	H	F	F
17.088	Me	F	H	H	F	Me
17.089	Me	F	H	H	Cl	H
17.090	Me	F	H	H	Cl	F
17.091	Me	F	H	H	Cl	Cl
17.092	Me	F	H	H	Cl	Me
17.093	Me	F	H	H	Me	H
17.094	Me	F	H	H	Me	Cl
17.095	Me	F	H	H	Me	F
17.096	Me	F	H	H	Me	Me
17.097	Me	F	H	H	Ph	H
17.098	Me	F	H	H	Ph	Cl
17.099	Me	F	H	H	Ph	F
17.100	Me	F	H	H	Ph	Me
17.101	Me	Cl	H	H	H	H
17.102	Me	Cl	H	H	H	Cl
17.103	Me	Cl	H	H	H	F
17.104	Me	Cl	H	H	H	Me
17.105	Me	Cl	H	H	F	H
17.106	Me	Cl	H	H	F	Cl
17.107	Me	Cl	H	H	F	F
17.108	Me	Cl	H	H	F	Me
17.109	Me	Cl	H	H	Cl	H
17.110	Me	Cl	H	H	Cl	F
17.111	Me	Cl	H	H	Cl	Cl

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
17.112	Me	Cl	H	H	Cl	Me
17.113	Me	Cl	H	H	Me	H
17.114	Me	Cl	H	H	Me	Cl
17.115	Me	Cl	H	H	Me	F
17.116	Me	Cl	H	H	Me	Me
17.117	Me	Cl	H	H	Ph	H
17.118	Me	Cl	H	H	Ph	Cl
17.119	Me	Cl	H	H	Ph	F
17.120	Me	Cl	H	H	Ph	Me
17.121	Et	H	H	H	H	H
17.122	Et	H	H	H	H	Cl
17.123	Et	H	H	H	H	F
17.124	Et	H	H	H	H	Me
17.125	Et	H	H	H	F	H
17.126	Et	H	H	H	F	Cl
17.127	Et	H	H	H	F	F
17.128	Et	H	H	H	F	Me
17.129	Et	H	H	H	Cl	H
17.130	Et	H	H	H	Cl	F
17.131	Et	H	H	H	Cl	Cl
17.132	Et	H	H	H	Cl	Me
17.133	Et	H	H	H	Me	H
17.134	Et	H	H	H	Me	Cl
17.135	Et	H	H	H	Me	F
17.136	Et	H	H	H	Me	Me
17.137	Et	H	H	H	Ph	H
17.138	Et	H	H	H	Ph	Cl
17.139	Et	H	H	H	Ph	F
17.140	Et	H	H	H	Ph	Me
17.141	Et	F	H	H	H	H
17.142	Et	F	H	H	H	Cl
17.143	Et	F	H	H	H	F
17.144	Et	F	H	H	H	Me
17.145	Et	F	H	H	F	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
17.146	Et	F	H	H	F	Cl
17.147	Et	F	H	H	F	F
17.148	Et	F	H	H	F	Me
17.149	Et	F	H	H	Cl	H
17.150	Et	F	H	H	Cl	F
17.151	Et	F	H	H	Cl	Cl
17.152	Et	F	H	H	Cl	Me
17.153	Et	F	H	H	Me	H
17.154	Et	F	H	H	Me	Cl
17.155	Et	F	H	H	Me	F
17.156	Et	F	H	H	Me	Me
17.157	Et	F	H	H	Ph	H
17.158	Et	F	H	H	Ph	Cl
17.159	Et	F	H	H	Ph	F
17.160	Et	F	H	H	Ph	Me
17.161	Et	Cl	H	H	H	H
17.162	Et	Cl	H	H	H	Cl
17.163	Et	Cl	H	H	H	F
17.164	Et	Cl	H	H	H	Me
17.165	Et	Cl	H	H	F	H
17.166	Et	Cl	H	H	F	Cl
17.167	Et	Cl	H	H	F	F
17.168	Et	Cl	H	H	F	Me
17.169	Et	Cl	H	H	Cl	H
17.170	Et	Cl	H	H	Cl	F
17.171	Et	Cl	H	H	Cl	Cl
17.172	Et	Cl	H	H	Cl	Me
17.173	Et	Cl	H	H	Me	H
17.174	Et	Cl	H	H	Me	Cl
17.175	Et	Cl	H	H	Me	F
17.176	Et	Cl	H	H	Me	Me
17.177	Et	Cl	H	H	Ph	H
17.178	Et	Cl	H	H	Ph	Cl
17.179	Et	Cl	H	H	Ph	F

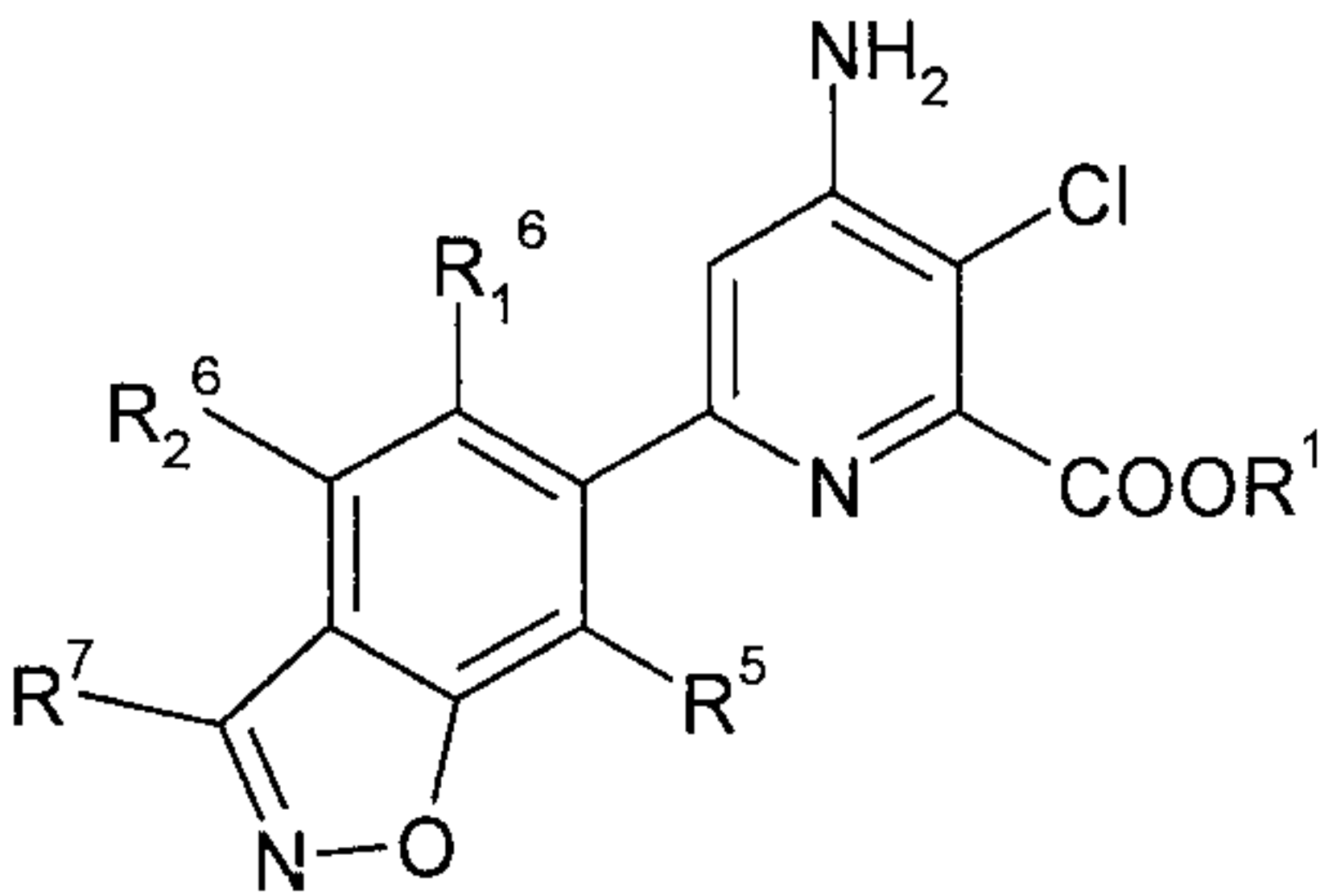
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
17.180	Et	Cl	H	H	Ph	Me
17.181	H	F	F	H	H	H
17.182	H	F	H	F	H	H

Table 18: Compounds according to the invention of the formula (I) in which X represents CH, A represents A16, R³ and R⁴ each represent hydrogen and R² represents chlorine:



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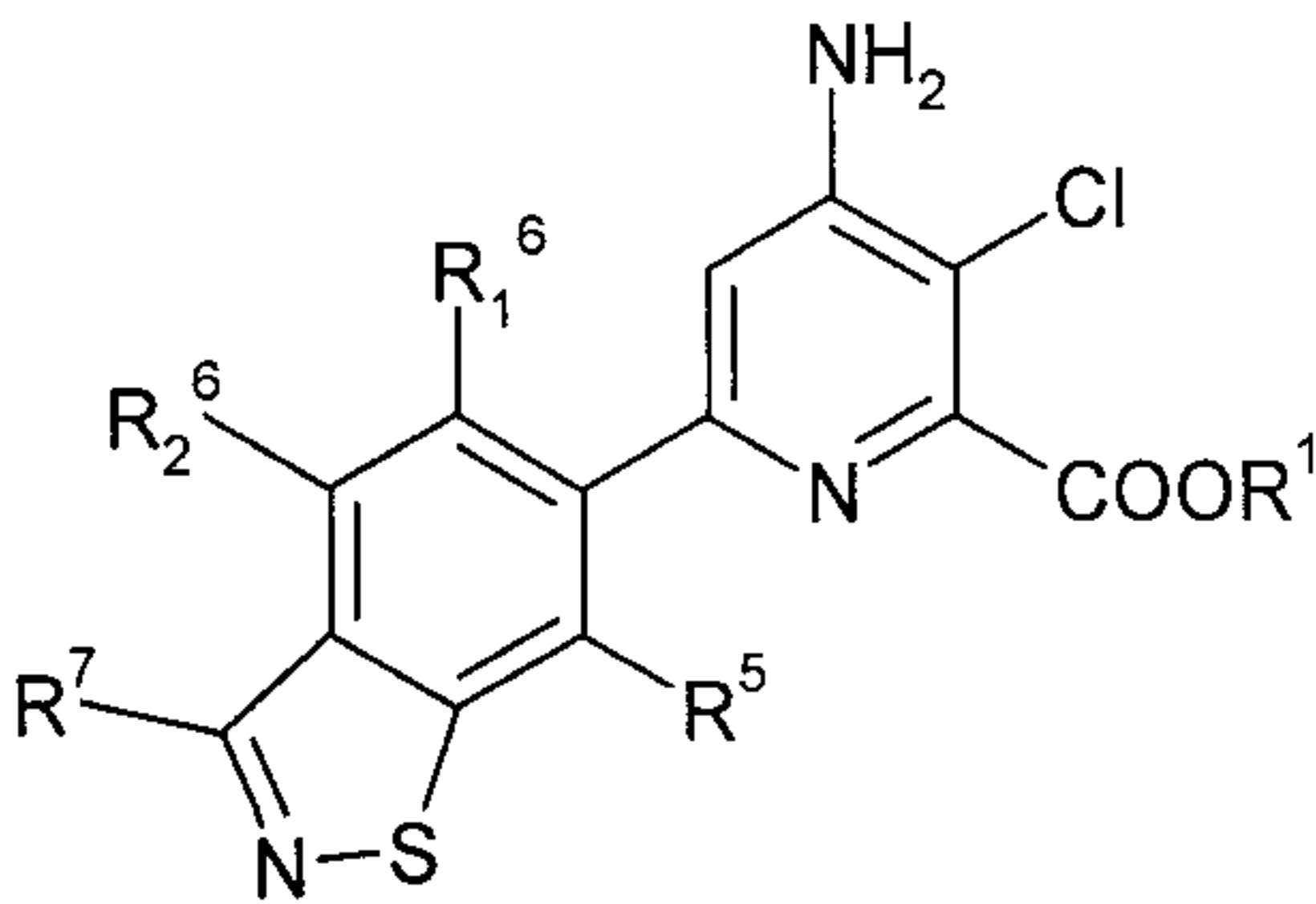
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
18.001	H	H	H	H	H
18.002	H	H	H	H	Me
18.003	H	H	H	H	Ph
18.004	H	H	H	H	F
18.005	H	H	H	H	Cl
18.006	H	Cl	H	H	H
18.007	H	Cl	H	H	Me
18.008	H	Cl	H	H	Ph
18.009	H	Cl	H	H	F
18.010	H	Cl	H	H	Cl
18.011	H	F	H	H	H
18.012	H	F	H	H	Me
18.013	H	F	H	H	Ph
18.014	H	F	H	H	F
18.015	H	F	H	H	Cl
18.016	Me	H	H	H	H
18.017	Me	H	H	H	Me
18.018	Me	H	H	H	Ph
18.019	Me	H	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
18.020	Me	H	H	H	Cl
18.021	Me	Cl	H	H	H
18.022	Me	Cl	H	H	Me
18.023	Me	Cl	H	H	Ph
18.024	Me	Cl	H	H	F
18.025	Me	Cl	H	H	Cl
18.026	Et	H	H	H	H
18.027	Et	H	H	H	Me
18.028	Et	H	H	H	Ph
18.029	Et	H	H	H	F
18.030	Et	H	H	H	Cl
18.031	Et	F	H	H	H
18.032	Et	F	H	H	Me
18.033	Et	F	H	H	Ph
18.034	Et	F	H	H	F
18.035	Et	F	H	H	Cl
18.036	Et	Cl	H	H	H
18.037	Et	Cl	H	H	Me
18.038	Et	Cl	H	H	Ph
18.039	Et	Cl	H	H	F
18.040	Et	Cl	H	H	Cl
18.041	H	F	F	H	H
18.042	H	F	H	F	H

Table 19: Compounds according to the invention of the formula (I) in which X represents CH, A represents A17, R³ and R⁴ each represent hydrogen and R² represents chlorine:



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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
19.001	H	H	H	H	H
19.002	H	H	H	H	Me
19.003	H	H	H	H	Ph
19.004	H	H	H	H	F
19.005	H	H	H	H	Cl
19.006	H	Cl	H	H	H
19.007	H	Cl	H	H	Me
19.008	H	Cl	H	H	Ph
19.009	H	Cl	H	H	F
19.010	H	Cl	H	H	Cl
19.011	H	F	H	H	H
19.012	H	F	H	H	Me
19.013	H	F	H	H	Ph
19.014	H	F	H	H	F
19.015	H	F	H	H	Cl
19.016	Me	H	H	H	H
19.017	Me	H	H	H	Me
19.018	Me	H	H	H	Ph
19.019	Me	H	H	H	F
19.020	Me	H	H	H	Cl
19.021	Me	Cl	H	H	H
19.022	Me	Cl	H	H	Me
19.023	Me	Cl	H	H	Ph
19.024	Me	Cl	H	H	F
19.025	Me	Cl	H	H	Cl
19.026	Et	H	H	H	H
19.027	Et	H	H	H	Me
19.028	Et	H	H	H	Ph
19.029	Et	H	H	H	F
19.030	Et	H	H	H	Cl
19.031	Et	F	H	H	H
19.032	Et	F	H	H	Me

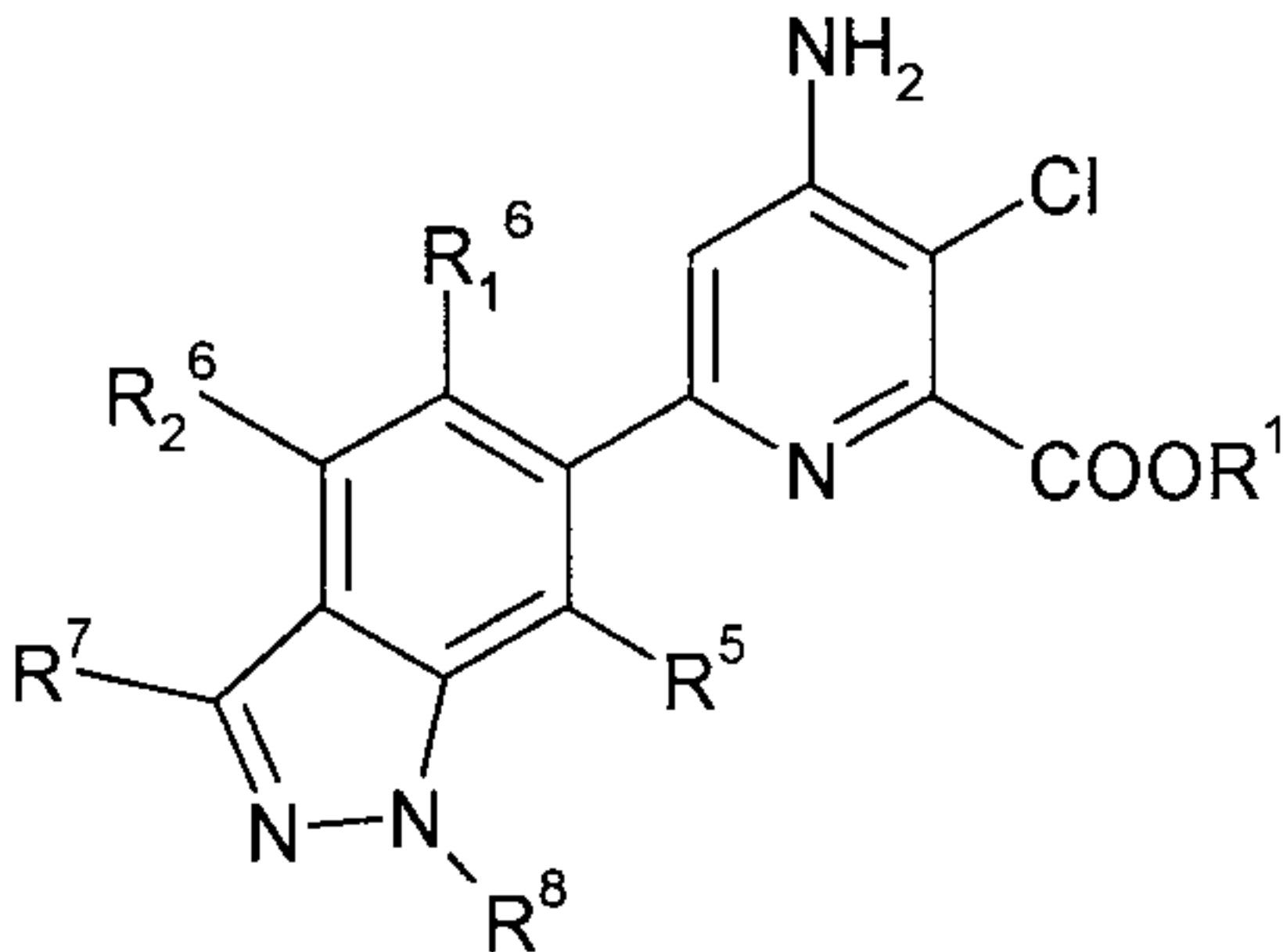
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
19.033	Et	F	H	H	Ph
19.034	Et	F	H	H	F
19.035	Et	F	H	H	Cl
19.036	Et	Cl	H	H	H
19.037	Et	Cl	H	H	Me
19.038	Et	Cl	H	H	Ph
19.039	Et	Cl	H	H	F
19.040	Et	Cl	H	H	Cl
19.041	H	F	F	H	H
19.042	H	F	H	F	H

Table 20: Compounds according to the invention of the formula (I) in which X represents CH, A represents A18, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
20.001	H	H	H	H	H	H
20.002	H	H	H	H	Me	H
20.003	H	H	H	H	Ph	H
20.004	H	H	H	H	F	Me
20.005	H	H	H	H	Cl	H
20.006	H	Cl	H	H	H	Me
20.007	H	Cl	H	H	Me	Me
20.008	H	Cl	H	H	Ph	Me
20.009	H	Cl	H	H	F	H
20.010	H	Cl	H	H	Cl	H

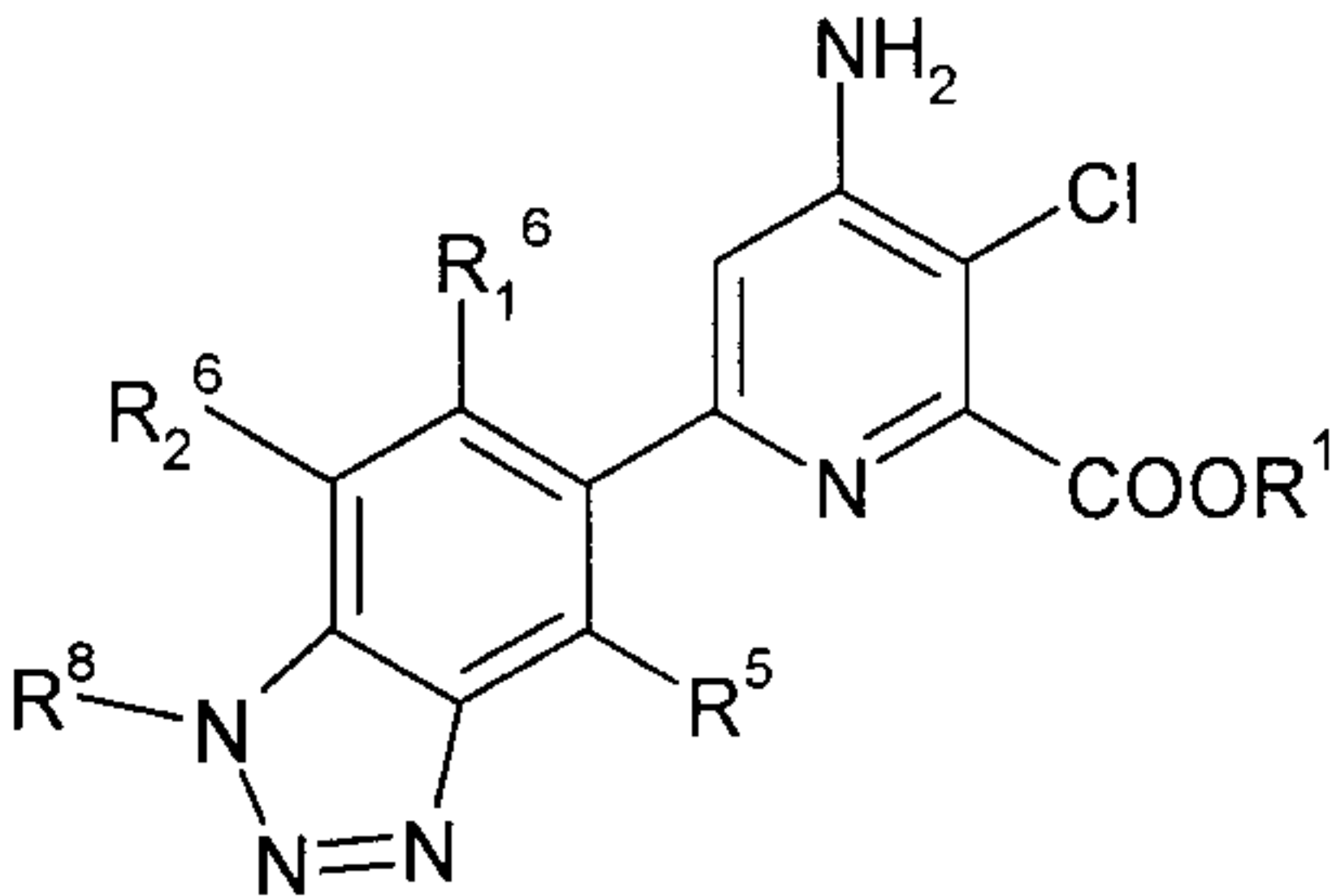
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
20.011	H	F	H	H	H	Me
20.012	H	F	H	H	Me	H
20.013	H	F	H	H	Ph	H
20.014	H	F	H	H	F	Me
20.015	H	F	H	H	Cl	Me
20.016	Me	H	H	H	H	Et
20.017	Me	H	H	H	Me	Et
20.018	Me	H	H	H	Ph	Et
20.019	Me	H	H	H	F	Et
20.020	Me	H	H	H	Cl	Et
20.021	Me	Cl	H	H	H	Me
20.022	Me	Cl	H	H	Me	H
20.023	Me	Cl	H	H	Ph	H
20.024	Me	Cl	H	H	F	H
20.025	Me	Cl	H	H	Cl	Et
20.026	Et	H	H	H	H	Me
20.027	Et	H	H	H	Me	Me
20.028	Et	H	H	H	Ph	Me
20.029	Et	H	H	H	F	H
20.030	Et	H	H	H	Cl	H
20.031	Et	F	H	H	H	Me
20.032	Et	F	H	H	Me	Me
20.033	Et	F	H	H	Ph	H
20.034	Et	F	H	H	F	Et
20.035	Et	F	H	H	Cl	Et
20.036	Et	Cl	H	H	H	H
20.037	Et	Cl	H	H	Me	H
20.038	Et	Cl	H	H	Ph	H
20.039	Et	Cl	H	H	F	Me
20.040	Et	Cl	H	H	Cl	H
20.041	H	F	F	H	H	H
20.042	H	F	H	F	H	H

Table 21: Compounds according to the invention of the formula (I) in which X represents CH, A represents A19, R³ and R⁴ each represent hydrogen and R² represents chlorine:



5

Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁸
21.001	H	H	H	H	H
21.002	H	H	H	H	Me
21.003	H	H	H	H	Et
21.004	H	F	H	H	H
21.005	H	F	H	H	Me
21.006	H	F	H	H	Et
21.007	H	Cl	H	H	H
21.008	H	Cl	H	H	Me
21.009	H	Cl	H	H	Et
21.010	Me	H	H	H	H
21.011	Me	H	H	H	Me
21.012	Me	H	H	H	Et
21.013	Me	F	H	H	H
21.014	Me	F	H	H	Me
21.015	Me	F	H	H	Et
21.016	Me	Cl	H	H	H
21.017	Me	Cl	H	H	Me
21.018	Me	Cl	H	H	Et
21.019	Et	H	H	H	H
21.020	Et	H	H	H	Me
21.021	Et	H	H	H	Et
21.022	Et	F	H	H	H
21.023	Et	F	H	H	Me
21.024	Et	F	H	H	Et

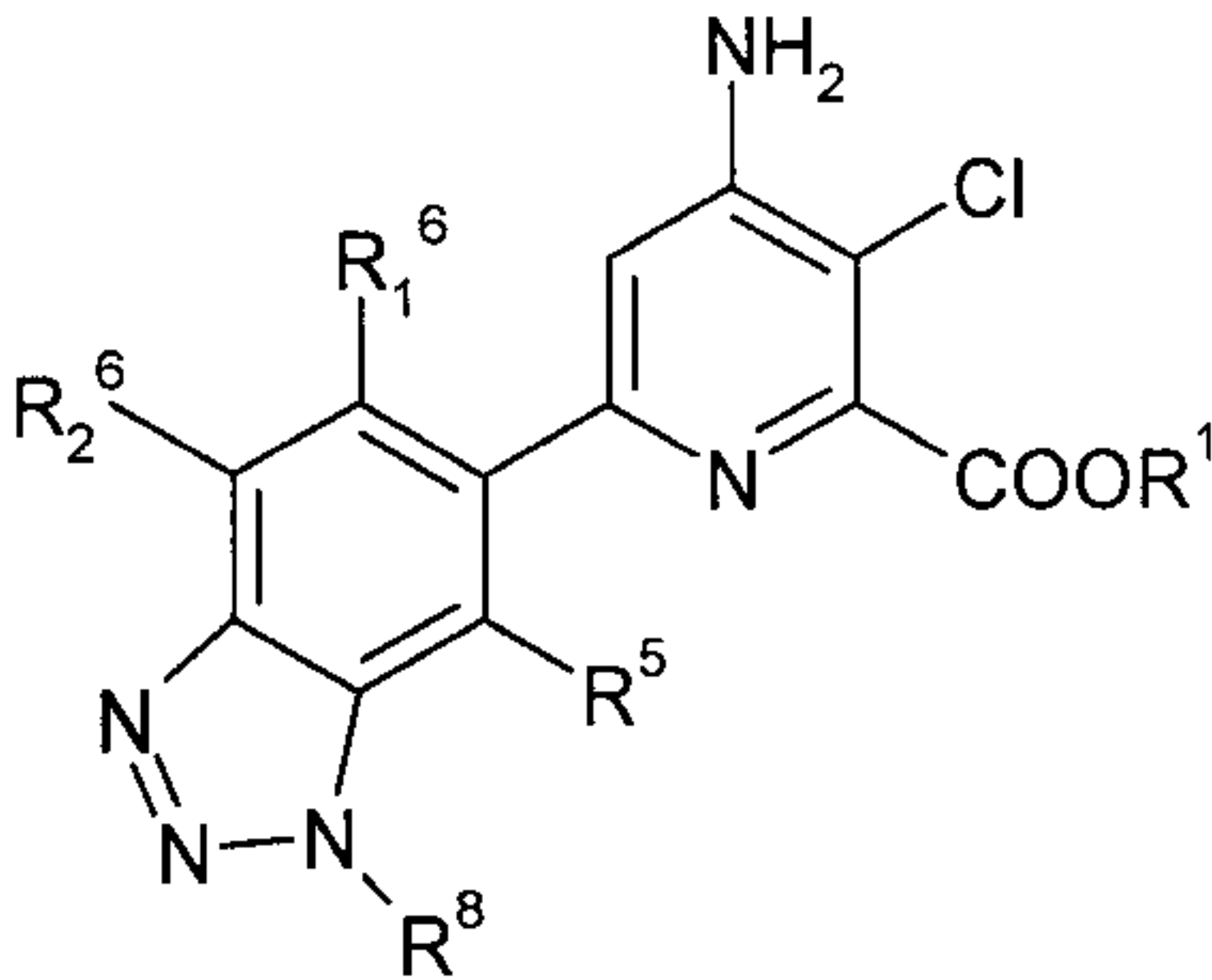
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁸
21.025	Et	Cl	H	H	H
21.026	Et	Cl	H	H	Me
21.027	Et	Cl	H	H	Et
21.028	H	F	F	H	H
21.029	H	F	H	F	H

Table 22: Compounds according to the invention of the formula (I) in which X represents CH, A represents A20, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁸
22.001	H	H	H	H	H
22.002	H	H	H	H	Me
22.003	H	H	H	H	Et
22.004	H	F	H	H	H
22.005	H	F	H	H	Me
22.006	H	F	H	H	Et
22.007	H	Cl	H	H	H
22.008	H	Cl	H	H	Me
22.009	H	Cl	H	H	Et
22.010	Me	H	H	H	H
22.011	Me	H	H	H	Me
22.012	Me	H	H	H	Et
22.013	Me	F	H	H	H
22.014	Me	F	H	H	Me
22.015	Me	F	H	H	Et

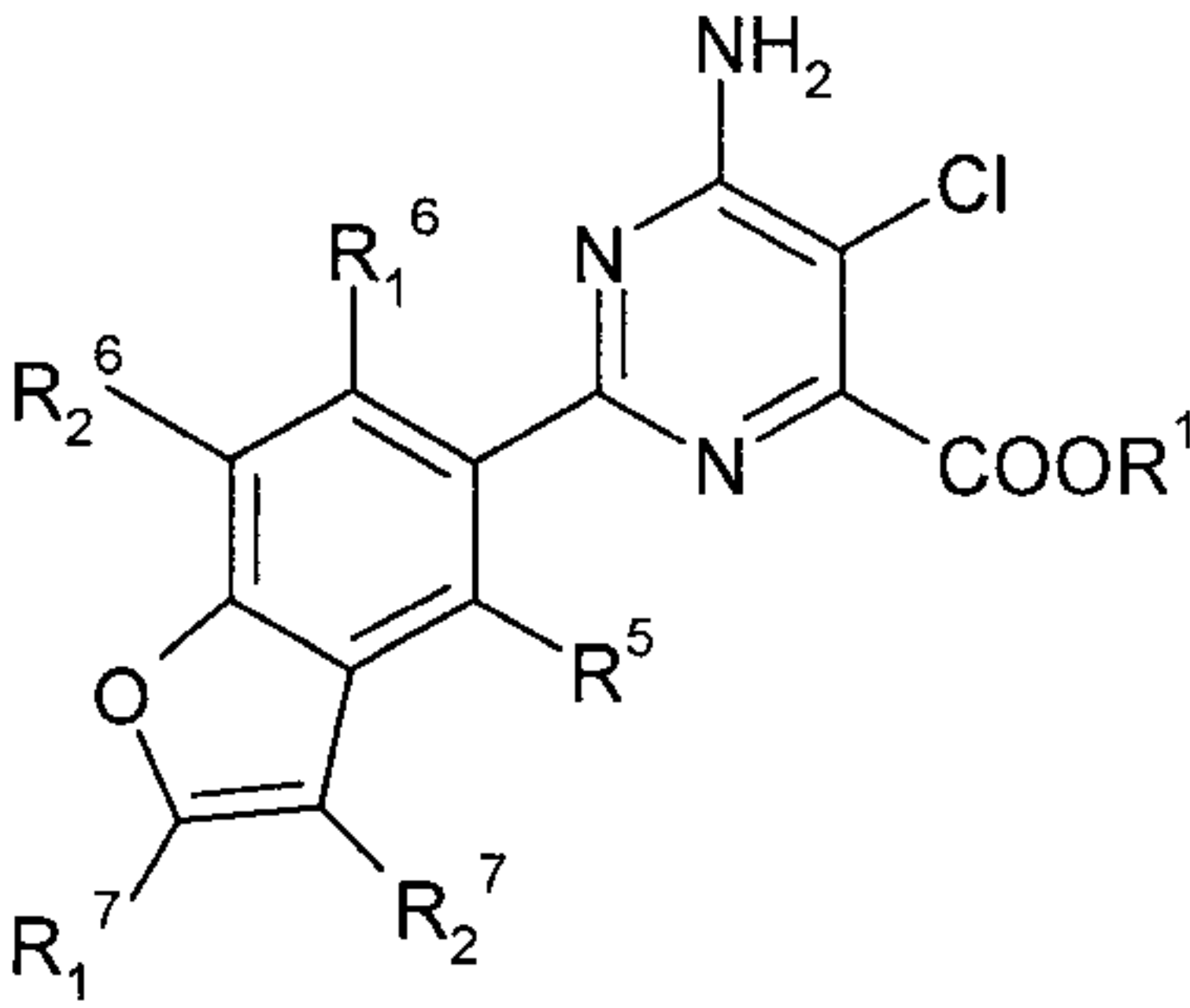
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁸
22.016	Me	Cl	H	H	H
22.017	Me	Cl	H	H	Me
22.018	Me	Cl	H	H	Et
22.019	Et	H	H	H	H
22.020	Et	H	H	H	Me
22.021	Et	H	H	H	Et
22.022	Et	F	H	H	H
22.023	Et	F	H	H	Me
22.024	Et	F	H	H	Et
22.025	Et	Cl	H	H	H
22.026	Et	Cl	H	H	Me
22.027	Et	Cl	H	H	Et
22.028	H	F	F	H	H
22.029	H	F	H	F	H

Table 23: Compounds according to the invention of the formula (I) in which X represents N, A represents A1, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
23.001	H	H	H	H	H	H
23.002	H	F	H	H	H	H
23.003	H	F	H	H	Cl	H
23.004	H	F	H	H	H	Cl
23.005	H	F	H	H	Cl	Cl
23.006	H	F	H	H	Ph	H

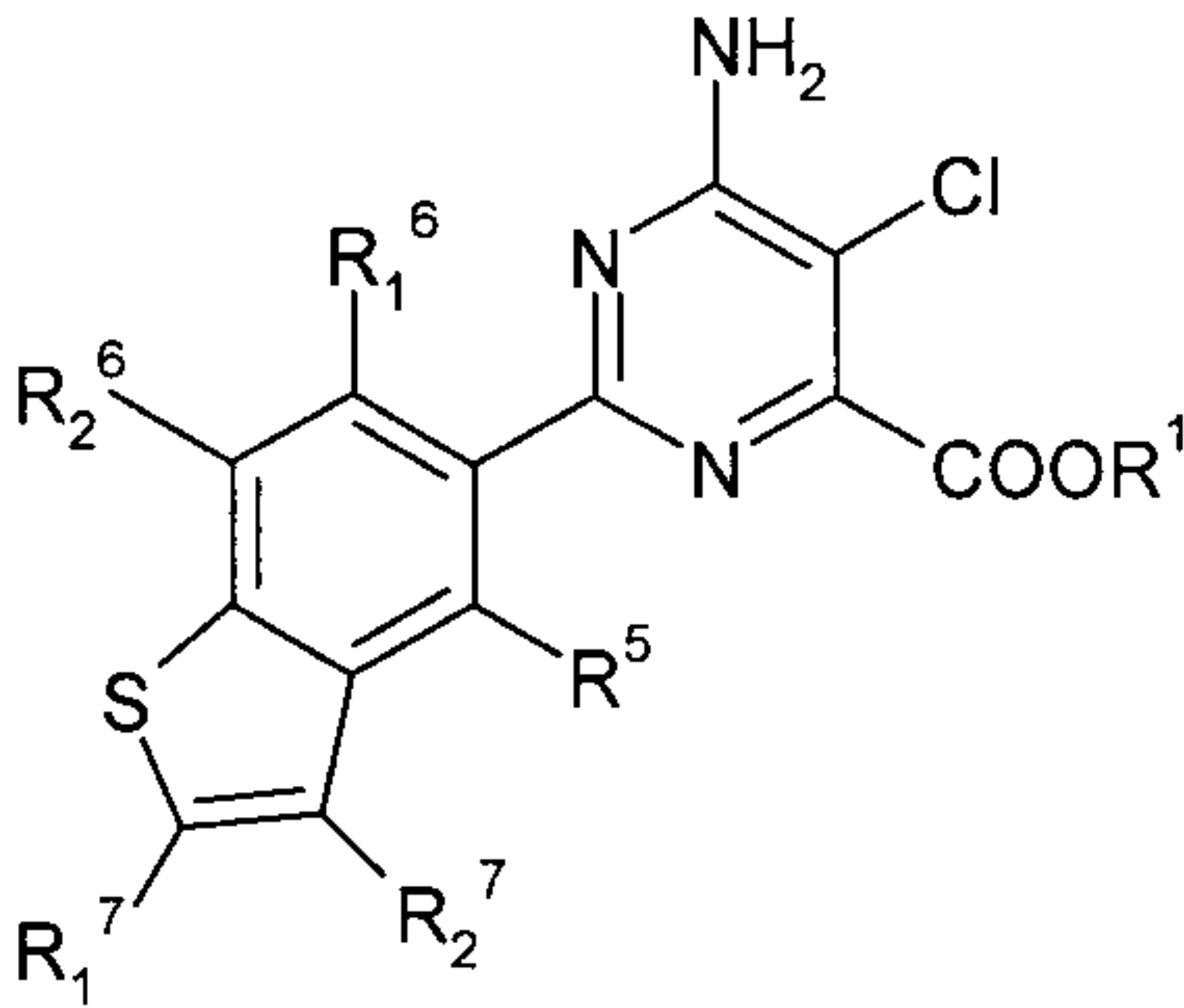
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
23.007	H	F	H	H	Ph	Cl
23.008	H	F	H	H	Ph	F
23.009	H	F	H	H	Me	H
23.010	H	F	H	H	Me	Cl
23.011	H	F	H	H	Me	F
23.012	Me	H	H	H	H	H
23.013	Me	F	H	H	H	H
23.014	Me	F	H	H	Cl	H
23.015	Me	F	H	H	H	Cl
23.016	Me	F	H	H	Cl	Cl
23.017	Me	F	H	H	H	F
23.018	Me	F	H	H	Ph	H
23.019	Me	F	H	H	Ph	Cl
23.020	Me	F	H	H	Ph	F
23.021	Me	F	H	H	Me	H
23.022	Me	F	H	H	Me	Cl
23.023	Me	F	H	H	Me	F
23.024	Et	H	H	H	H	H
23.025	Et	Cl	H	H	H	H
23.026	Et	Cl	H	H	Cl	H
23.027	Et	Cl	H	H	H	Cl
23.028	Et	Cl	H	H	Cl	Cl
23.029	Et	Cl	H	H	H	F
23.030	Et	Cl	H	H	Ph	H
23.031	Et	Cl	H	H	Ph	Cl
23.032	Et	Cl	H	H	Ph	F
23.033	Et	Cl	H	H	Me	H
23.034	Et	Cl	H	H	Me	Cl
23.035	Et	Cl	H	H	Me	F
23.036	H	F	F	H	H	H
23.037	H	F	H	F	H	H

Table 24: Compounds according to the invention of the formula (I) in which X represents N, A represents A2, R³ and R⁴ each represent hydrogen and R² represents chlorine:



5

Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
24.001	H	H	H	H	H	H
24.002	H	F	H	H	H	H
24.003	H	F	H	H	Cl	H
24.004	H	F	H	H	H	Cl
24.005	H	F	H	H	Cl	Cl
24.006	H	F	H	H	Ph	H
24.007	H	F	H	H	Ph	Cl
24.008	H	F	H	H	Ph	F
24.009	H	F	H	H	Me	H
24.010	H	F	H	H	Me	Cl
24.011	H	F	H	H	Me	F
24.012	Me	H	H	H	H	H
24.013	Me	F	H	H	H	H
24.014	Me	F	H	H	Cl	H
24.015	Me	F	H	H	H	Cl
24.016	Me	F	H	H	Cl	Cl
24.017	Me	F	H	H	H	F
24.018	Me	F	H	H	Ph	H
24.019	Me	F	H	H	Ph	Cl
24.020	Me	F	H	H	Ph	F
24.021	Me	F	H	H	Me	H
24.022	Me	F	H	H	Me	Cl

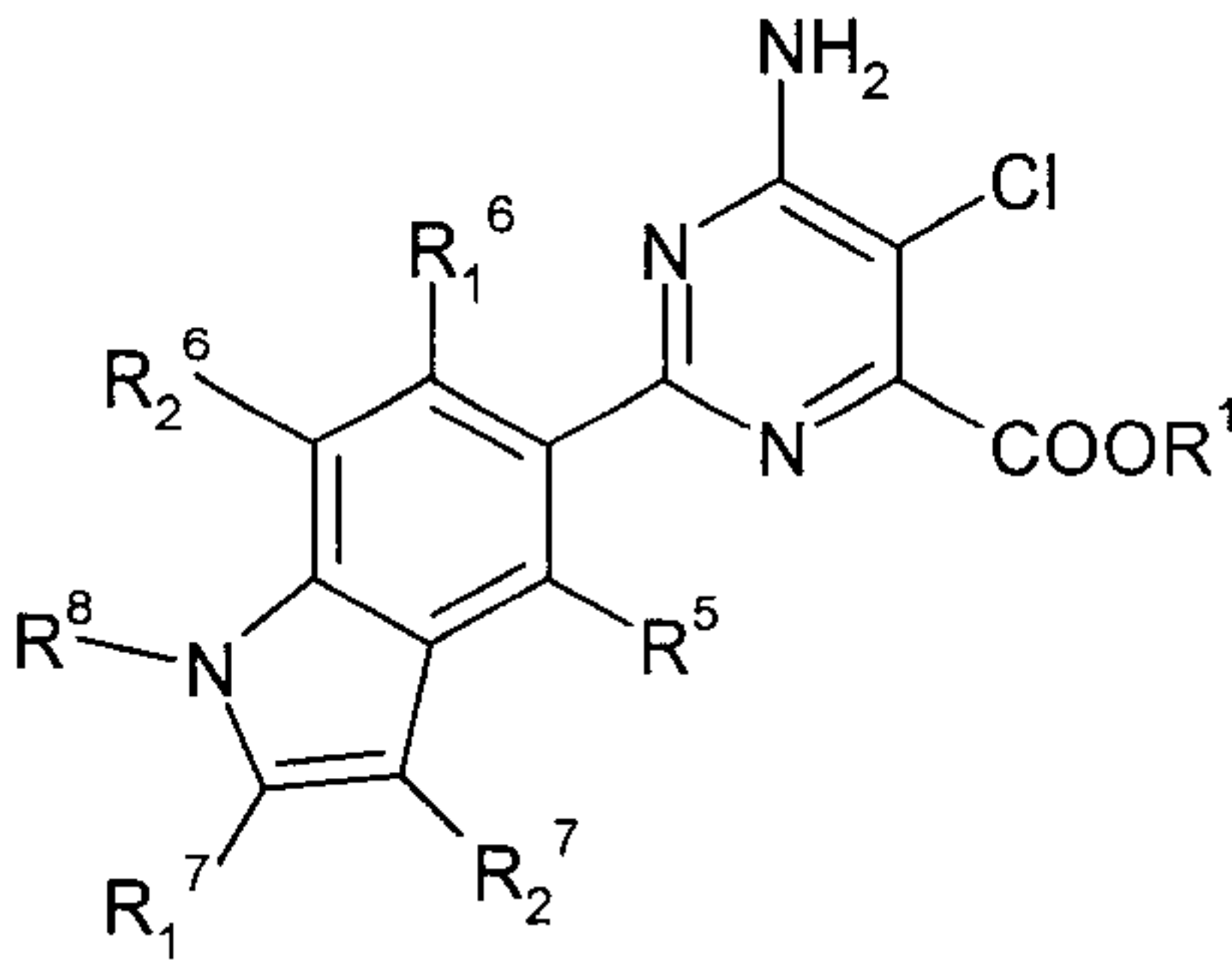
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
24.023	Me	F	H	H	Me	F
24.024	Et	H	H	H	H	H
24.025	Et	Cl	H	H	H	H
24.026	Et	Cl	H	H	Cl	H
24.027	Et	Cl	H	H	H	Cl
24.028	Et	Cl	H	H	Cl	Cl
24.029	Et	Cl	H	H	H	F
24.030	Et	Cl	H	H	Ph	H
24.031	Et	Cl	H	H	Ph	Cl
24.032	Et	Cl	H	H	Ph	F
24.033	Et	Cl	H	H	Me	H
24.034	Et	Cl	H	H	Me	Cl
24.035	Et	Cl	H	H	Me	F
24.036	H	F	F	H	H	H
24.037	H	F	H	F	H	H

Table 25: Compounds according to the invention of the formula (I) in which X represents N, A represents A3, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷	R ⁸
25.001	H	H	H	H	H	H	H
25.002	H	F	H	H	H	H	H
25.003	H	F	H	H	Cl	H	H
25.004	H	F	H	H	H	Cl	Me
25.005	H	F	H	H	Cl	Cl	Me

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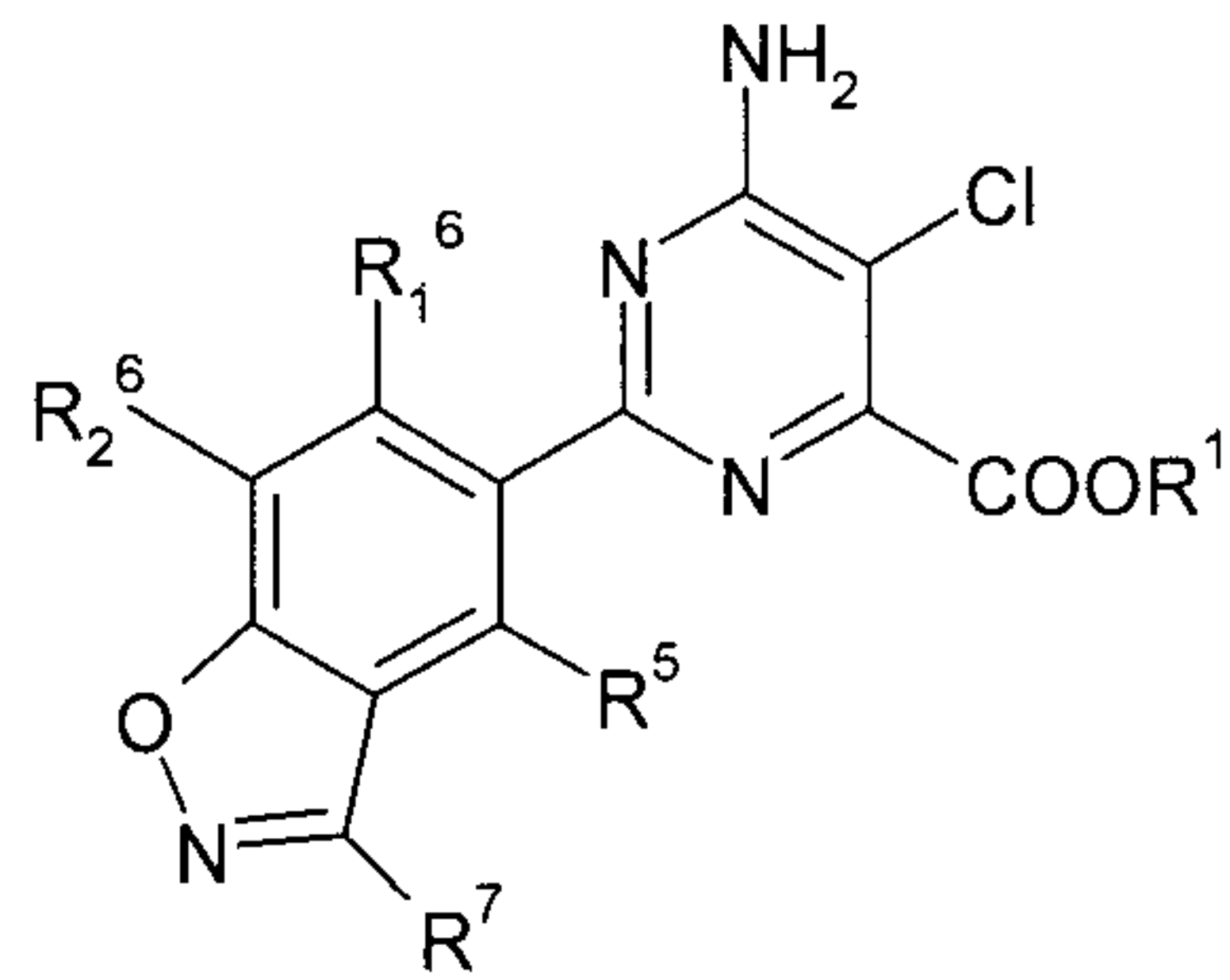
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷	R ⁸
25.006	H	F	H	H	Ph	H	Me
25.007	H	F	H	H	Ph	Cl	H
25.008	H	F	H	H	Ph	F	H
25.009	H	F	H	H	Me	H	H
25.010	H	F	H	H	Me	Cl	Me
25.011	H	F	H	H	Me	F	Me
25.012	Me	H	H	H	H	H	H
25.013	Me	F	H	H	H	H	H
25.014	Me	F	H	H	Cl	H	H
25.015	Me	F	H	H	H	Cl	Me
25.016	Me	F	H	H	Cl	Cl	Me
25.017	Me	F	H	H	H	F	Me
25.018	Me	F	H	H	Ph	H	H
25.019	Me	F	H	H	Ph	Cl	H
25.020	Me	F	H	H	Ph	F	H
25.021	Me	F	H	H	Me	H	H
25.022	Me	F	H	H	Me	Cl	Me
25.023	Me	F	H	H	Me	F	H
25.024	Et	H	H	H	H	H	H
25.025	Et	Cl	H	H	H	H	Me
25.026	Et	Cl	H	H	Cl	H	Me
25.027	Et	Cl	H	H	H	Cl	Me
25.028	Et	Cl	H	H	Cl	Cl	Me
25.029	Et	Cl	H	H	H	F	Me
25.030	Et	Cl	H	H	Ph	H	H
25.031	Et	Cl	H	H	Ph	Cl	H
25.032	Et	Cl	H	H	Ph	F	H
25.033	Et	Cl	H	H	Me	H	H
25.034	Et	Cl	H	H	Me	Cl	H
25.035	Et	Cl	H	H	Me	F	Me
25.036	H	F	F	H	H	H	H
25.037	H	F	H	F	H	H	H

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Table 26: Compounds according to the invention of the formula (I) in which X represents N, A represents A4, R³ and R⁴ each represent hydrogen and R² represents chlorine:



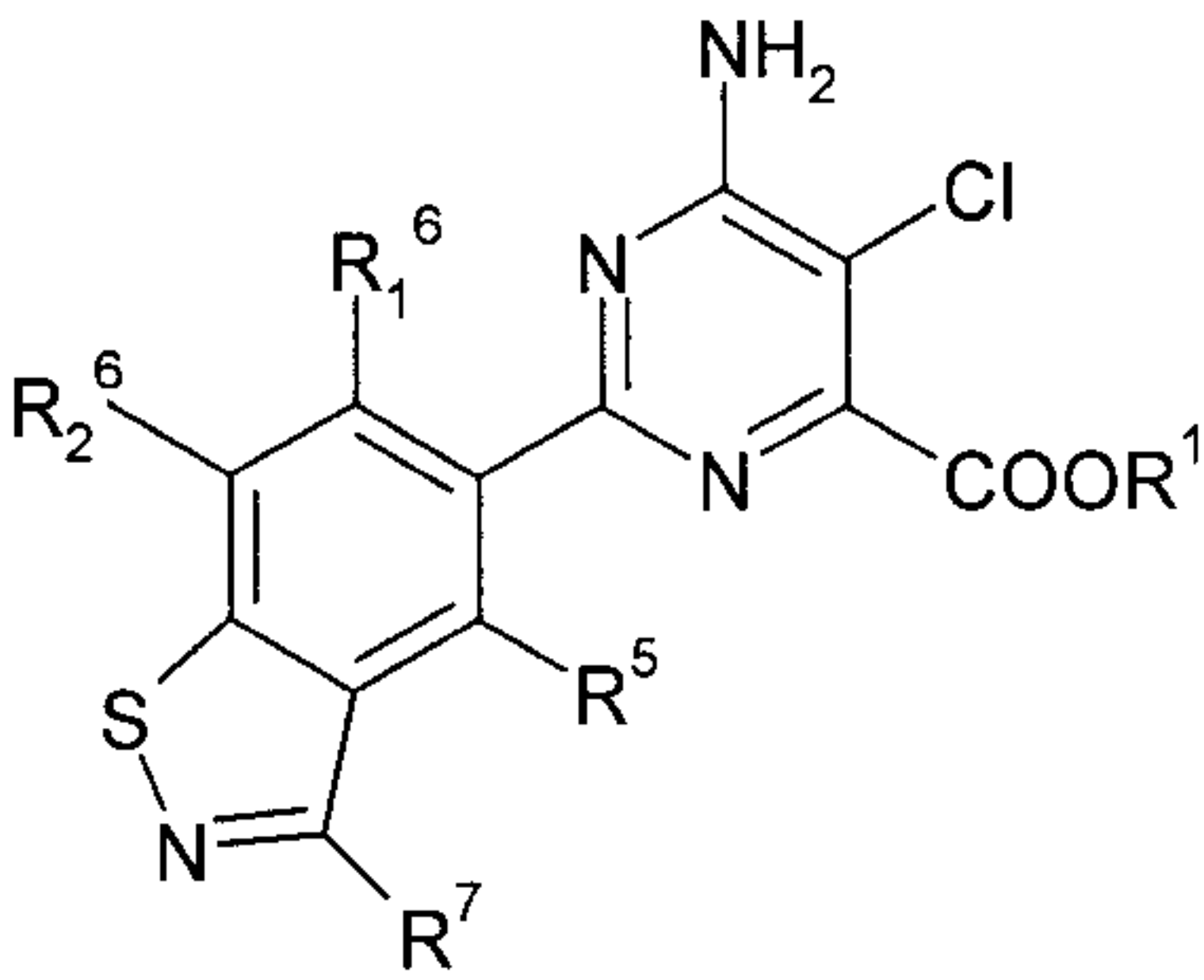
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
26.001	H	H	H	H	H
26.002	H	F	H	H	H
26.003	H	F	H	H	F
26.004	H	F	H	H	Cl
26.005	H	F	H	H	Me
26.006	H	Cl	H	H	H
26.007	H	Cl	H	H	F
26.008	H	Cl	H	H	Cl
26.009	H	Cl	H	H	Me
26.010	Me	H	H	H	H
26.011	Me	F	H	H	H
26.012	Me	F	H	H	F
26.013	Me	F	H	H	Cl
26.014	Me	Cl	H	H	H
26.015	Me	Cl	H	H	F
26.016	Me	Cl	H	H	Cl
26.017	Me	Cl	H	H	Me
26.018	Et	H	H	H	H
26.019	Et	F	H	H	H
26.020	Et	Cl	H	H	H
26.021	Et	F	H	H	Me
26.022	Et	Cl	H	H	Me
26.023	H	F	F	H	H
26.024	H	F	H	F	H

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Table 27: Compounds according to the invention of the formula (I) in which X represents N, A represents A5, R³ and R⁴ each represent hydrogen and R² represents chlorine:

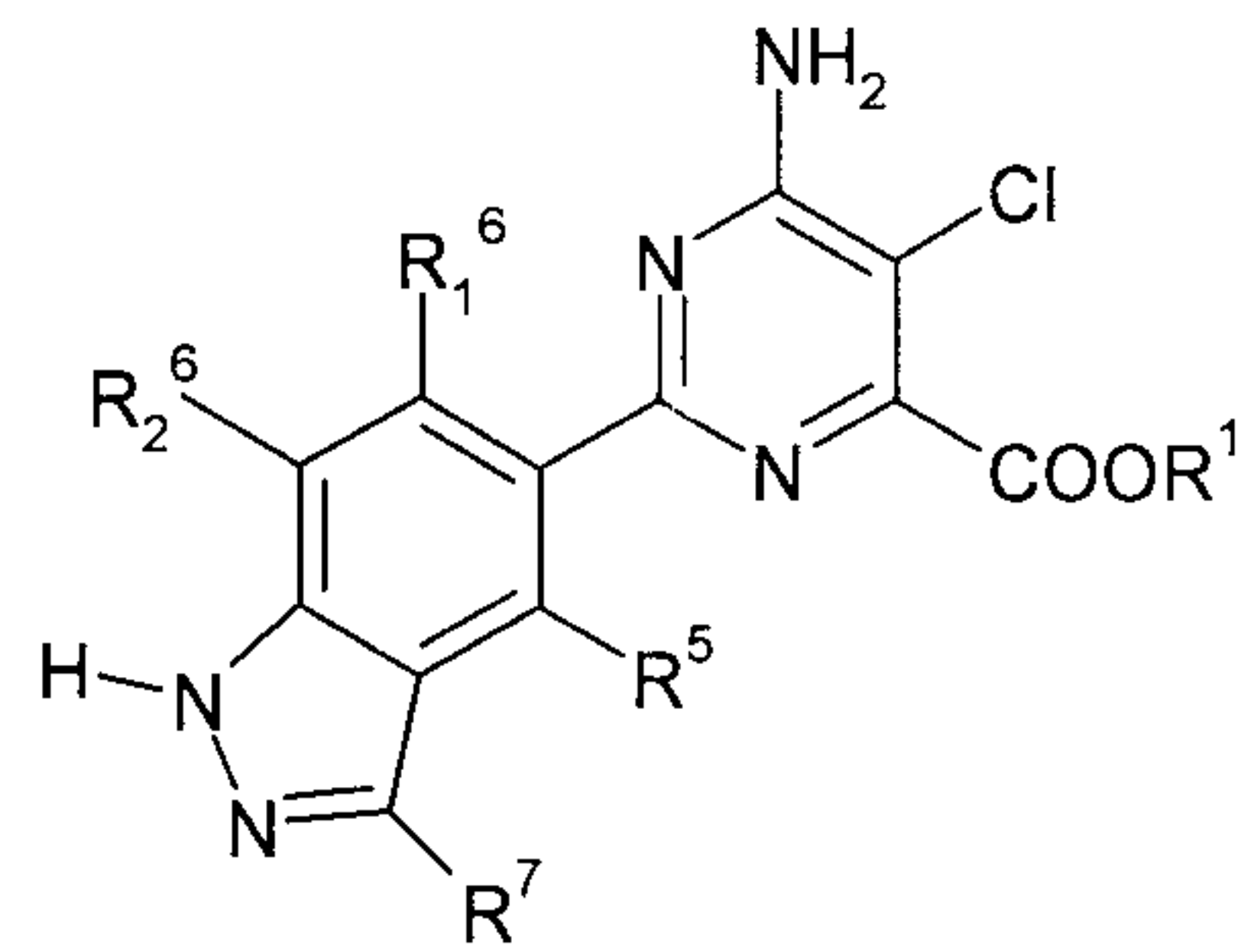


Ex. No.	R ¹	R ⁵	R ¹ ₆	R ² ₆	R ⁷
27.001	H	H	H	H	H
27.002	H	F	H	H	H
27.003	H	F	H	H	F
27.004	H	F	H	H	Cl
27.005	H	F	H	H	F
27.006	H	Cl	H	H	H
27.007	H	Cl	H	H	F
27.008	H	Cl	H	H	Cl
27.009	H	Cl	H	H	Me
27.010	Me	H	H	H	H
27.011	Me	F	H	H	H
27.012	Me	F	H	H	Cl
27.013	Me	Cl	H	H	H
27.014	Me	Cl	H	H	F
27.015	Me	Cl	H	H	Cl
27.016	Me	Cl	H	H	Me
27.017	Et	H	H	H	H
27.018	Et	F	H	H	H
27.019	Et	Cl	H	H	H
27.020	Et	F	H	H	Me
27.021	Et	Cl	H	H	Me
27.022	H	F	F	H	H
27.023	H	F	H	F	H

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Table 28: Compounds according to the invention of the formula (I) in which X represents N, A represents A6, R⁸, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
28.001	H	H	H	H	H
28.002	H	F	H	H	H
28.003	H	F	H	H	Me
28.004	H	F	H	H	Et
28.005	H	H	H	H	Me
28.006	H	Cl	H	H	H
28.007	H	Cl	H	H	Me
28.008	H	Cl	H	H	Et
28.009	Me	H	H	H	H
28.010	Me	H	H	H	Me
28.011	Me	F	H	H	H
28.012	Me	F	H	H	Me
28.013	Me	F	H	H	Et
28.014	Me	Cl	H	H	H
28.015	Me	Cl	H	H	Me
28.016	Me	Cl	H	H	Et
28.017	Me	H	H	H	Me
28.018	Et	H	H	H	H
28.019	Et	H	H	H	Me
28.020	Et	H	H	H	Et
28.021	Et	F	H	H	H
28.022	Et	F	H	H	Me
28.023	Et	F	H	H	Et
28.024	Et	Cl	H	H	H

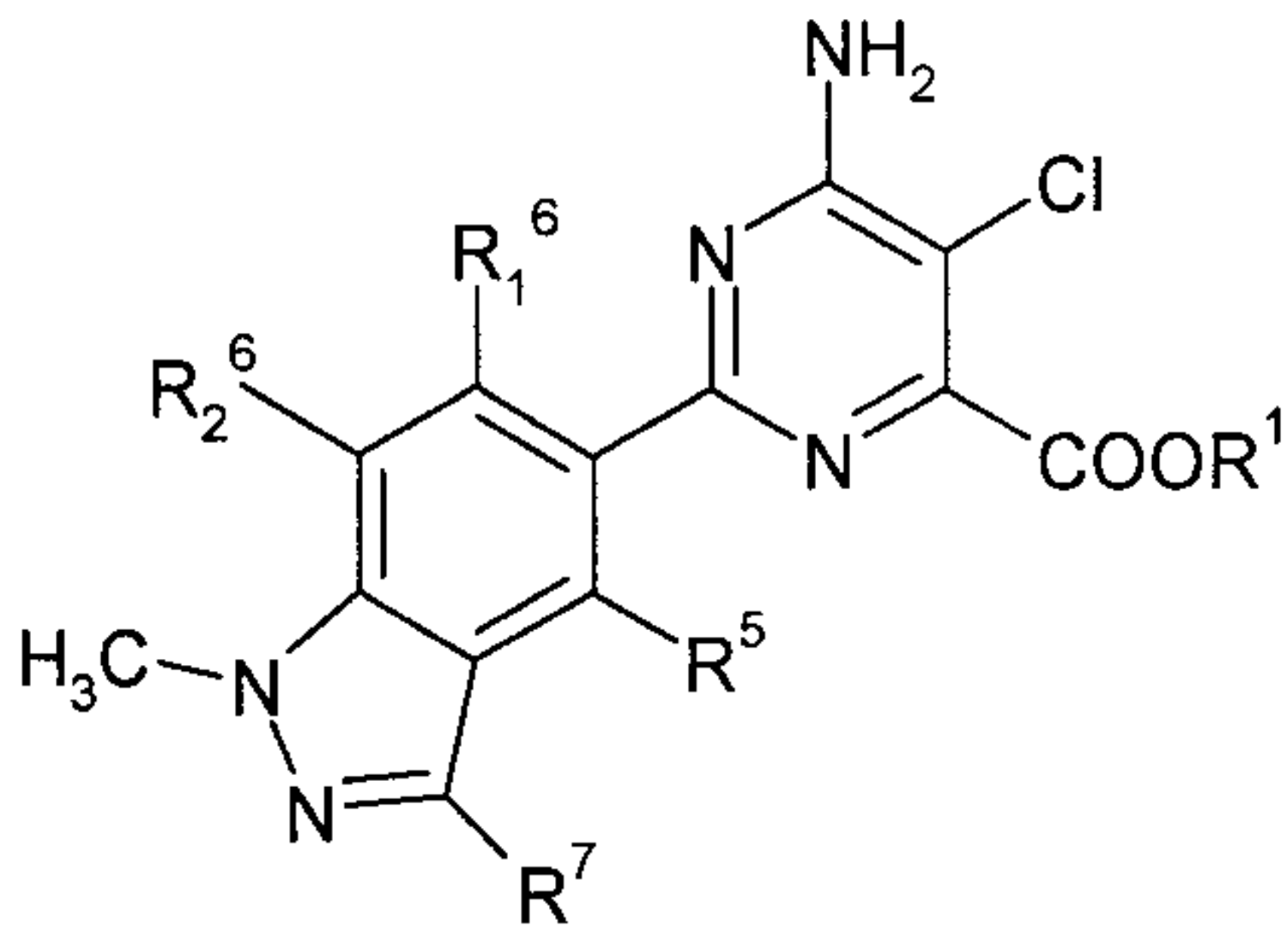
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
28.025	Et	Cl	H	H	Me
28.026	Et	Cl	H	H	Et
28.027	H	F	F	H	H
28.028	H	F	H	F	H

Table 29: Compounds according to the invention of the formula (I) in which X represents N, A represents A6, R³ and R⁴ each represent hydrogen, R⁸ represents methyl and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
29.001	H	H	H	H	H
29.002	H	F	H	H	H
29.003	H	F	H	H	Me
29.004	H	F	H	H	Et
29.005	H	H	H	H	Me
29.006	H	Cl	H	H	H
29.007	H	Cl	H	H	Me
29.008	H	Cl	H	H	Et
29.009	Me	H	H	H	H
29.010	Me	H	H	H	Me
29.011	Me	F	H	H	H
29.012	Me	F	H	H	Me
29.013	Me	F	H	H	Et
29.014	Me	Cl	H	H	H
29.015	Me	Cl	H	H	Me
29.016	Me	Cl	H	H	Et

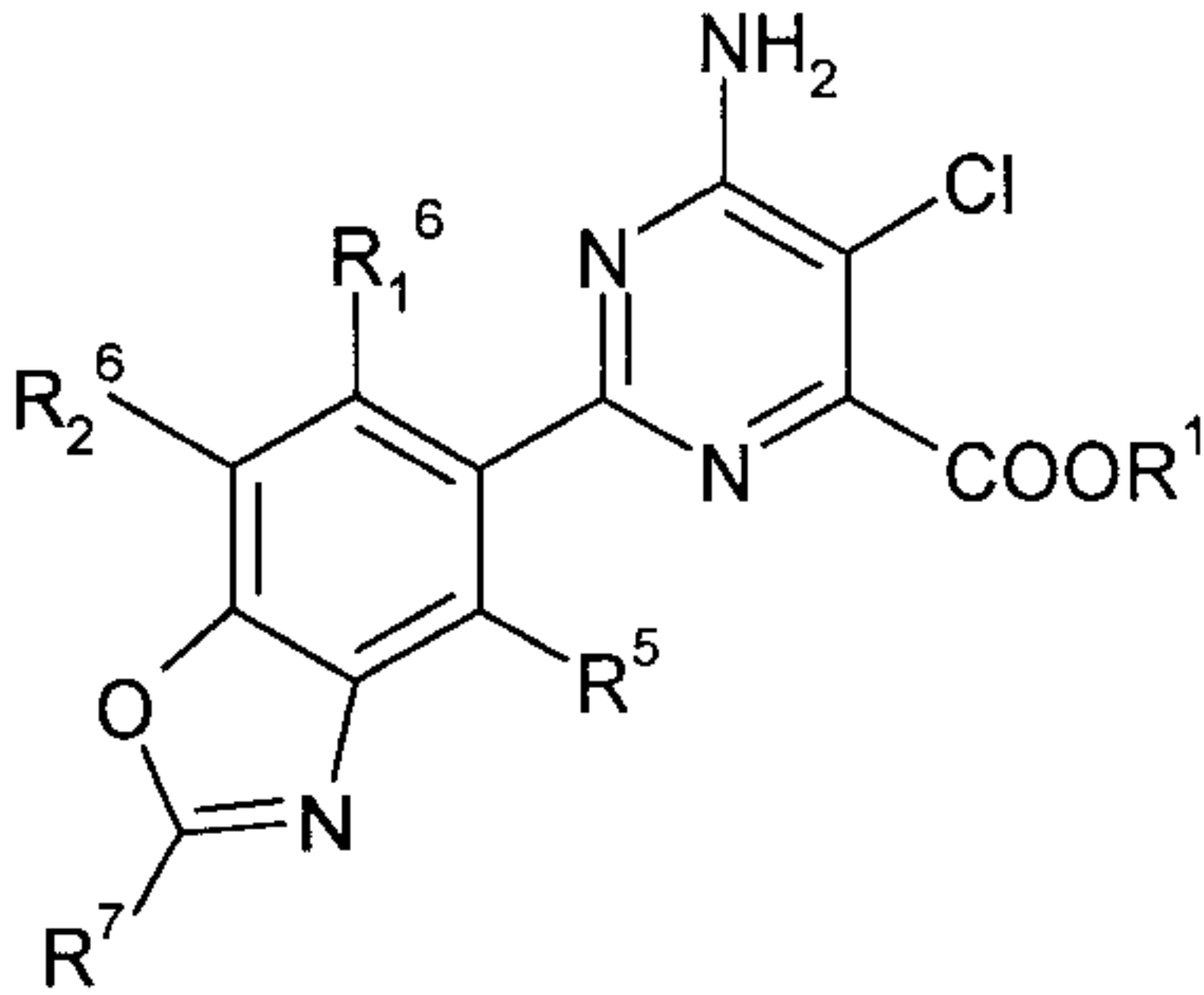
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
29.017	Me	H	H	H	Me
29.018	Et	H	H	H	H
29.019	Et	H	H	H	Me
29.020	Et	H	H	H	Et
29.021	Et	F	H	H	H
29.022	Et	F	H	H	Me
29.023	Et	F	H	H	Et
29.024	Et	Cl	H	H	H
29.025	Et	Cl	H	H	Me
29.026	Et	Cl	H	H	Et
29.027	H	F	F	H	H
29.028	H	F	H	F	H

Table 30: Compounds according to the invention of the formula (I) in which X represents N, A represents A7, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
30.001	H	H	H	H	H
30.002	H	H	H	H	Me
30.003	H	H	H	H	Ph
30.004	H	H	H	H	SMe
30.005	H	F	H	H	H
30.006	H	F	H	H	Me
30.007	H	F	H	H	Ph
30.008	H	F	H	H	SMe

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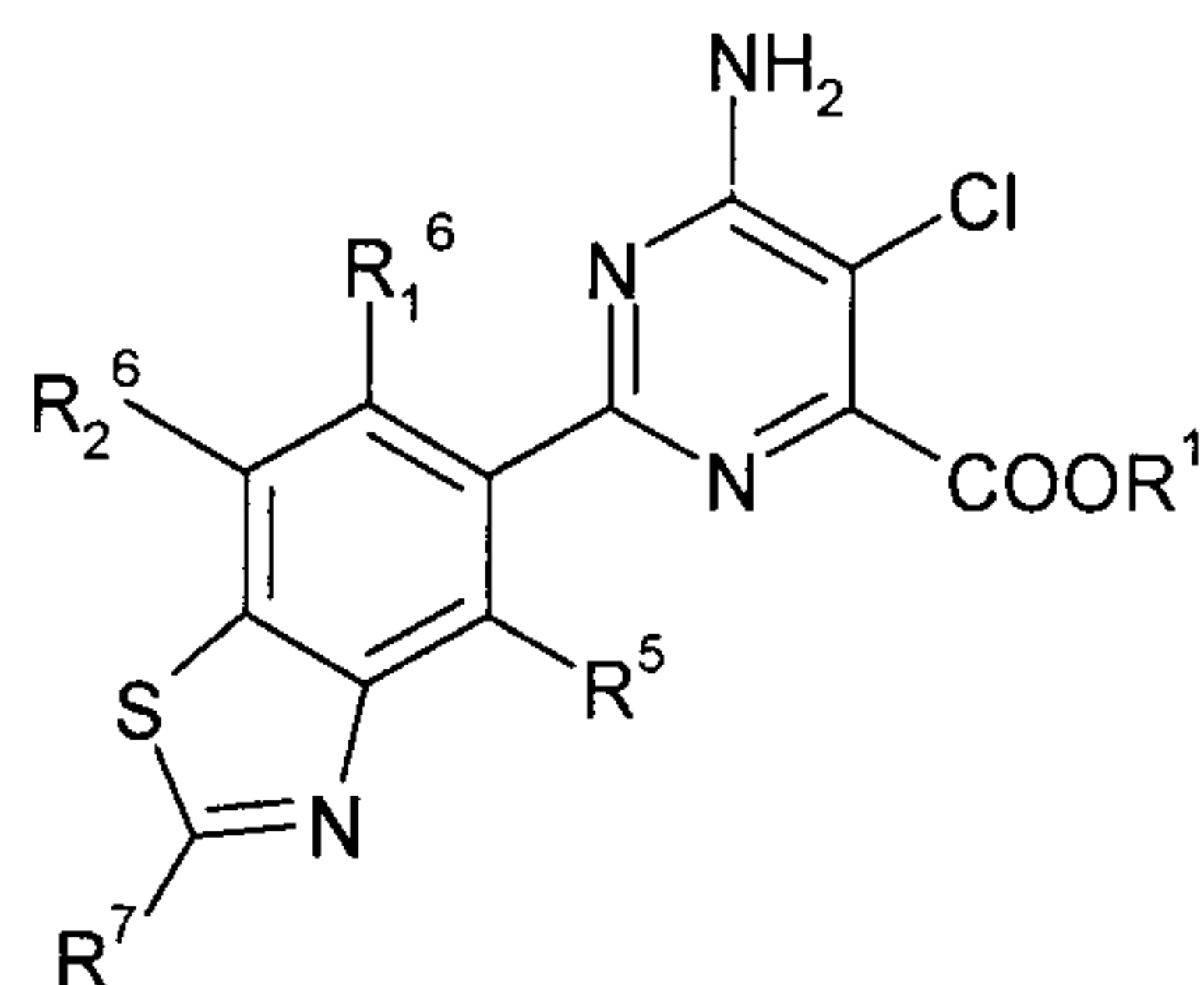
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
30.009	H	Cl	H	H	H
30.010	H	Cl	H	H	Me
30.011	H	Cl	H	H	Ph
30.012	H	Cl	H	H	SMe
30.013	Me	H	H	H	H
30.014	Me	H	H	H	Me
30.015	Me	H	H	H	Ph
30.016	Me	H	H	H	SMe
30.017	Me	F	H	H	H
30.018	Me	F	H	H	Me
30.019	Me	F	H	H	Ph
30.020	Me	F	H	H	SMe
30.021	Me	Cl	H	H	H
30.022	Me	Cl	H	H	Me
30.023	Me	Cl	H	H	Ph
30.024	Me	Cl	H	H	SMe
30.025	Et	H	H	H	H
30.026	Et	H	H	H	Me
30.027	Et	H	H	H	Ph
30.028	Et	H	H	H	SMe
30.029	Et	F	H	H	H
30.030	Et	F	H	H	Me
30.031	Et	F	H	H	Ph
30.032	Et	F	H	H	SMe
30.033	Et	Cl	H	H	H
30.034	Et	Cl	H	H	Me
30.035	Et	Cl	H	H	Ph
30.036	Et	Cl	H	H	SMe
30.037	H	F	F	H	H
30.038	H	F	H	F	H

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Table 31: Compounds according to the invention of the formula (I) in which X represents N, A represents A8, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
31.001	H	H	H	H	H
31.002	H	H	H	H	Me
31.003	H	H	H	H	Ph
31.004	H	H	H	H	SMe
31.005	H	F	H	H	H
31.006	H	F	H	H	Me
31.007	H	F	H	H	Ph
31.008	H	F	H	H	SMe
31.009	H	Cl	H	H	H
31.010	H	Cl	H	H	Me
31.011	H	Cl	H	H	Ph
31.012	H	Cl	H	H	SMe
31.013	Me	H	H	H	H
31.014	Me	H	H	H	Me
31.015	Me	H	H	H	Ph
31.016	Me	H	H	H	SMe
31.017	Me	F	H	H	H
31.018	Me	F	H	H	Me
31.019	Me	F	H	H	Ph
31.020	Me	F	H	H	SMe
31.021	Me	Cl	H	H	H
31.022	Et	H	H	H	H
31.023	Et	H	H	H	Me
31.024	Et	H	H	H	Ph

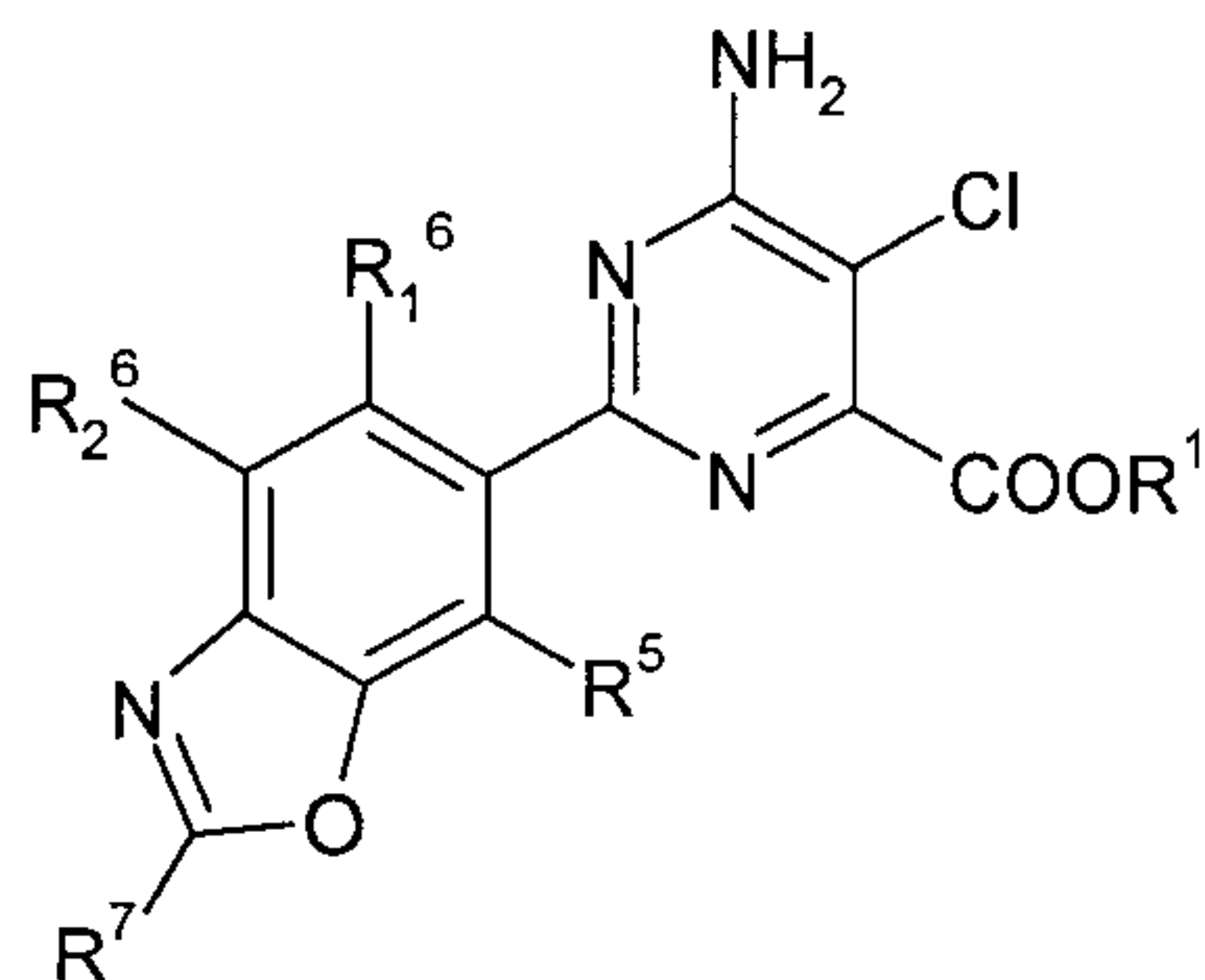
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
31.025	Et	H	H	H	SMe
31.026	Et	F	H	H	H
31.027	Et	F	H	H	Me
31.028	Et	F	H	H	Ph
31.029	Et	F	H	H	SMe
31.030	Et	Cl	H	H	H
31.031	Et	Cl	H	H	Me
31.032	Et	Cl	H	H	Ph
31.033	Et	Cl	H	H	SMe
31.034	H	F	F	H	H
31.035	H	F	H	F	H

Table 32: Compounds according to the invention of the formula (I) in which X represents N, A represents A9, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
32.001	H	H	H	H	H
32.002	H	H	H	H	Me
32.003	H	H	H	H	Ph
32.004	H	H	H	H	SMe
32.005	H	F	H	H	H
32.006	H	F	H	H	Me
32.007	H	F	H	H	Ph
32.008	H	F	H	H	SMe
32.009	H	Cl	H	H	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
32.010	H	Cl	H	H	Me
32.011	H	Cl	H	H	Ph
32.012	H	Cl	H	H	SMe
32.013	Me	H	H	H	H
32.014	Me	H	H	H	Me
32.015	Me	H	H	H	Ph
32.016	Me	H	H	H	SMe
32.017	Me	F	H	H	H
32.018	Me	F	H	H	Me
32.019	Me	F	H	H	Ph
32.020	Me	F	H	H	SMe
32.021	Me	Cl	H	H	H
32.022	Me	Cl	H	H	Me
32.023	Me	Cl	H	H	Ph
32.024	Me	Cl	H	H	SMe
32.025	Et	H	H	H	H
32.026	Et	H	H	H	Me
32.027	Et	H	H	H	Ph
32.028	Et	H	H	H	SMe
32.029	Et	F	H	H	H
32.030	Et	F	H	H	Me
32.031	Et	F	H	H	Ph
32.032	Et	F	H	H	SMe
32.033	Et	Cl	H	H	H
32.034	Et	Cl	H	H	Me
32.035	Et	Cl	H	H	Ph
32.036	Et	Cl	H	H	SMe
32.037	H	F	F	H	H
32.038	H	F	H	F	H

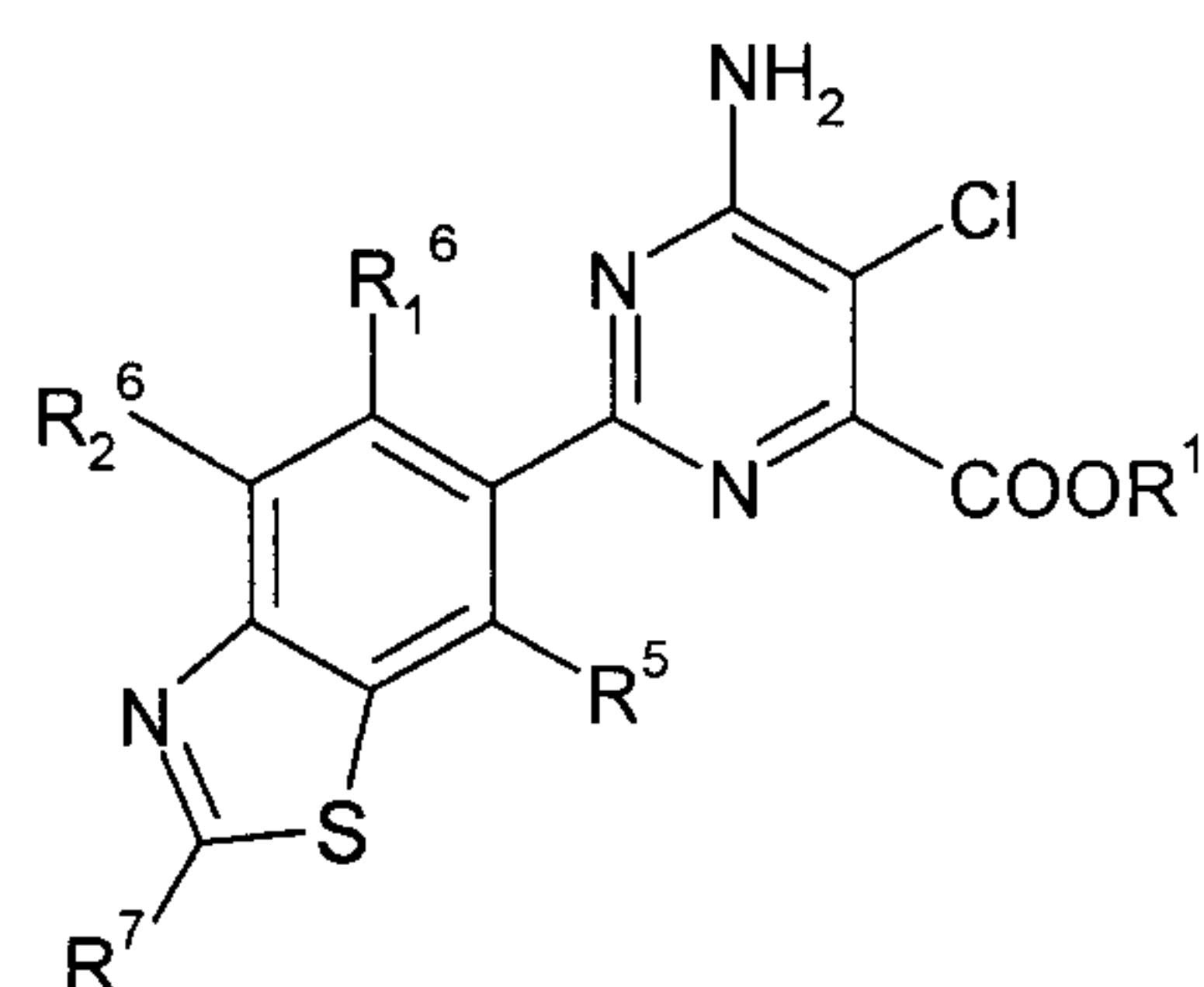
Table 33: Compounds according to the invention of the formula (I) in which X represents N, A represents A10, R³ and R⁴ each represent hydrogen and R²

5 represents chlorine:

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
33.001	H	H	H	H	H
33.002	H	H	H	H	Me
33.003	H	H	H	H	Ph
33.004	H	H	H	H	SMe
33.005	H	F	H	H	H
33.006	H	F	H	H	Me
33.007	H	F	H	H	Ph
33.008	H	F	H	H	SMe
33.009	H	Cl	H	H	H
33.010	H	Cl	H	H	Me
33.011	H	Cl	H	H	Ph
33.012	H	Cl	H	H	SMe
33.013	Me	H	H	H	H
33.014	Me	H	H	H	Me
33.015	Me	H	H	H	Ph
33.016	Me	H	H	H	SMe
33.017	Me	F	H	H	H
33.018	Me	F	H	H	Me
33.019	Me	F	H	H	Ph
33.020	Me	F	H	H	SMe
33.021	Me	Cl	H	H	H
33.022	Et	H	H	H	H
33.023	Et	H	H	H	Me
33.024	Et	H	H	H	Ph
33.025	Et	H	H	H	SMe

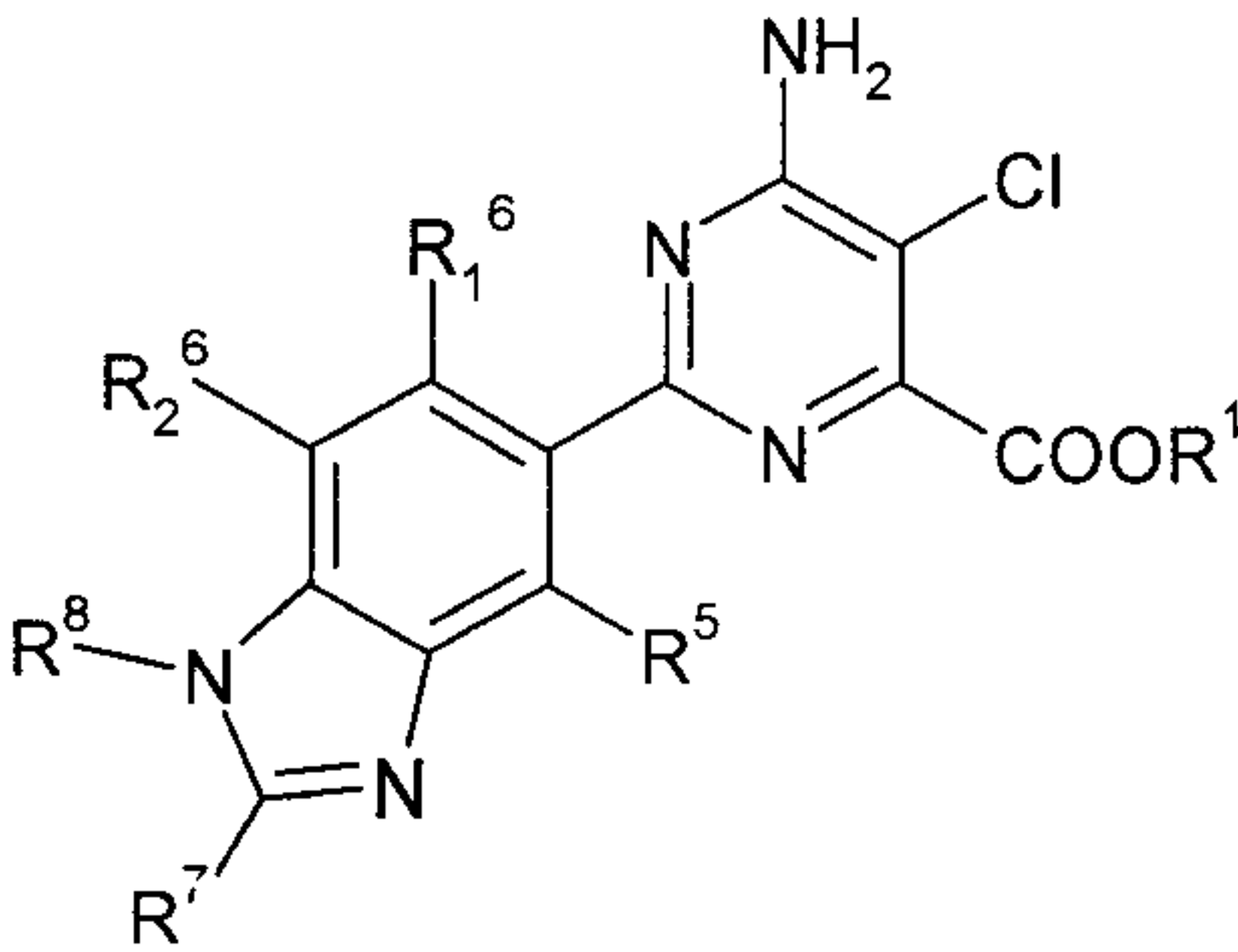
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
33.026	Et	F	H	H	H
33.027	Et	F	H	H	Me
33.028	Et	F	H	H	Ph
33.029	Et	F	H	H	SMe
33.030	Et	Cl	H	H	H
33.031	Et	Cl	H	H	Me
33.032	Et	Cl	H	H	Ph
33.033	Et	Cl	H	H	SMe
33.034	H	F	F	H	H
33.035	H	F	H	F	H

Table 34: Compounds according to the invention of the formula (I) in which X represents N, A represents A11, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
34.001	H	H	H	H	H	H
34.002	H	F	H	H	H	H
34.003	H	F	H	H	H	Me
34.004	H	F	H	H	Me	H
34.005	H	F	H	H	Me	Me
34.006	H	Cl	H	H	H	H
34.007	H	Cl	H	H	H	Me
34.008	H	Cl	H	H	Me	H
34.009	H	Cl	H	H	Me	Me

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
34.010	H	H	H	H	Ph	H
34.011	H	H	H	H	Ph	Me
34.012	H	F	H	H	Ph	H
34.013	H	F	H	H	Ph	Me
34.014	H	Cl	H	H	Ph	H
34.015	H	Cl	H	H	Ph	Me
34.016	H	H	H	H	Me	H
34.017	H	H	H	H	H	Me
34.018	H	H	H	H	Me	Me
34.019	Me	H	H	H	H	H
34.020	Me	F	H	H	H	H
34.021	Me	F	H	H	H	Me
34.022	Me	F	H	H	Me	H
34.023	Me	F	H	H	Me	Me
34.024	Me	Cl	H	H	H	H
34.025	Me	Cl	H	H	H	Me
34.026	Me	Cl	H	H	Me	H
34.027	Me	Cl	H	H	Me	Me
34.028	Me	H	H	H	Ph	H
34.029	Me	H	H	H	Ph	Me
34.030	Me	F	H	H	Ph	H
34.031	Me	F	H	H	Ph	Me
34.032	Me	Cl	H	H	Ph	H
34.033	Me	Cl	H	H	Ph	Me
34.034	Me	H	H	H	Me	H
34.035	Me	H	H	H	H	Me
34.036	Me	H	H	H	Me	Me
34.037	Et	H	H	H	H	H
34.038	Et	F	H	H	H	H
34.039	Et	F	H	H	H	Me
34.040	Et	F	H	H	Me	H
34.041	Et	F	H	H	Me	Me
34.042	Et	Cl	H	H	H	H
34.043	Et	Cl	H	H	H	Me

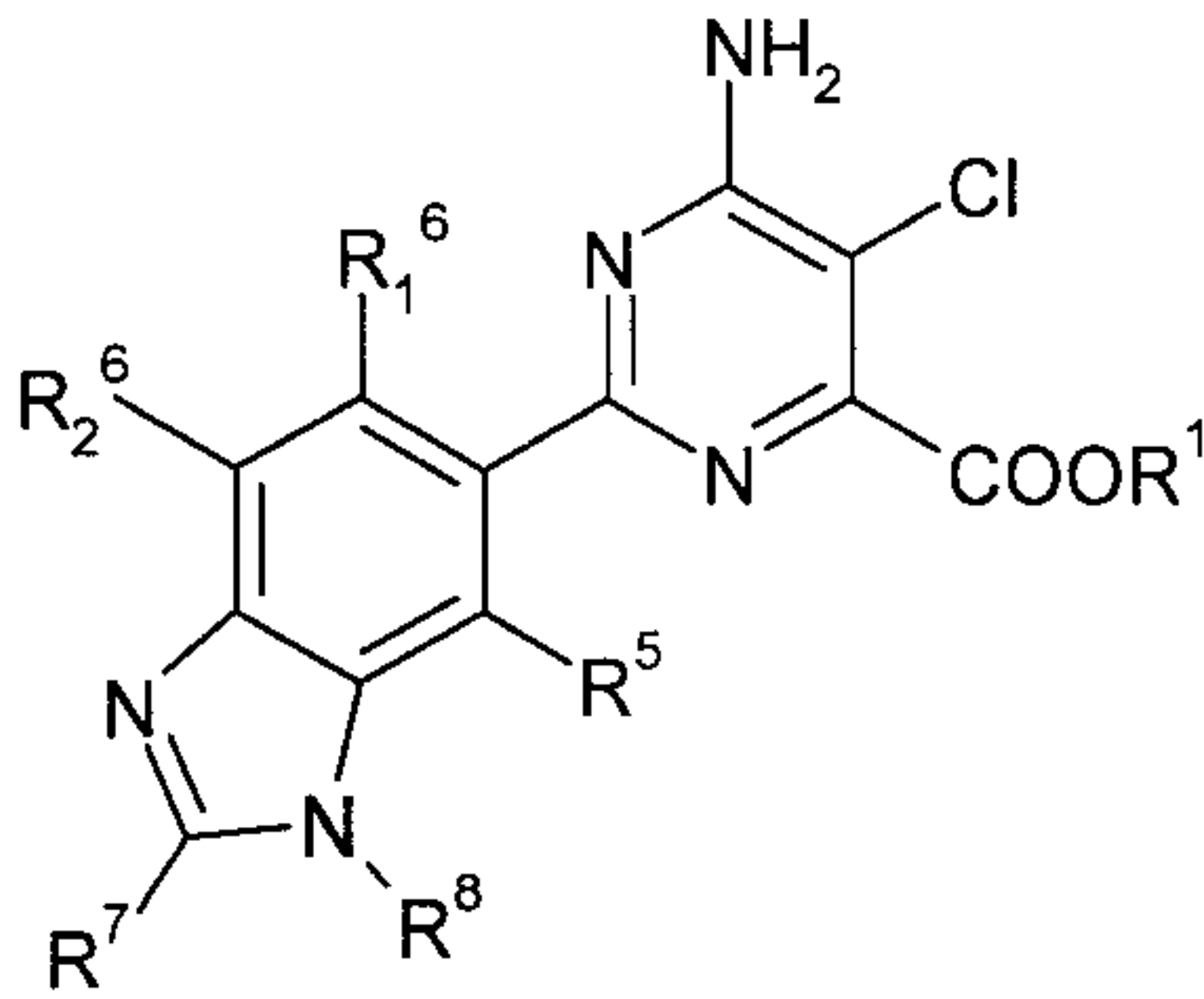
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
34.044	Et	Cl	H	H	Me	H
34.045	Et	H	H	H	Ph	H
34.046	Et	H	H	H	Ph	Me
34.047	Et	F	H	H	Ph	H
34.048	Et	F	H	H	Ph	Me
34.049	Et	Cl	H	H	Ph	H
34.050	Et	Cl	H	H	Me	Me
34.051	Et	H	H	H	Me	H
34.052	Et	H	H	H	H	Me
34.053	Et	H	H	H	Me	Me
34.054	H	F	F	H	H	H
34.055	H	F	H	F	H	H

Table 35: Compounds according to the invention of the formula (I) in which X represents N, A represents A12, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
35.001	H	H	H	H	H	Me
35.002	H	F	H	H	H	Me
35.003	H	F	H	H	Me	Me
35.004	H	Cl	H	H	H	Me
35.005	H	Cl	H	H	Me	Me
35.006	H	H	H	H	Ph	Me
35.007	H	F	H	H	Ph	Me
35.008	H	Cl	H	H	Ph	Me

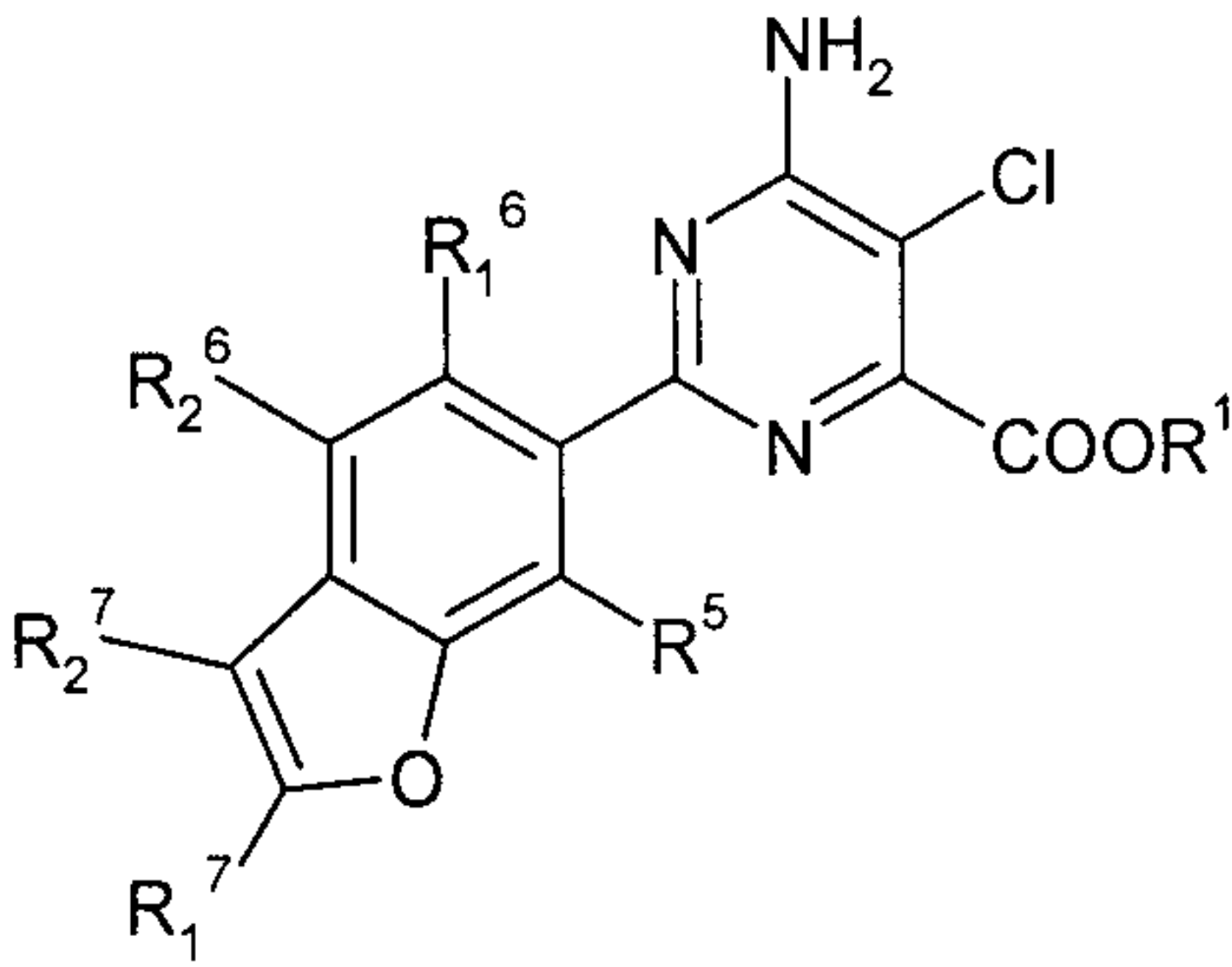
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
35.009	H	H	H	H	H	Me
35.010	Me	H	H	H	H	Me
35.011	Me	F	H	H	H	Me
35.012	Me	H	H	H	Me	Me
35.013	Me	F	H	H	Me	Me
35.014	Me	Cl	H	H	H	Me
35.015	Me	Cl	H	H	Me	Me
35.016	Me	H	H	H	Ph	Me
35.017	Me	F	H	H	Ph	Me
35.018	Me	Cl	H	H	Ph	Me
35.019	Et	F	H	H	H	Me
35.020	Et	F	H	H	Me	Me
35.021	Et	Cl	H	H	H	Me
35.022	Et	H	H	H	Ph	Me
35.023	Et	F	H	H	Ph	Me
35.024	Et	Cl	H	H	Ph	Me
35.025	Et	H	H	H	H	Me
35.026	Et	H	H	H	Me	Me
35.027	Et	Cl	H	H	Me	Me
35.028	H	F	F	H	H	H
35.029	H	F	H	F	H	H

Table 36: Compounds according to the invention of the formula (I) in which X represents N, A represents A13, R³ and R⁴ each represent hydrogen and R² represents chlorine:



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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
36.001	H	H	H	H	H	H
36.002	H	H	H	H	H	Cl
36.003	H	H	H	H	H	F
36.004	H	H	H	H	H	Me
36.005	H	H	H	H	F	H
36.006	H	H	H	H	F	Cl
36.007	H	H	H	H	F	F
36.008	H	H	H	H	F	Me
36.009	H	H	H	H	Cl	H
36.010	H	H	H	H	Cl	F
36.011	H	H	H	H	Cl	Cl
36.012	H	H	H	H	Cl	Me
36.013	H	H	H	H	Me	H
36.014	H	H	H	H	Me	Cl
36.015	H	H	H	H	Me	F
36.016	H	H	H	H	Me	Me
36.017	H	H	H	H	Ph	H
36.018	H	H	H	H	Ph	Cl
36.019	H	H	H	H	Ph	F
36.020	H	H	H	H	Ph	Me
36.021	H	F	H	H	H	H
36.022	H	F	H	H	H	Cl
36.023	H	F	H	H	H	F
36.024	H	F	H	H	H	Me
36.025	H	F	H	H	F	H
36.026	H	F	H	H	F	Cl
36.027	H	F	H	H	F	F
36.028	H	F	H	H	F	Me
36.029	H	F	H	H	Cl	H
36.030	H	F	H	H	Cl	F
36.031	H	F	H	H	Cl	Cl
36.032	H	F	H	H	Cl	Me
36.033	H	F	H	H	Me	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
36.034	H	F	H	H	Me	Cl
36.035	H	F	H	H	Me	F
36.036	H	F	H	H	Me	Me
36.037	H	F	H	H	Ph	H
36.038	H	F	H	H	Ph	Cl
36.039	H	F	H	H	Ph	F
36.040	H	F	H	H	Ph	Me
36.041	H	Cl	H	H	H	H
36.042	H	Cl	H	H	H	Cl
36.043	H	Cl	H	H	H	F
36.044	H	Cl	H	H	H	Me
36.045	H	Cl	H	H	F	H
36.046	H	Cl	H	H	F	Cl
36.047	H	Cl	H	H	F	F
36.048	H	Cl	H	H	F	Me
36.049	H	Cl	H	H	Cl	H
36.050	H	Cl	H	H	Cl	F
36.051	H	Cl	H	H	Cl	Cl
36.052	H	Cl	H	H	Cl	Me
36.053	H	Cl	H	H	Me	H
36.054	H	Cl	H	H	Me	Cl
36.055	H	Cl	H	H	Me	F
36.056	H	Cl	H	H	Me	Me
36.057	H	Cl	H	H	Ph	H
36.058	H	Cl	H	H	Ph	Cl
36.059	H	Cl	H	H	Ph	F
36.060	H	Cl	H	H	Ph	Me
36.061	Me	H	H	H	H	H
36.062	Me	H	H	H	H	Cl
36.063	Me	H	H	H	H	F
36.064	Me	H	H	H	H	Me
36.065	Me	H	H	H	F	H
36.066	Me	H	H	H	F	Cl
36.067	Me	H	H	H	F	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
36.068	Me	H	H	H	F	Me
36.069	Me	H	H	H	Cl	H
36.070	Me	H	H	H	Cl	F
36.071	Me	H	H	H	Cl	Cl
36.072	Me	H	H	H	Cl	Me
36.073	Me	H	H	H	Me	H
36.074	Me	H	H	H	Me	Cl
36.075	Me	H	H	H	Me	F
36.076	Me	H	H	H	Me	Me
36.077	Me	H	H	H	Ph	H
36.078	Me	H	H	H	Ph	Cl
36.079	Me	H	H	H	Ph	F
36.080	Me	H	H	H	Ph	Me
36.081	Me	F	H	H	H	H
36.082	Me	F	H	H	H	Cl
36.083	Me	F	H	H	H	F
36.084	Me	F	H	H	H	Me
36.085	Me	F	H	H	F	H
36.086	Me	F	H	H	F	Cl
36.087	Me	F	H	H	F	F
36.088	Me	F	H	H	F	Me
36.089	Me	F	H	H	Cl	H
36.090	Me	F	H	H	Cl	F
36.091	Me	F	H	H	Cl	Cl
36.092	Me	F	H	H	Cl	Me
36.093	Me	F	H	H	Me	H
36.094	Me	F	H	H	Me	Cl
36.095	Me	F	H	H	Me	F
36.096	Me	F	H	H	Me	Me
36.097	Me	F	H	H	Ph	H
36.098	Me	F	H	H	Ph	Cl
36.099	Me	F	H	H	Ph	F
36.100	Me	F	H	H	Ph	Me
36.101	Me	Cl	H	H	H	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
36.102	Me	Cl	H	H	H	Cl
36.103	Me	Cl	H	H	H	F
36.104	Me	Cl	H	H	H	Me
36.105	Me	Cl	H	H	F	H
36.106	Me	Cl	H	H	F	Cl
36.107	Me	Cl	H	H	F	F
36.108	Me	Cl	H	H	F	Me
36.109	Me	Cl	H	H	Cl	H
36.110	Me	Cl	H	H	Cl	F
36.111	Me	Cl	H	H	Cl	Cl
36.112	Me	Cl	H	H	Cl	Me
36.113	Me	Cl	H	H	Me	H
36.114	Me	Cl	H	H	Me	Cl
36.115	Me	Cl	H	H	Me	F
36.116	Me	Cl	H	H	Me	Me
36.117	Me	Cl	H	H	Ph	H
36.118	Me	Cl	H	H	Ph	Cl
36.119	Me	Cl	H	H	Ph	F
36.120	Me	Cl	H	H	Ph	Me
36.121	Et	H	H	H	H	H
36.122	Et	H	H	H	H	Cl
36.123	Et	H	H	H	H	F
36.124	Et	H	H	H	H	Me
36.125	Et	H	H	H	F	H
36.126	Et	H	H	H	F	Cl
36.127	Et	H	H	H	F	F
36.128	Et	H	H	H	F	Me
36.129	Et	H	H	H	Cl	H
36.130	Et	H	H	H	Cl	F
36.131	Et	H	H	H	Cl	Cl
36.132	Et	H	H	H	Cl	Me
36.133	Et	H	H	H	Me	H
36.134	Et	H	H	H	Me	Cl
36.135	Et	H	H	H	Me	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
36.136	Et	H	H	H	Me	Me
36.137	Et	H	H	H	Ph	H
36.138	Et	H	H	H	Ph	Cl
36.139	Et	H	H	H	Ph	F
36.140	Et	H	H	H	Ph	Me
36.141	Et	F	H	H	H	H
36.142	Et	F	H	H	H	Cl
36.143	Et	F	H	H	H	F
36.144	Et	F	H	H	H	Me
36.145	Et	F	H	H	F	H
36.146	Et	F	H	H	F	Cl
36.147	Et	F	H	H	F	F
36.148	Et	F	H	H	F	Me
36.149	Et	F	H	H	Cl	H
36.150	Et	F	H	H	Cl	F
36.151	Et	F	H	H	Cl	Cl
36.152	Et	F	H	H	Cl	Me
36.153	Et	F	H	H	Me	H
36.154	Et	F	H	H	Me	Cl
36.155	Et	F	H	H	Me	F
36.156	Et	F	H	H	Me	Me
36.157	Et	F	H	H	Ph	H
36.158	Et	F	H	H	Ph	Cl
36.159	Et	F	H	H	Ph	F
36.160	Et	F	H	H	Ph	Me
36.161	Et	Cl	H	H	H	H
36.162	Et	Cl	H	H	H	Cl
36.163	Et	Cl	H	H	H	F
36.164	Et	Cl	H	H	H	Me
36.165	Et	Cl	H	H	F	H
36.166	Et	Cl	H	H	F	Cl
36.167	Et	Cl	H	H	F	F
36.168	Et	Cl	H	H	F	Me
36.169	Et	Cl	H	H	Cl	H

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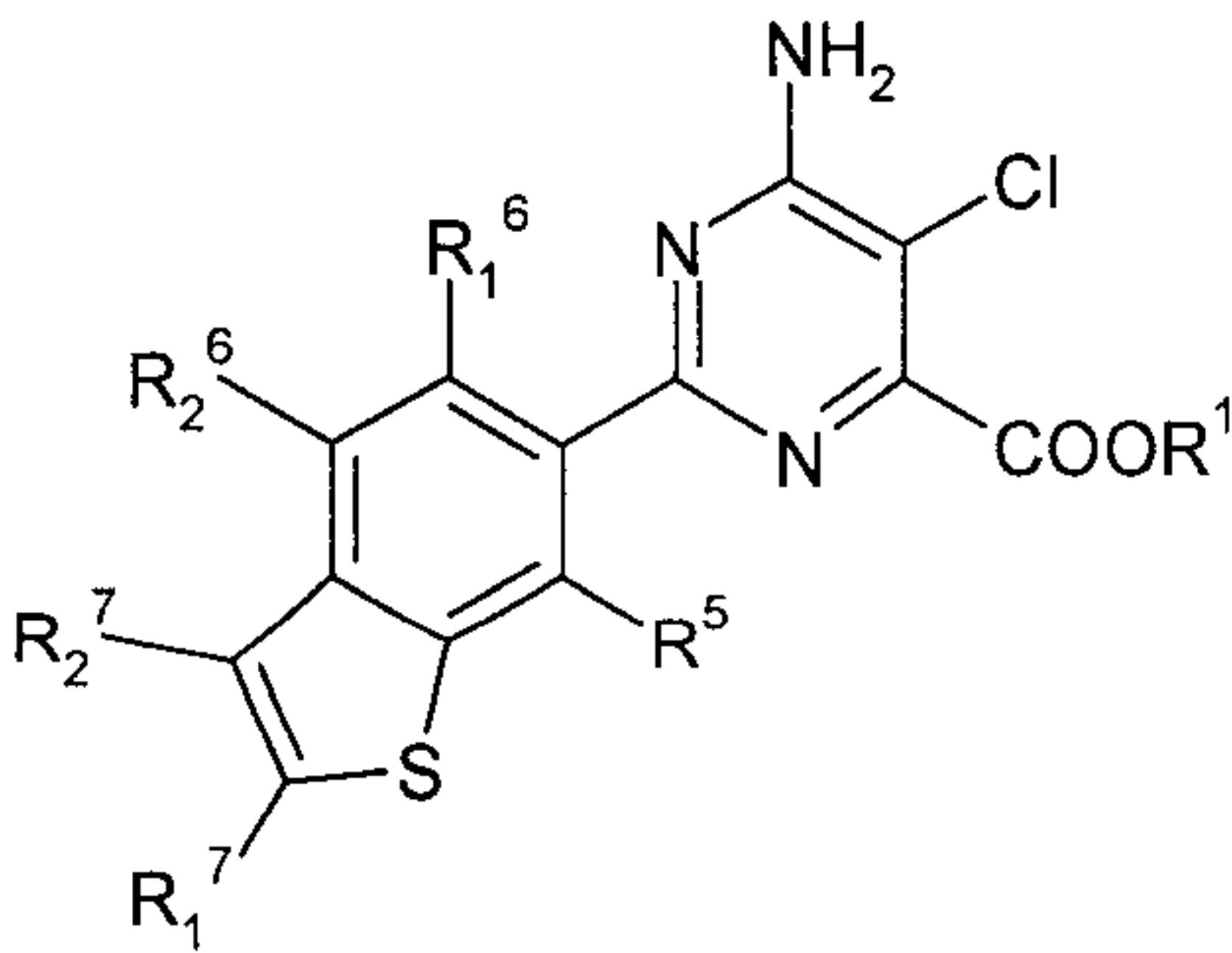
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
36.170	Et	Cl	H	H	Cl	F
36.171	Et	Cl	H	H	Cl	Cl
36.172	Et	Cl	H	H	Cl	Me
36.173	Et	Cl	H	H	Me	H
36.174	Et	Cl	H	H	Me	Cl
36.175	Et	Cl	H	H	Me	F
36.176	Et	Cl	H	H	Me	Me
36.177	Et	Cl	H	H	Ph	H
36.178	Et	Cl	H	H	Ph	Cl
36.179	Et	Cl	H	H	Ph	F
36.180	Et	Cl	H	H	Ph	Me
36.181	H	F	F	H	H	H
36.182	H	F	H	F	H	H

Table 37: Compounds according to the invention of the formula (I) in which X represents N, A represents A14, R³ and R⁴ each represent hydrogen and R² represents chlorine:

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
37.001	H	H	H	H	H	H
37.002	H	H	H	H	H	Cl
37.003	H	H	H	H	H	F
37.004	H	H	H	H	H	Me
37.005	H	H	H	H	F	H
37.006	H	H	H	H	F	Cl
37.007	H	H	H	H	F	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
37.008	H	H	H	H	F	Me
37.009	H	H	H	H	Cl	H
37.010	H	H	H	H	Cl	F
37.011	H	H	H	H	Cl	Cl
37.012	H	H	H	H	Cl	Me
37.013	H	H	H	H	Me	H
37.014	H	H	H	H	Me	Cl
37.015	H	H	H	H	Me	F
37.016	H	H	H	H	Me	Me
37.017	H	H	H	H	Ph	H
37.018	H	H	H	H	Ph	Cl
37.019	H	H	H	H	Ph	F
37.020	H	H	H	H	Ph	Me
37.021	H	F	H	H	H	H
37.022	H	F	H	H	H	Cl
37.023	H	F	H	H	H	F
37.024	H	F	H	H	H	Me
37.025	H	F	H	H	F	H
37.026	H	F	H	H	F	Cl
37.027	H	F	H	H	F	F
37.028	H	F	H	H	F	Me
37.029	H	F	H	H	Cl	H
37.030	H	F	H	H	Cl	F
37.031	H	F	H	H	Cl	Cl
37.032	H	F	H	H	Cl	Me
37.033	H	F	H	H	Me	H
37.034	H	F	H	H	Me	Cl
37.035	H	F	H	H	Me	F
37.036	H	F	H	H	Me	Me
37.037	H	F	H	H	Ph	H
37.038	H	F	H	H	Ph	Cl
37.039	H	F	H	H	Ph	F
37.040	H	F	H	H	Ph	Me
37.041	H	Cl	H	H	H	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
37.042	H	Cl	H	H	H	Cl
37.043	H	Cl	H	H	H	F
37.044	H	Cl	H	H	H	Me
37.045	H	Cl	H	H	F	H
37.046	H	Cl	H	H	F	Cl
37.047	H	Cl	H	H	F	F
37.048	H	Cl	H	H	F	Me
37.049	H	Cl	H	H	Cl	H
37.050	H	Cl	H	H	Cl	F
37.051	H	Cl	H	H	Cl	Cl
37.052	H	Cl	H	H	Cl	Me
37.053	H	Cl	H	H	Me	H
37.054	H	Cl	H	H	Me	Cl
37.055	H	Cl	H	H	Me	F
37.056	H	Cl	H	H	Me	Me
37.057	H	Cl	H	H	Ph	H
37.058	H	Cl	H	H	Ph	Cl
37.059	H	Cl	H	H	Ph	F
37.060	H	Cl	H	H	Ph	Me
37.061	Me	H	H	H	H	H
37.062	Me	H	H	H	H	Cl
37.063	Me	H	H	H	H	F
37.064	Me	H	H	H	H	Me
37.065	Me	H	H	H	F	H
37.066	Me	H	H	H	F	Cl
37.067	Me	H	H	H	F	F
37.068	Me	H	H	H	F	Me
37.069	Me	H	H	H	Cl	H
37.070	Me	H	H	H	Cl	F
37.071	Me	H	H	H	Cl	Cl
37.072	Me	H	H	H	Cl	Me
37.073	Me	H	H	H	Me	H
37.074	Me	H	H	H	Me	Cl
37.075	Me	H	H	H	Me	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
37.076	Me	H	H	H	Me	Me
37.077	Me	H	H	H	Ph	H
37.078	Me	H	H	H	Ph	Cl
37.079	Me	H	H	H	Ph	F
37.080	Me	H	H	H	Ph	Me
37.081	Me	F	H	H	H	H
37.082	Me	F	H	H	H	Cl
37.083	Me	F	H	H	H	F
37.084	Me	F	H	H	H	Me
37.085	Me	F	H	H	F	H
37.086	Me	F	H	H	F	Cl
37.087	Me	F	H	H	F	F
37.088	Me	F	H	H	F	Me
37.089	Me	F	H	H	Cl	H
37.090	Me	F	H	H	Cl	F
37.091	Me	F	H	H	Cl	Cl
37.092	Me	F	H	H	Cl	Me
37.093	Me	F	H	H	Me	H
37.094	Me	F	H	H	Me	Cl
37.095	Me	F	H	H	Me	F
37.096	Me	F	H	H	Me	Me
37.097	Me	F	H	H	Ph	H
37.098	Me	F	H	H	Ph	Cl
37.099	Me	F	H	H	Ph	F
37.100	Me	F	H	H	Ph	Me
37.101	Me	Cl	H	H	H	H
37.102	Me	Cl	H	H	H	Cl
37.103	Me	Cl	H	H	H	F
37.104	Me	Cl	H	H	H	Me
37.105	Me	Cl	H	H	F	H
37.106	Me	Cl	H	H	F	Cl
37.107	Me	Cl	H	H	F	F
37.108	Me	Cl	H	H	F	Me
37.109	Me	Cl	H	H	Cl	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
37.110	Me	Cl	H	H	Cl	F
37.111	Me	Cl	H	H	Cl	Cl
37.112	Me	Cl	H	H	Cl	Me
37.113	Me	Cl	H	H	Me	H
37.114	Me	Cl	H	H	Me	Cl
37.115	Me	Cl	H	H	Me	F
37.116	Me	Cl	H	H	Me	Me
37.117	Me	Cl	H	H	Ph	H
37.118	Me	Cl	H	H	Ph	Cl
37.119	Me	Cl	H	H	Ph	F
37.120	Me	Cl	H	H	Ph	Me
37.121	Et	H	H	H	H	H
37.122	Et	H	H	H	H	Cl
37.123	Et	H	H	H	H	F
37.124	Et	H	H	H	H	Me
37.125	Et	H	H	H	F	H
37.126	Et	H	H	H	F	Cl
37.127	Et	H	H	H	F	F
37.128	Et	H	H	H	F	Me
37.129	Et	H	H	H	Cl	H
37.130	Et	H	H	H	Cl	F
37.131	Et	H	H	H	Cl	Cl
37.132	Et	H	H	H	Cl	Me
37.133	Et	H	H	H	Me	H
37.134	Et	H	H	H	Me	Cl
37.135	Et	H	H	H	Me	F
37.136	Et	H	H	H	Me	Me
37.137	Et	H	H	H	Ph	H
37.138	Et	H	H	H	Ph	Cl
37.139	Et	H	H	H	Ph	F
37.140	Et	H	H	H	Ph	Me
37.141	Et	F	H	H	H	H
37.142	Et	F	H	H	H	Cl
37.143	Et	F	H	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
37.144	Et	F	H	H	H	Me
37.145	Et	F	H	H	F	H
37.146	Et	F	H	H	F	Cl
37.147	Et	F	H	H	F	F
37.148	Et	F	H	H	F	Me
37.149	Et	F	H	H	Cl	H
37.150	Et	F	H	H	Cl	F
37.151	Et	F	H	H	Cl	Cl
37.152	Et	F	H	H	Cl	Me
37.153	Et	F	H	H	Me	H
37.154	Et	F	H	H	Me	Cl
37.155	Et	F	H	H	Me	F
37.156	Et	F	H	H	Me	Me
37.157	Et	F	H	H	Ph	H
37.158	Et	F	H	H	Ph	Cl
37.159	Et	F	H	H	Ph	F
37.160	Et	F	H	H	Ph	Me
37.161	Et	Cl	H	H	H	H
37.162	Et	Cl	H	H	H	Cl
37.163	Et	Cl	H	H	H	F
37.164	Et	Cl	H	H	H	Me
37.165	Et	Cl	H	H	F	H
37.166	Et	Cl	H	H	F	Cl
37.167	Et	Cl	H	H	F	F
37.168	Et	Cl	H	H	F	Me
37.169	Et	Cl	H	H	Cl	H
37.170	Et	Cl	H	H	Cl	F
37.171	Et	Cl	H	H	Cl	Cl
37.172	Et	Cl	H	H	Cl	Me
37.173	Et	Cl	H	H	Me	H
37.174	Et	Cl	H	H	Me	Cl
37.175	Et	Cl	H	H	Me	F
37.176	Et	Cl	H	H	Me	Me
37.177	Et	Cl	H	H	Ph	H

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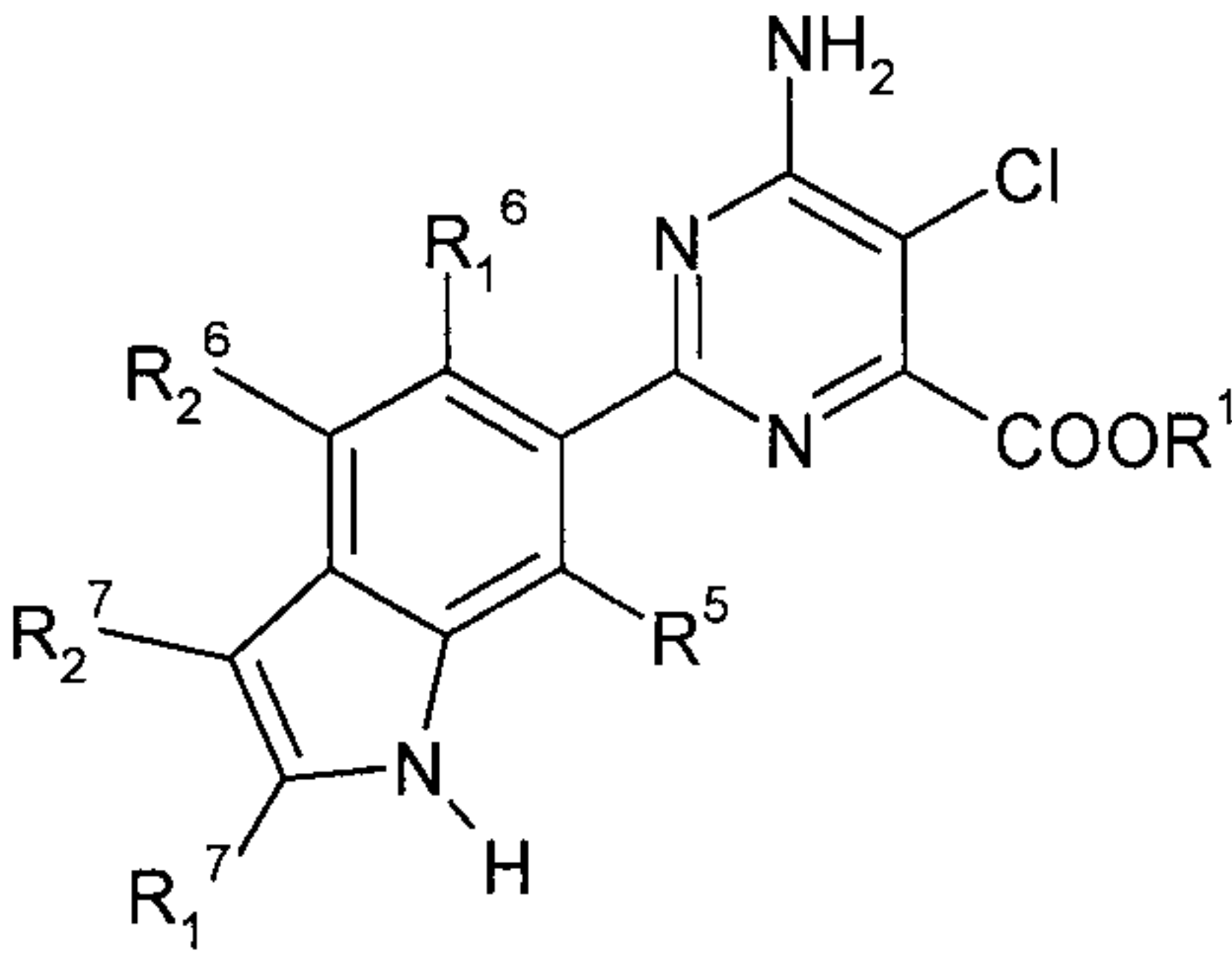
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
37.178	Et	Cl	H	H	Ph	Cl
37.179	Et	Cl	H	H	Ph	F
37.180	Et	Cl	H	H	Ph	Me
37.181	H	F	F	H	H	H
37.182	H	F	H	F	H	H

Table 38: Compounds according to the invention of the formula (I) in which X represents N, A represents A15, R⁸, R³ and R⁴ each represent hydrogen and R² represents chlorine:

5



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
38.001	H	H	H	H	H	H
38.002	H	H	H	H	H	Cl
38.003	H	H	H	H	H	F
38.004	H	H	H	H	H	Me
38.005	H	H	H	H	F	H
38.006	H	H	H	H	F	Cl
38.007	H	H	H	H	F	F
38.008	H	H	H	H	F	Me
38.009	H	H	H	H	Cl	H
38.010	H	H	H	H	Cl	F
38.011	H	H	H	H	Cl	Cl
38.012	H	H	H	H	Cl	Me
38.013	H	H	H	H	Me	H
38.014	H	H	H	H	Me	Cl
38.015	H	H	H	H	Me	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
38.016	H	H	H	H	Me	Me
38.017	H	H	H	H	Ph	H
38.018	H	H	H	H	Ph	Cl
38.019	H	H	H	H	Ph	F
38.020	H	H	H	H	Ph	Me
38.021	H	F	H	H	H	H
38.022	H	F	H	H	H	Cl
38.023	H	F	H	H	H	F
38.024	H	F	H	H	H	Me
38.025	H	F	H	H	F	H
38.026	H	F	H	H	F	Cl
38.027	H	F	H	H	F	F
38.028	H	F	H	H	F	Me
38.029	H	F	H	H	Cl	H
38.030	H	F	H	H	Cl	F
38.031	H	F	H	H	Cl	Cl
38.032	H	F	H	H	Cl	Me
38.033	H	F	H	H	Me	H
38.034	H	F	H	H	Me	Cl
38.035	H	F	H	H	Me	F
38.036	H	F	H	H	Me	Me
38.037	H	F	H	H	Ph	H
38.038	H	F	H	H	Ph	Cl
38.039	H	F	H	H	Ph	F
38.040	H	F	H	H	Ph	Me
38.041	H	Cl	H	H	H	H
38.042	H	Cl	H	H	H	Cl
38.043	H	Cl	H	H	H	F
38.044	H	Cl	H	H	H	Me
38.045	H	Cl	H	H	F	H
38.046	H	Cl	H	H	F	Cl
38.047	H	Cl	H	H	F	F
38.048	H	Cl	H	H	F	Me
38.049	H	Cl	H	H	Cl	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
38.050	H	Cl	H	H	Cl	F
38.051	H	Cl	H	H	Cl	Cl
38.052	H	Cl	H	H	Cl	Me
38.053	H	Cl	H	H	Me	H
38.054	H	Cl	H	H	Me	Cl
38.055	H	Cl	H	H	Me	F
38.056	H	Cl	H	H	Me	Me
38.057	H	Cl	H	H	Ph	H
38.058	H	Cl	H	H	Ph	Cl
38.059	H	Cl	H	H	Ph	F
38.060	H	Cl	H	H	Ph	Me
38.061	Me	H	H	H	H	H
38.062	Me	H	H	H	H	Cl
38.063	Me	H	H	H	H	F
38.064	Me	H	H	H	H	Me
38.065	Me	H	H	H	F	H
38.066	Me	H	H	H	F	Cl
38.067	Me	H	H	H	F	F
38.068	Me	H	H	H	F	Me
38.069	Me	H	H	H	Cl	H
38.070	Me	H	H	H	Cl	F
38.071	Me	H	H	H	Cl	Cl
38.072	Me	H	H	H	Cl	Me
38.073	Me	H	H	H	Me	H
38.074	Me	H	H	H	Me	Cl
38.075	Me	H	H	H	Me	F
38.076	Me	H	H	H	Me	Me
38.077	Me	H	H	H	Ph	H
38.078	Me	H	H	H	Ph	Cl
38.079	Me	H	H	H	Ph	F
38.080	Me	H	H	H	Ph	Me
38.081	Me	F	H	H	H	H
38.082	Me	F	H	H	H	Cl
38.083	Me	F	H	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
38.084	Me	F	H	H	H	Me
38.085	Me	F	H	H	F	H
38.086	Me	F	H	H	F	Cl
38.087	Me	F	H	H	F	F
38.088	Me	F	H	H	F	Me
38.089	Me	F	H	H	Cl	H
38.090	Me	F	H	H	Cl	F
38.091	Me	F	H	H	Cl	Cl
38.092	Me	F	H	H	Cl	Me
38.093	Me	F	H	H	Me	H
38.094	Me	F	H	H	Me	Cl
38.095	Me	F	H	H	Me	F
38.096	Me	F	H	H	Me	Me
38.097	Me	F	H	H	Ph	H
38.098	Me	F	H	H	Ph	Cl
38.099	Me	F	H	H	Ph	F
38.100	Me	F	H	H	Ph	Me
38.101	Me	Cl	H	H	H	H
38.102	Me	Cl	H	H	H	Cl
38.103	Me	Cl	H	H	H	F
38.104	Me	Cl	H	H	H	Me
38.105	Me	Cl	H	H	F	H
38.106	Me	Cl	H	H	F	Cl
38.107	Me	Cl	H	H	F	F
38.108	Me	Cl	H	H	F	Me
38.109	Me	Cl	H	H	Cl	H
38.110	Me	Cl	H	H	Cl	F
38.111	Me	Cl	H	H	Cl	Cl
38.112	Me	Cl	H	H	Cl	Me
38.113	Me	Cl	H	H	Me	H
38.114	Me	Cl	H	H	Me	Cl
38.115	Me	Cl	H	H	Me	F
38.116	Me	Cl	H	H	Me	Me
38.117	Me	Cl	H	H	Ph	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
38.118	Me	Cl	H	H	Ph	Cl
38.119	Me	Cl	H	H	Ph	F
38.120	Me	Cl	H	H	Ph	Me
38.121	Et	H	H	H	H	H
38.122	Et	H	H	H	H	Cl
38.123	Et	H	H	H	H	F
38.124	Et	H	H	H	H	Me
38.125	Et	H	H	H	F	H
38.126	Et	H	H	H	F	Cl
38.127	Et	H	H	H	F	F
38.128	Et	H	H	H	F	Me
38.129	Et	H	H	H	Cl	H
38.130	Et	H	H	H	Cl	F
38.131	Et	H	H	H	Cl	Cl
38.132	Et	H	H	H	Cl	Me
38.133	Et	H	H	H	Me	H
38.134	Et	H	H	H	Me	Cl
38.135	Et	H	H	H	Me	F
38.136	Et	H	H	H	Me	Me
38.137	Et	H	H	H	Ph	H
38.138	Et	H	H	H	Ph	Cl
38.139	Et	H	H	H	Ph	F
38.140	Et	H	H	H	Ph	Me
38.141	Et	F	H	H	H	H
38.142	Et	F	H	H	H	Cl
38.143	Et	F	H	H	H	F
38.144	Et	F	H	H	H	Me
38.145	Et	F	H	H	F	H
38.146	Et	F	H	H	F	Cl
38.147	Et	F	H	H	F	F
38.148	Et	F	H	H	F	Me
38.149	Et	F	H	H	Cl	H
38.150	Et	F	H	H	Cl	F
38.151	Et	F	H	H	Cl	Cl

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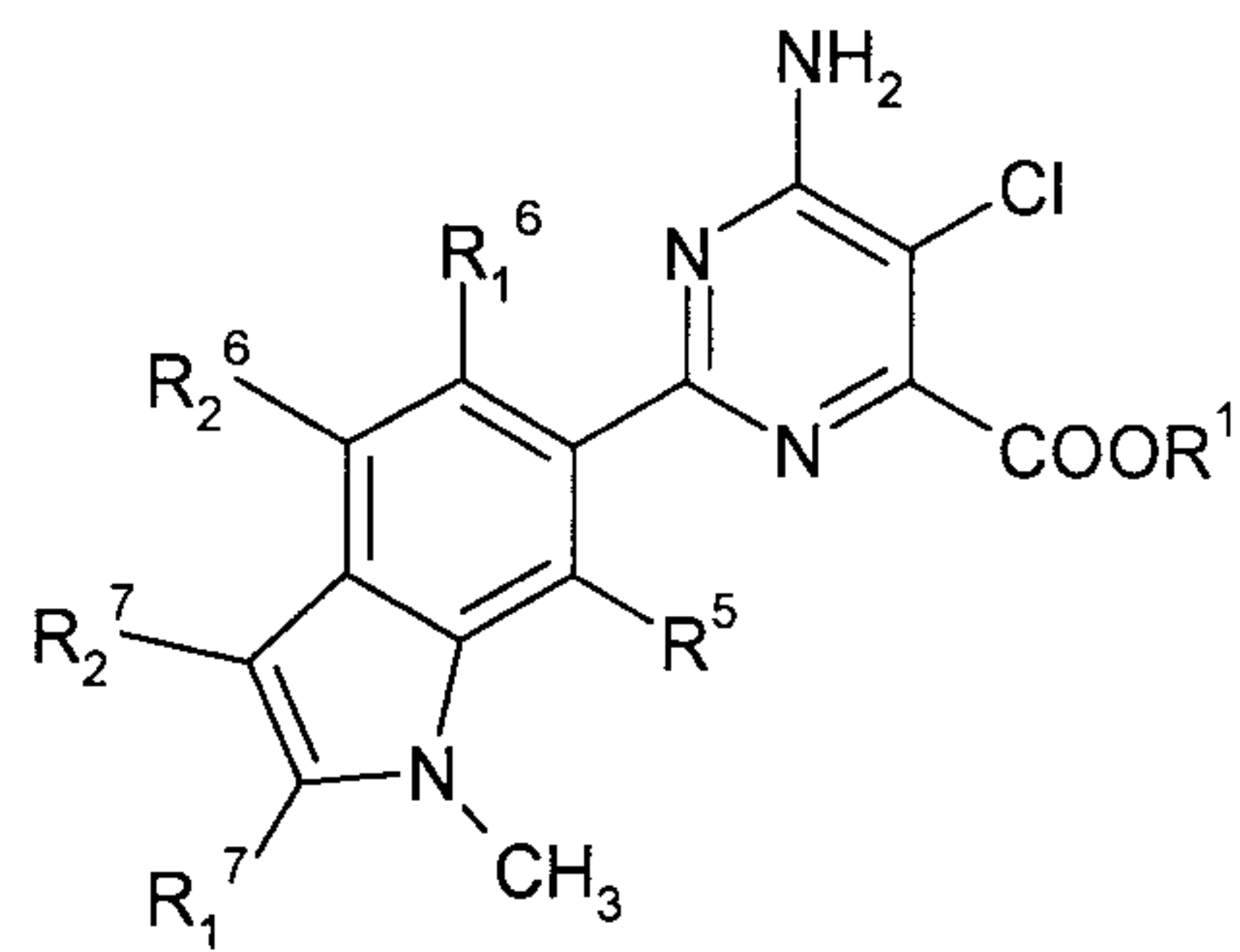
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
38.152	Et	F	H	H	Cl	Me
38.153	Et	F	H	H	Me	H
38.154	Et	F	H	H	Me	Cl
38.155	Et	F	H	H	Me	F
38.156	Et	F	H	H	Me	Me
38.157	Et	F	H	H	Ph	H
38.158	Et	F	H	H	Ph	Cl
38.159	Et	F	H	H	Ph	F
38.160	Et	F	H	H	Ph	Me
38.161	Et	Cl	H	H	H	H
38.162	Et	Cl	H	H	H	Cl
38.163	Et	Cl	H	H	H	F
38.164	Et	Cl	H	H	H	Me
38.165	Et	Cl	H	H	F	H
38.166	Et	Cl	H	H	F	Cl
38.167	Et	Cl	H	H	F	F
38.168	Et	Cl	H	H	F	Me
38.169	Et	Cl	H	H	Cl	H
38.170	Et	Cl	H	H	Cl	F
38.171	Et	Cl	H	H	Cl	Cl
38.172	Et	Cl	H	H	Cl	Me
38.173	Et	Cl	H	H	Me	H
38.174	Et	Cl	H	H	Me	Cl
38.175	Et	Cl	H	H	Me	F
38.176	Et	Cl	H	H	Me	Me
38.177	Et	Cl	H	H	Ph	H
38.178	Et	Cl	H	H	Ph	Cl
38.179	Et	Cl	H	H	Ph	F
38.180	Et	Cl	H	H	Ph	Me
38.181	H	F	F	H	H	H
38.182	H	F	H	F	H	H

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Table 39: Compounds according to the invention of the formula (I) in which X represents N, A represents A15, R⁸ represents methyl, R³ and R⁴ each represent hydrogen and R² represents chlorine:



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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
39.001	H	H	H	H	H	H
39.002	H	H	H	H	H	Cl
39.003	H	H	H	H	H	F
39.004	H	H	H	H	H	Me
39.005	H	H	H	H	F	H
39.006	H	H	H	H	F	Cl
39.007	H	H	H	H	F	F
39.008	H	H	H	H	F	Me
39.009	H	H	H	H	Cl	H
39.010	H	H	H	H	Cl	F
39.011	H	H	H	H	Cl	Cl
39.012	H	H	H	H	Cl	Me
39.013	H	H	H	H	Me	H
39.014	H	H	H	H	Me	Cl
39.015	H	H	H	H	Me	F
39.016	H	H	H	H	Me	Me
39.017	H	H	H	H	Ph	H
39.018	H	H	H	H	Ph	Cl
39.019	H	H	H	H	Ph	F
39.020	H	H	H	H	Ph	Me
39.021	H	F	H	H	H	H
39.022	H	F	H	H	H	Cl
39.023	H	F	H	H	H	F

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
39.024	H	F	H	H	H	Me
39.025	H	F	H	H	F	H
39.026	H	F	H	H	F	Cl
39.027	H	F	H	H	F	F
39.028	H	F	H	H	F	Me
39.029	H	F	H	H	Cl	H
39.030	H	F	H	H	Cl	F
39.031	H	F	H	H	Cl	Cl
39.032	H	F	H	H	Cl	Me
39.033	H	F	H	H	Me	H
39.034	H	F	H	H	Me	Cl
39.035	H	F	H	H	Me	F
39.036	H	F	H	H	Me	Me
39.037	H	F	H	H	Ph	H
39.038	H	F	H	H	Ph	Cl
39.039	H	F	H	H	Ph	F
39.040	H	F	H	H	Ph	Me
39.041	H	Cl	H	H	H	H
39.042	H	Cl	H	H	H	Cl
39.043	H	Cl	H	H	H	F
39.044	H	Cl	H	H	H	Me
39.045	H	Cl	H	H	F	H
39.046	H	Cl	H	H	F	Cl
39.047	H	Cl	H	H	F	F
39.048	H	Cl	H	H	F	Me
39.049	H	Cl	H	H	Cl	H
39.050	H	Cl	H	H	Cl	F
39.051	H	Cl	H	H	Cl	Cl
39.052	H	Cl	H	H	Cl	Me
39.053	H	Cl	H	H	Me	H
39.054	H	Cl	H	H	Me	Cl
39.055	H	Cl	H	H	Me	F
39.056	H	Cl	H	H	Me	Me
39.057	H	Cl	H	H	Ph	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
39.058	H	Cl	H	H	Ph	Cl
39.059	H	Cl	H	H	Ph	F
39.060	H	Cl	H	H	Ph	Me
39.061	Me	H	H	H	H	H
39.062	Me	H	H	H	H	Cl
39.063	Me	H	H	H	H	F
39.064	Me	H	H	H	H	Me
39.065	Me	H	H	H	F	H
39.066	Me	H	H	H	F	Cl
39.067	Me	H	H	H	F	F
39.068	Me	H	H	H	F	Me
39.069	Me	H	H	H	Cl	H
39.070	Me	H	H	H	Cl	F
39.071	Me	H	H	H	Cl	Cl
39.072	Me	H	H	H	Cl	Me
39.073	Me	H	H	H	Me	H
39.074	Me	H	H	H	Me	Cl
39.075	Me	H	H	H	Me	F
39.076	Me	H	H	H	Me	Me
39.077	Me	H	H	H	Ph	H
39.078	Me	H	H	H	Ph	Cl
39.079	Me	H	H	H	Ph	F
39.080	Me	H	H	H	Ph	Me
39.081	Me	F	H	H	H	H
39.082	Me	F	H	H	H	Cl
39.083	Me	F	H	H	H	F
39.084	Me	F	H	H	H	Me
39.085	Me	F	H	H	F	H
39.086	Me	F	H	H	F	Cl
39.087	Me	F	H	H	F	F
39.088	Me	F	H	H	F	Me
39.089	Me	F	H	H	Cl	H
39.090	Me	F	H	H	Cl	F
39.091	Me	F	H	H	Cl	Cl

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
39.092	Me	F	H	H	Cl	Me
39.093	Me	F	H	H	Me	H
39.094	Me	F	H	H	Me	Cl
39.095	Me	F	H	H	Me	F
39.096	Me	F	H	H	Me	Me
39.097	Me	F	H	H	Ph	H
39.098	Me	F	H	H	Ph	Cl
39.099	Me	F	H	H	Ph	F
39.100	Me	F	H	H	Ph	Me
39.101	Me	Cl	H	H	H	H
39.102	Me	Cl	H	H	H	Cl
39.103	Me	Cl	H	H	H	F
39.104	Me	Cl	H	H	H	Me
39.105	Me	Cl	H	H	F	H
39.106	Me	Cl	H	H	F	Cl
39.107	Me	Cl	H	H	F	F
39.108	Me	Cl	H	H	F	Me
39.109	Me	Cl	H	H	Cl	H
39.110	Me	Cl	H	H	Cl	F
39.111	Me	Cl	H	H	Cl	Cl
39.112	Me	Cl	H	H	Cl	Me
39.113	Me	Cl	H	H	Me	H
39.114	Me	Cl	H	H	Me	Cl
39.115	Me	Cl	H	H	Me	F
39.116	Me	Cl	H	H	Me	Me
39.117	Me	Cl	H	H	Ph	H
39.118	Me	Cl	H	H	Ph	Cl
39.119	Me	Cl	H	H	Ph	F
39.120	Me	Cl	H	H	Ph	Me
39.121	Et	H	H	H	H	H
39.122	Et	H	H	H	H	Cl
39.123	Et	H	H	H	H	F
39.124	Et	H	H	H	H	Me
39.125	Et	H	H	H	F	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
39.126	Et	H	H	H	F	Cl
39.127	Et	H	H	H	F	F
39.128	Et	H	H	H	F	Me
39.129	Et	H	H	H	Cl	H
39.130	Et	H	H	H	Cl	F
39.131	Et	H	H	H	Cl	Cl
39.132	Et	H	H	H	Cl	Me
39.133	Et	H	H	H	Me	H
39.134	Et	H	H	H	Me	Cl
39.135	Et	H	H	H	Me	F
39.136	Et	H	H	H	Me	Me
39.137	Et	H	H	H	Ph	H
39.138	Et	H	H	H	Ph	Cl
39.139	Et	H	H	H	Ph	F
39.140	Et	H	H	H	Ph	Me
39.141	Et	F	H	H	H	H
39.142	Et	F	H	H	H	Cl
39.143	Et	F	H	H	H	F
39.144	Et	F	H	H	H	Me
39.145	Et	F	H	H	F	H
39.146	Et	F	H	H	F	Cl
39.147	Et	F	H	H	F	F
39.148	Et	F	H	H	F	Me
39.149	Et	F	H	H	Cl	H
39.150	Et	F	H	H	Cl	F
39.151	Et	F	H	H	Cl	Cl
39.152	Et	F	H	H	Cl	Me
39.153	Et	F	H	H	Me	H
39.154	Et	F	H	H	Me	Cl
39.155	Et	F	H	H	Me	F
39.156	Et	F	H	H	Me	Me
39.157	Et	F	H	H	Ph	H
39.158	Et	F	H	H	Ph	Cl
39.159	Et	F	H	H	Ph	F

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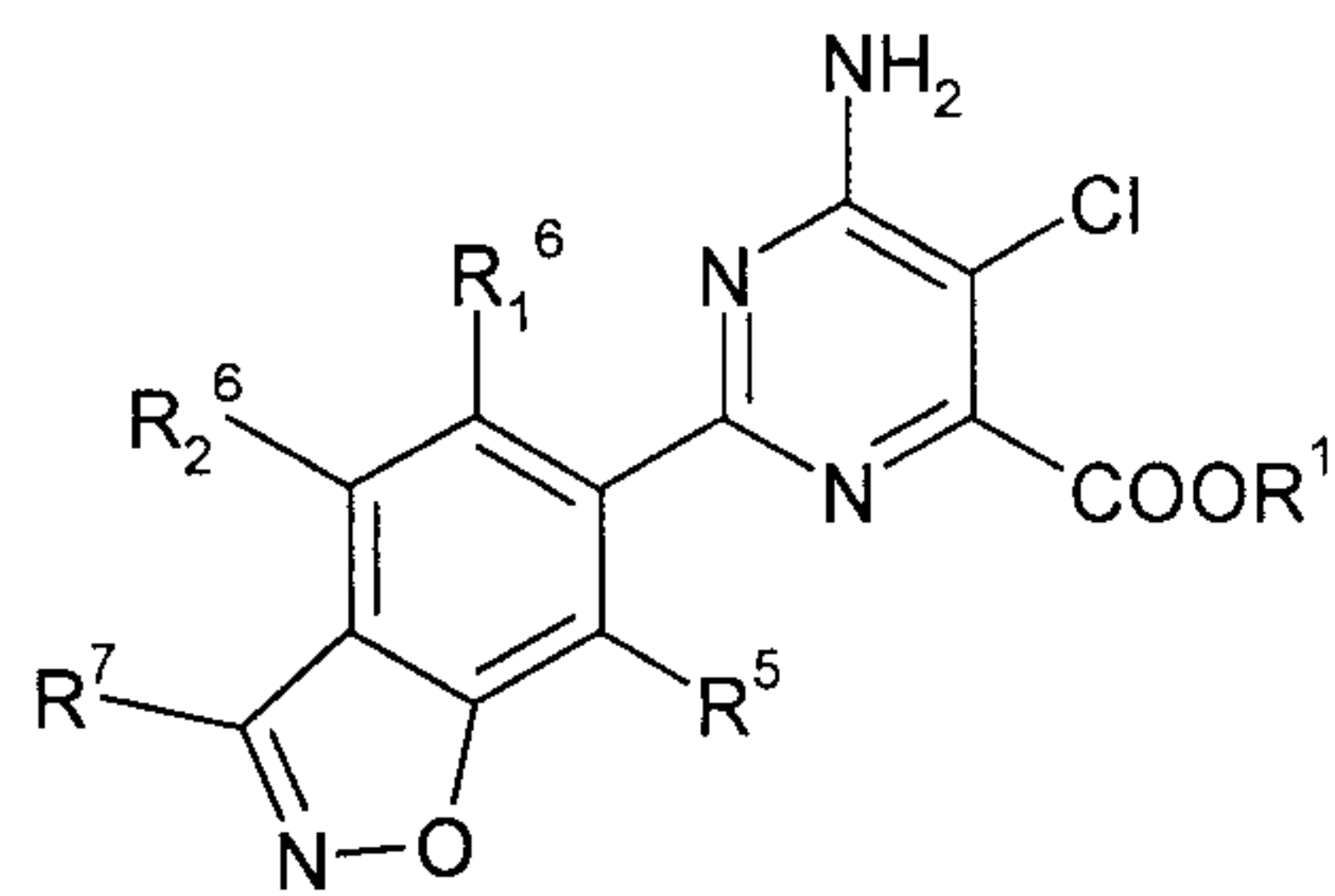
Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ₁ ⁷	R ₂ ⁷
39.160	Et	F	H	H	Ph	Me
39.161	Et	Cl	H	H	H	H
39.162	Et	Cl	H	H	H	Cl
39.163	Et	Cl	H	H	H	F
39.164	Et	Cl	H	H	H	Me
39.165	Et	Cl	H	H	F	H
39.166	Et	Cl	H	H	F	Cl
39.167	Et	Cl	H	H	F	F
39.168	Et	Cl	H	H	F	Me
39.169	Et	Cl	H	H	Cl	H
39.170	Et	Cl	H	H	Cl	F
39.171	Et	Cl	H	H	Cl	Cl
39.172	Et	Cl	H	H	Cl	Me
39.173	Et	Cl	H	H	Me	H
39.174	Et	Cl	H	H	Me	Cl
39.175	Et	Cl	H	H	Me	F
39.176	Et	Cl	H	H	Me	Me
39.177	Et	Cl	H	H	Ph	H
39.178	Et	Cl	H	H	Ph	Cl
39.179	Et	Cl	H	H	Ph	F
39.180	Et	Cl	H	H	Ph	Me
39.181	H	F	F	H	H	H
39.182	H	F	H	F	H	H

Table 40: Compounds according to the invention of the formula (I) in which X represents N, A represents A16, R³ and R⁴ each represent hydrogen and R² represents chlorine:

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
40.001	H	H	H	H	H
40.002	H	H	H	H	Me
40.003	H	H	H	H	Ph
40.004	H	H	H	H	F
40.005	H	H	H	H	Cl
40.006	H	Cl	H	H	H
40.007	H	Cl	H	H	Me
40.008	H	Cl	H	H	Ph
40.009	H	Cl	H	H	F
40.010	H	Cl	H	H	Cl
40.011	H	F	H	H	H
40.012	H	F	H	H	Me
40.013	H	F	H	H	Ph
40.014	H	F	H	H	F
40.015	H	F	H	H	Cl
40.016	Me	H	H	H	H
40.017	Me	H	H	H	Me
40.018	Me	H	H	H	Ph
40.019	Me	H	H	H	F
40.020	Me	H	H	H	Cl
40.021	Me	Cl	H	H	H
40.022	Me	Cl	H	H	Me
40.023	Me	Cl	H	H	Ph
40.024	Me	Cl	H	H	F
40.025	Me	Cl	H	H	Cl
40.026	Et	H	H	H	H
40.027	Et	H	H	H	Me

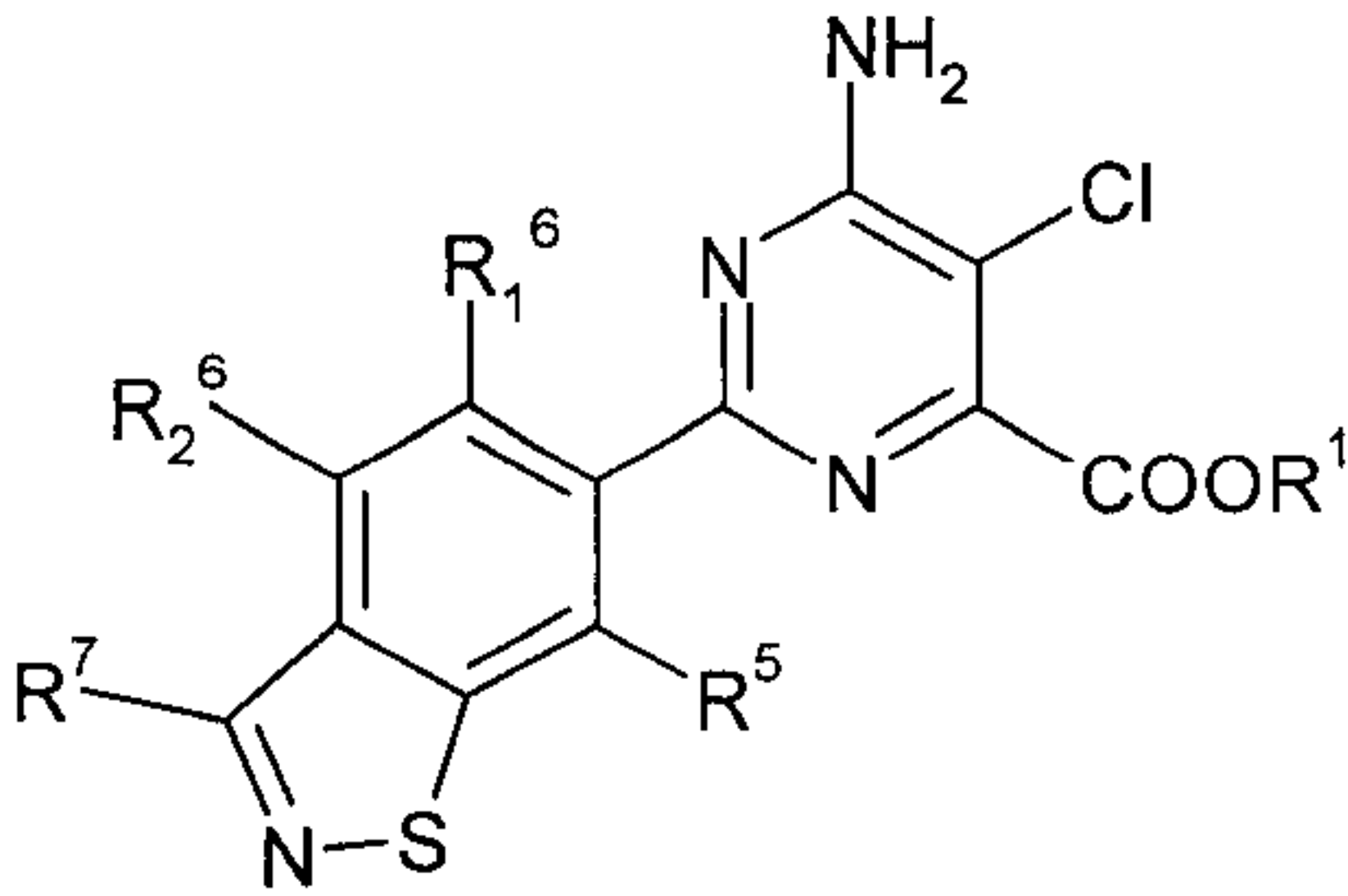
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
40.028	Et	H	H	H	Ph
40.029	Et	H	H	H	F
40.030	Et	H	H	H	Cl
40.031	Et	F	H	H	H
40.032	Et	F	H	H	Me
40.033	Et	F	H	H	Ph
40.034	Et	F	H	H	F
40.035	Et	F	H	H	Cl
40.036	Et	Cl	H	H	H
40.037	Et	Cl	H	H	Me
40.038	Et	Cl	H	H	Ph
40.039	Et	Cl	H	H	F
40.040	Et	Cl	H	H	Cl
40.041	H	F	F	H	H
40.042	H	F	H	F	H

Table 41: Compounds according to the invention of the formula (I) in which X represents N, A represents A17, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
41.001	H	H	H	H	H
41.002	H	H	H	H	Me
41.003	H	H	H	H	Ph
41.004	H	H	H	H	F
41.005	H	H	H	H	Cl
41.006	H	Cl	H	H	H

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
41.007	H	Cl	H	H	Me
41.008	H	Cl	H	H	Ph
41.009	H	Cl	H	H	F
41.010	H	Cl	H	H	Cl
41.011	H	F	H	H	H
41.012	H	F	H	H	Me
41.013	H	F	H	H	Ph
41.014	H	F	H	H	F
41.015	H	F	H	H	Cl
41.016	Me	H	H	H	H
41.017	Me	H	H	H	Me
41.018	Me	H	H	H	Ph
41.019	Me	H	H	H	F
41.020	Me	H	H	H	Cl
41.021	Me	Cl	H	H	H
41.022	Me	Cl	H	H	Me
41.023	Me	Cl	H	H	Ph
41.024	Me	Cl	H	H	F
41.025	Me	Cl	H	H	Cl
41.026	Et	H	H	H	H
41.027	Et	H	H	H	Me
41.028	Et	H	H	H	Ph
41.029	Et	H	H	H	F
41.030	Et	H	H	H	Cl
41.031	Et	F	H	H	H
41.032	Et	F	H	H	Me
41.033	Et	F	H	H	Ph
41.034	Et	F	H	H	F
41.035	Et	F	H	H	Cl
41.036	Et	Cl	H	H	H
41.037	Et	Cl	H	H	Me
41.038	Et	Cl	H	H	Ph
41.039	Et	Cl	H	H	F
41.040	Et	Cl	H	H	Cl

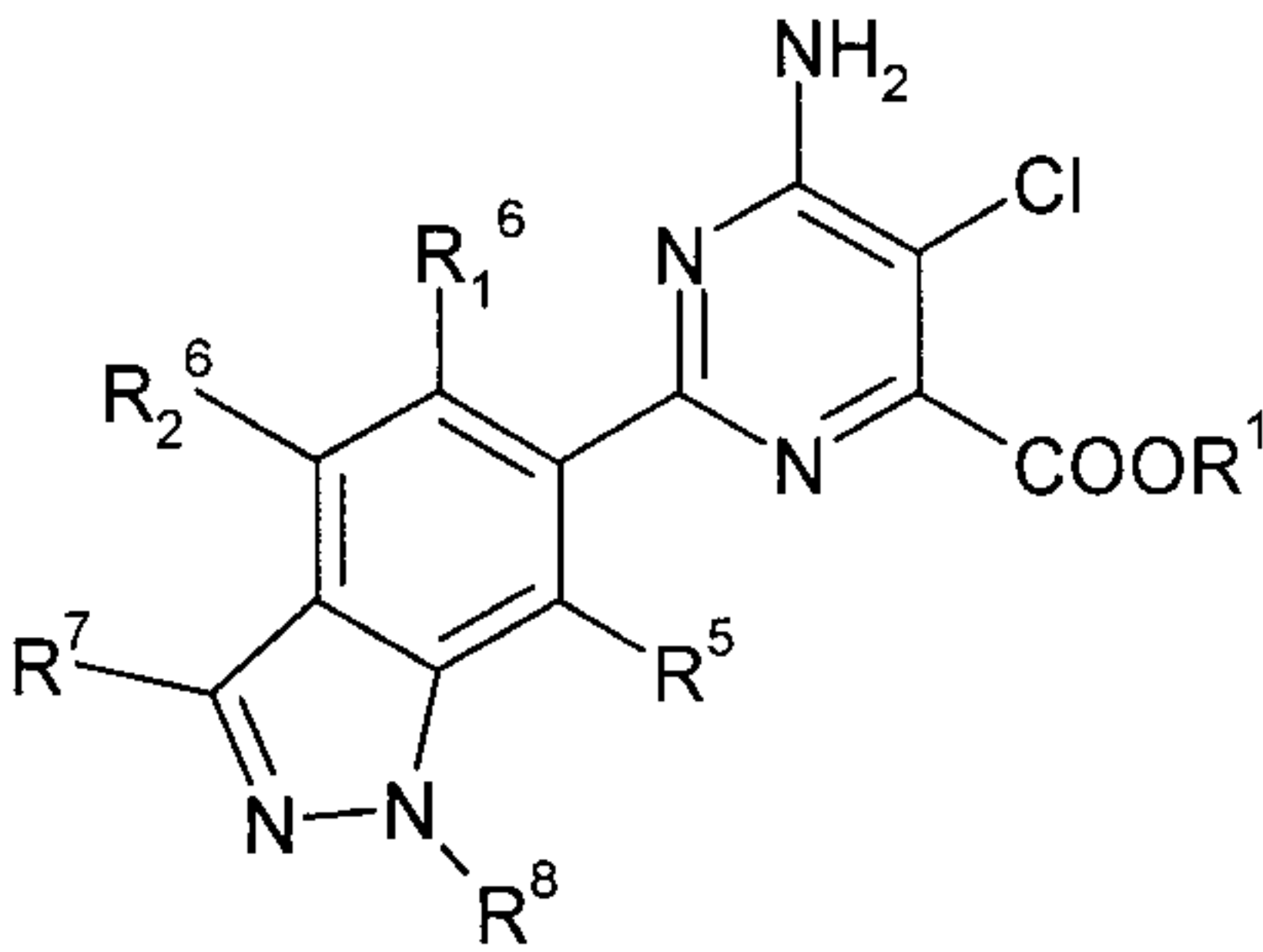
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷
41.041	H	F	F	H	H
41.042	H	F	H	F	H

Table 42: Compounds according to the invention of the formula (I) in which X represents N, A represents A18, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
42.001	H	H	H	H	H	H
42.002	H	H	H	H	Me	H
42.003	H	H	H	H	Ph	H
42.004	H	H	H	H	F	Me
42.005	H	H	H	H	Cl	H
42.006	H	Cl	H	H	H	Me
42.007	H	Cl	H	H	Me	Me
42.008	H	Cl	H	H	Ph	Me
42.009	H	Cl	H	H	F	H
42.010	H	Cl	H	H	Cl	H
42.011	H	F	H	H	H	Me
42.012	H	F	H	H	Me	H
42.013	H	F	H	H	Ph	H
42.014	H	F	H	H	F	Me
42.015	H	F	H	H	Cl	Me
42.016	Me	H	H	H	H	Et
42.017	Me	H	H	H	Me	Et
42.018	Me	H	H	H	Ph	Et

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁷	R ⁸
42.019	Me	H	H	H	F	Et
42.020	Me	H	H	H	Cl	Et
42.021	Me	Cl	H	H	H	Me
42.022	Me	Cl	H	H	Me	H
42.023	Me	Cl	H	H	Ph	H
42.024	Me	Cl	H	H	F	H
42.025	Me	Cl	H	H	Cl	Et
42.026	Et	H	H	H	H	Me
42.027	Et	H	H	H	Me	Me
42.028	Et	H	H	H	Ph	Me
42.029	Et	H	H	H	F	H
42.030	Et	H	H	H	Cl	H
42.031	Et	F	H	H	H	Me
42.032	Et	F	H	H	Me	Me
42.033	Et	F	H	H	Ph	H
42.034	Et	F	H	H	F	Et
42.035	Et	F	H	H	Cl	Et
42.036	Et	Cl	H	H	H	H
42.037	Et	Cl	H	H	Me	H
42.038	Et	Cl	H	H	Ph	H
42.039	Et	Cl	H	H	F	Me
42.040	Et	Cl	H	H	Cl	H
42.041	H	F	F	H	H	H
42.042	H	F	H	F	H	H

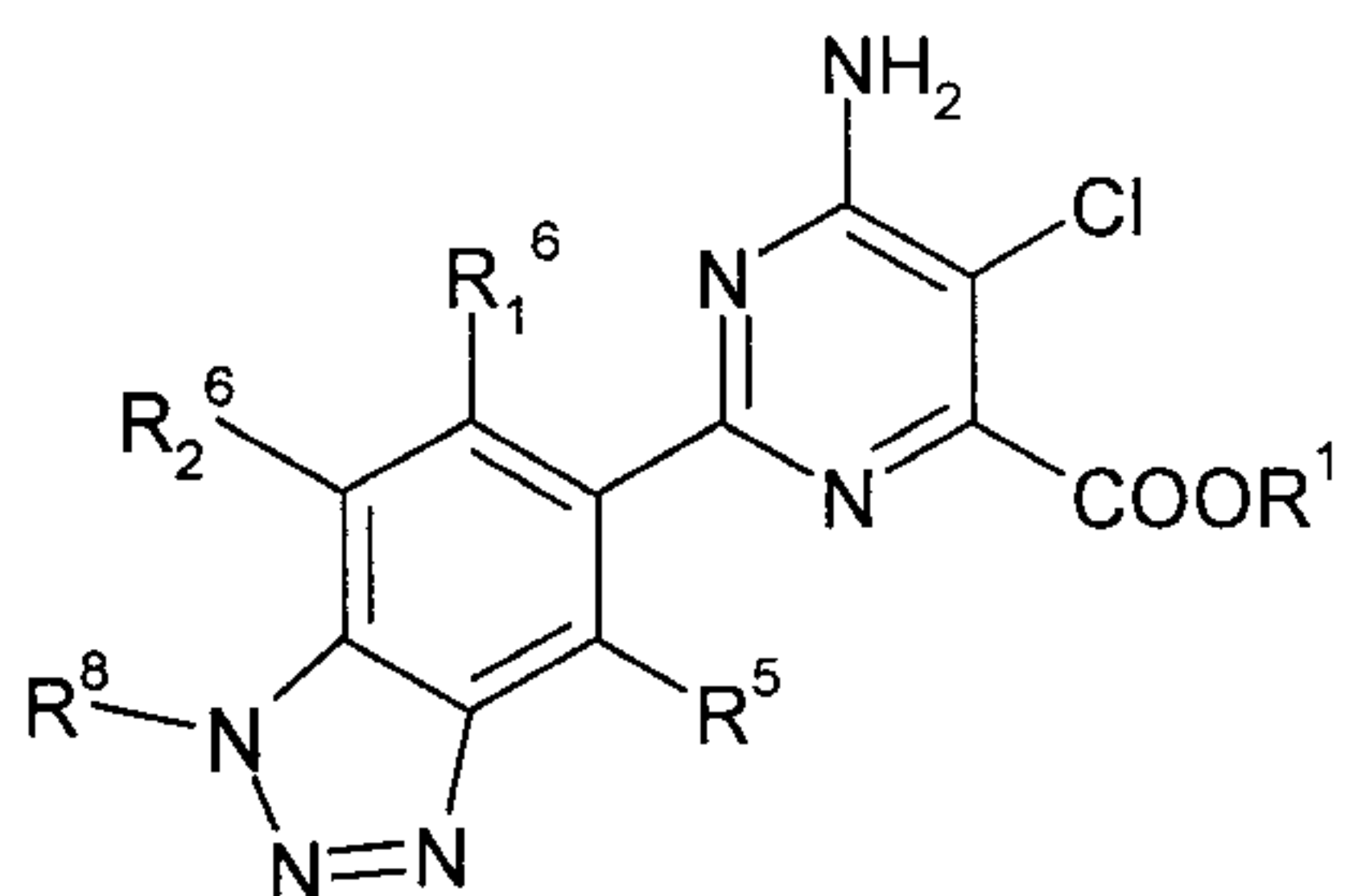
Table 43: Compounds according to the invention of the formula (I) in which X represents N, A represents A19, R³ and R⁴ each represent hydrogen and R² represents chlorine:

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Ex. No.	R ¹	R ⁵	R ¹⁶	R ⁶	R ⁸
43.001	H	H	H	H	H
43.002	H	H	H	H	Me
43.003	H	H	H	H	Et
43.004	H	F	H	H	H
43.005	H	F	H	H	Me
43.006	H	F	H	H	Et
43.007	H	Cl	H	H	H
43.008	H	Cl	H	H	Me
43.009	H	Cl	H	H	Et
43.010	Me	H	H	H	H
43.011	Me	H	H	H	Me
43.012	Me	H	H	H	Et
43.013	Me	F	H	H	H
43.014	Me	F	H	H	Me
43.015	Me	F	H	H	Et
43.016	Me	Cl	H	H	H
43.017	Me	Cl	H	H	Me
43.018	Me	Cl	H	H	Et
43.019	Et	H	H	H	H
43.020	Et	H	H	H	Me
43.021	Et	H	H	H	Et
43.022	Et	F	H	H	H
43.023	Et	F	H	H	Me
43.024	Et	F	H	H	Et
43.025	Et	Cl	H	H	H
43.026	Et	Cl	H	H	Me
43.027	Et	Cl	H	H	Et

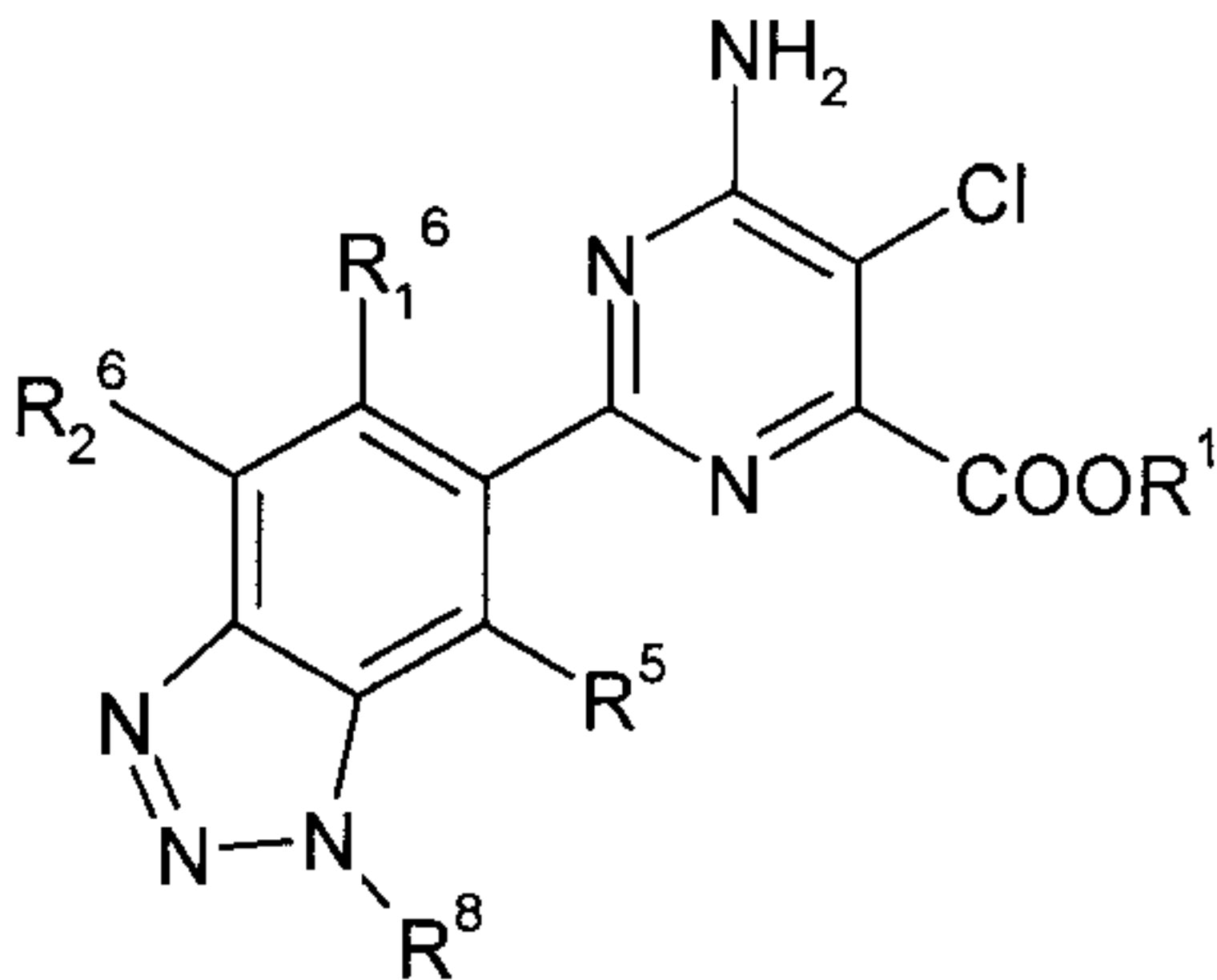
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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁸
43.028	H	F	F	H	H
43.029	H	F	H	F	H

Table 44: Compounds according to the invention of the formula (I) in which X represents N, A represents A20, R³ and R⁴ each represent hydrogen and R² represents chlorine:



Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁸
44.001	H	H	H	H	Me
44.002	H	H	H	H	Et
44.003	H	F	H	H	Me
44.004	H	F	H	H	Et
44.005	H	Cl	H	H	Me
44.006	H	Cl	H	H	Et
44.007	Me	H	H	H	Me
44.008	Me	H	H	H	Et
44.009	Me	F	H	H	Me
44.010	Me	F	H	H	Et
44.011	Me	Cl	H	H	Me
44.012	Me	Cl	H	H	Et
44.013	Et	H	H	H	Me
44.014	Et	H	H	H	Et
44.015	Et	F	H	H	Me
44.016	Et	F	H	H	Et
44.017	Et	Cl	H	H	Me
44.018	Et	Cl	H	H	Et

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Ex. No.	R ¹	R ⁵	R ₁ ⁶	R ₂ ⁶	R ⁸
44.019	H	F	F	H	Me
44.020	H	F	H	F	Me

Collections of compounds of the formula (I) and/or salts thereof which can be synthesized by the aforementioned reactions can also be prepared in a parallel manner, it being possible for this to take place in a manual, partly automated or completely automated manner. In this connection, it is, for example, possible to automate the reaction procedure, the work-up or the purification of the products and/or intermediates. Overall, this is understood as meaning a procedure as described, for example, by D. Tiebes in Combinatorial Chemistry – Synthesis, Analysis, Screening (editor Günther Jung), Verlag Wiley 1999, on pages 1 to 34.

For the parallel reaction procedure and work-up, it is possible to use a series of commercially available instruments, for example Calpyso reaction blocks from Barnstead International, Dubuque, Iowa 52004-0797, USA or reaction stations from Radleys, Shirehill, Saffron Walden, Essex, CB 11 3AZ, England or MultiPROBE Automated Workstations from Perkin Elmer, Waltham, Massachusetts 02451, USA. For the parallel purification of compounds of the formula (I) and salts thereof or of intermediates produced during the preparation, there are available, inter alia, chromatography apparatuses, for example from ISCO, Inc., 4700 Superior Street, Lincoln, NE 68504, USA.

The apparatuses listed lead to a modular procedure in which the individual process steps are automated, but between the process steps manual operations have to be carried out. This can be circumvented by using partly or completely integrated automation systems in which the respective automation modules are operated, for example, by robots. Automation systems of this type can be acquired, for example, from Caliper, Hopkinton, MA 01748, USA.

The implementation of single or several synthesis steps can be supported through the use of polymer-supported reagents/scavenger resins. The specialist literature

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describes a series of experimental protocols, for example in ChemFiles, Vol. 4, No. 1, Polymer-Supported Scavengers and Reagents for Solution-Phase Synthesis (Sigma-Aldrich).

- 5 Besides the methods described here, the preparation of compounds of the formula (I) and salts thereof can take place completely or partially by solid-phase-supported methods. For this purpose, individual intermediates or all intermediates in the synthesis or a synthesis adapted for the corresponding procedure are bonded to a synthesis resin. Solid-phase-supported synthesis methods are sufficiently described in
10 the specialist literature, for example Barry A. Bunin in "The Combinatorial Index", Academic Press, 1998 and Combinatorial Chemistry – Synthesis, Analysis, Screening (editor Günther Jung), Wiley, 1999. The use of solid-phase-supported synthesis methods permits a series of protocols known in the literature, which again can be carried out manually or in an automated manner. The reactions can be carried out, for
15 example, by means of IRORI technology in microreactors from Nexus Biosystems, 12140 Community Road, Poway, CA92064, USA.

- Both on a solid phase and in liquid phase can the procedure of individual or several synthesis steps be supported through the use of microwave technology. The specialist
20 literature describes a series of experimental protocols, for example in Microwaves in Organic and Medicinal Chemistry (editor C. O. Kappe and A. Stadler), Wiley, 2005.

- The preparation according to the processes described here produces compounds of the formula (I) and their salts in the form of substance collections which are called
25 libraries. The present invention also provides libraries which comprise at least two compounds of the formula (I) and their salts.

- The compounds of the formula (I) according to the invention (and/or their salts), hereinbelow also referred to together as "compounds according to the invention", have
30 excellent herbicidal efficacy against a broad spectrum of economically important monocotyledonous and dicotyledonous annual harmful plants. The active compounds

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act efficiently even on perennial harmful plants which produce shoots from rhizomes, root stocks and other perennial organs and which are difficult to control.

The present invention therefore also relates to a method for controlling unwanted
5 plants or for regulating the growth of plants, preferably in crops of plants, where one or more compound(s) according to the invention is/are applied to the plants (for example harmful plants such as monocotyledonous or dicotyledonous weeds or undesired crop plants), to the seed (for example grains, seeds or vegetative propagules such as tubers or shoot parts with buds) or to the area on which the plants grow (for example
10 the area under cultivation). In this context, the compounds according to the invention can be applied for example pre-sowing (if appropriate also by incorporation into the soil), pre-emergence or post-emergence. Specific examples may be mentioned of some representatives of the monocotyledonous and dicotyledonous weed flora which can be controlled by the compounds according to the invention, without the
15 enumeration being restricted to certain species.

Monocotyledonous harmful plants of the genera: Aegilops, Agropyron, Agrostis, Alopecurus, Apera, Avena, Brachiaria, Bromus, Cenchrus, Commelina, Cynodon, Cyperus, Dactyloctenium, Digitaria, Echinochloa, Eleocharis, Eleusine, Eragrostis,
20 Eriochloa, Festuca, Fimbristylis, Heteranthera, Imperata, Ischaemum, Leptochloa, Lolium, Monochoria, Panicum, Paspalum, Phalaris, Phleum, Poa, Rottboellia, Sagittaria, Scirpus, Setaria, Sorghum.

Dicotyledonous weeds of the genera: Abutilon, Amaranthus, Ambrosia, Anoda,
25 Anthemis, Aphanes, Artemisia, Atriplex, Bellis, Bidens, Capsella, Carduus, Cassia, Centaurea, Chenopodium, Cirsium, Convolvulus, Datura, Desmodium, Emex, Erysimum, Euphorbia, Galeopsis, Galinsoga, Galium, Hibiscus, Ipomoea, Kochia, Lamium, Lepidium, Lindernia, Matricaria, Mentha, Mercurialis, Mullugo, Myosotis, Papaver, Pharbitis, Plantago, Polygonum, Portulaca, Ranunculus, Raphanus, Rorippa,
30 Rotala, Rumex, Salsola, Senecio, Sesbania, Sida, Sinapis, Solanum, Sonchus, Sphenoclea, Stellaria, Taraxacum, Thlaspi, Trifolium, Urtica, Veronica, Viola, Xanthium.

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If the compounds according to the invention are applied to the soil surface before germination, the weed seedlings are either prevented completely from emerging or else the weeds grow until they have reached the cotyledon stage, but then their growth stops, and, eventually, after three to four weeks have elapsed, they die completely.

5

If the active compounds are applied post-emergence to the green parts of the plants, growth stops after the treatment, and the harmful plants remain at the growth stage of the point of time of application, or they die completely after a certain time, so that in this manner competition by the weeds, which is harmful to the crop plants, is eliminated very early and in a sustained manner.

10

Although the compounds according to the invention display an outstanding herbicidal activity against monocotyledonous and dicotyledonous weeds, crop plants of economically important crops, for example dicotyledonous crops of the genera Arachis, Beta, Brassica, Cucumis, Cucurbita, Helianthus, Daucus, Glycine, Gossypium, Ipomoea, Lactuca, Linum, Lycopersicon, Nicotiana, Phaseolus, Pisum, Solanum, Vicia, or monocotyledonous crops of the genera Allium, Ananas, Asparagus, Avena, Hordeum, Oryza, Panicum, Saccharum, Secale, Sorghum, Triticale, Triticum, Zea, in particular Zea and Triticum, are damaged only to an insignificant extent, or not at all, depending on the structure of the respective compound according to the invention and its application rate. This is why the present compounds are highly suitable for the selective control of unwanted plant growth in plant crops such as agriculturally useful plants or ornamentals.

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Moreover, the compounds according to the invention (depending on their respective structure and the application rate applied) have outstanding growth-regulatory properties in crop plants. They engage in the plant's metabolism in a regulatory fashion and can therefore be employed for the influencing, in a targeted manner, of plant constituents and for facilitating harvesting, such as, for example, by triggering desiccation and stunted growth. Moreover, they are also suitable for generally controlling and inhibiting unwanted vegetative growth without destroying the plants in the process. Inhibiting the vegetative growth plays an important role in many

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monocotyledonous and dicotyledonous crops since for example lodging can be reduced, or prevented completely, hereby.

By virtue of their herbicidal and plant-growth-regulatory properties, the active
5 compounds can also be employed for controlling harmful plants in crops of known
genetically modified plants or genetically modified plants still to be developed. In
general, the transgenic plants are distinguished by especially advantageous
properties, for example by resistances to certain pesticides, mainly certain herbicides,
resistances to plant diseases or causative organisms of plant diseases, such as certain
10 insects or microorganisms such as fungi, bacteria or viruses. Other particular
properties relate, for example, to the harvested material with regard to quantity, quality,
storability, composition and specific constituents. Thus, transgenic plants are known
whose starch content is increased, or whose starch quality is altered, or those where
the harvested material has a different fatty acid composition. Other particular
15 properties may be tolerant or resistant to abiotic stressors, for example heat, low
temperatures, drought, salinity and ultraviolet radiation.

It is preferred to use the compounds of the formula (I) according to the invention or
salts thereof in economically important transgenic crops of useful plants and
20 ornamental plants, for example of cereals such as wheat, barley, rye, oats, sorghum
and millet, rice, cassava and corn or else crops of sugar beet, cotton, soybean, oilseed
rape, potato, tomato, peas and other vegetables.

It is preferred to employ the compounds of the formula (I) as herbicides in crops of
25 useful plants which are resistant, or have been made resistant by recombinant means,
to the phytotoxic effects of the herbicides.

Conventional methods of generating novel plants which have modified properties in
comparison to plants occurring to date consist, for example, in traditional breeding
30 methods and the generation of mutants. Alternatively, novel plants with altered
properties can be generated with the aid of recombinant methods (see, for example,

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EP 0221044, EP 0131624). For example, the following have been described in several cases:

- genetic modifications of crop plants for the purposes of modifying the starch synthesized in the plants (for example WO 92/011376 A, WO 92/014827 A, WO 91/019806 A),
- transgenic crop plants which are resistant to certain herbicides of the glufosinate type (cf., for example, EP 0242236 A, EP 0242246 A) or of the glyphosate type (WO 92/000377 A) or of the sulfonylurea type (EP 0257993 A, US 5,013,659) or to combinations or mixtures of these herbicides through "gene stacking", such as transgenic crop plants e.g. corn or soybean with the tradename or the name Optimum™ GAT™ (glyphosate ALS tolerant),
- transgenic crop plants, for example cotton, which is capable of producing *Bacillus thuringiensis* toxins (Bt toxins), which make the plants resistant to certain pests (EP 0142924 A, EP 0193259 A),
- transgenic crop plants with a modified fatty acid composition (WO 91/013972 A),
- genetically modified crop plants with novel constituents or secondary metabolites, for example novel phytoalexins, which bring about an increased disease resistance (EP 0309862 A, EP 0464461 A),
- genetically modified plants with reduced photorespiration which feature higher yields and higher stress tolerance (EP 0305398 A),
- transgenic crop plants which produce pharmaceutically or diagnostically important proteins ("molecular pharming"),
- transgenic crop plants which are distinguished by higher yields or better quality,
- transgenic crop plants which are distinguished by a combination for example, of the abovementioned novel properties ("gene stacking").

A large number of molecular-biological techniques by means of which novel transgenic plants with modified properties can be generated are known in principle; see, for example, I. Potrykus and G. Spangenberg (eds.) *Gene Transfer to Plants*, Springer Lab Manual (1995), Springer Verlag Berlin, Heidelberg. or Christou, "Trends in Plant Science" 1 (1996) 423-431.

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- To carry out such recombinant manipulations, nucleic acid molecules which allow mutagenesis or a sequence change by recombination of DNA sequences can be introduced into plasmids. For example, standard methods allow base exchanges to be carried out, subsequences to be removed, or natural or synthetic sequences to be added. For the joining of the DNA fragments to one another, adaptors or linkers can be attached to the fragments; see, for example, Sambrook et al., 1989, Molecular Cloning, A Laboratory Manual, 2nd ed. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY; or Winnacker "Gene und Klone", VCH Weinheim 2nd edition 1996.
- For example, the generation of plant cells with a reduced activity of a gene product can be achieved by expressing at least one corresponding antisense RNA, a sense RNA for achieving a cosuppression effect or by expressing at least one suitably constructed ribozyme which specifically cleaves transcripts of the abovementioned gene product.
- To this end, it is possible to use DNA molecules which encompass the entire coding sequence of a gene product inclusive of any flanking sequences which may be present, and also DNA molecules which only encompass portions of the coding sequence, it being necessary for these portions to be long enough to have an antisense effect in the cells. The use of DNA sequences which have a high degree of homology to the coding sequences of a gene product, but are not completely identical to them, is also possible.

- When expressing nucleic acid molecules in plants, the protein synthesized can be localized in any desired compartment of the plant cell. However, to achieve localization in a particular compartment, it is possible, for example, to link the coding region with DNA sequences which ensure localization in a particular compartment. Such sequences are known to the person skilled in the art (see, for example, Braun et al., EMBO J. 11 (1992), 3219-3227; Wolter et al., Proc. Natl. Acad. Sci. USA 85 (1988), 846-850; Sonnewald et al., Plant J. 1 (1991), 95-106). The nucleic acid molecules can also be expressed in the organelles of the plant cells.

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The transgenic plant cells can be regenerated by known techniques to give rise to entire plants. In principle, the transgenic plants can be plants of any desired plant species, i.e. not only monocotyledonous, but also dicotyledonous, plants.

- 5 Thus, transgenic plants can be obtained whose properties are altered by overexpression, suppression or inhibition of homologous (= natural) genes or gene sequences or the expression of heterologous (= foreign) genes or gene sequences.

- 10 It is preferred to employ the compounds (I) according to the invention in transgenic crops which are resistant to growth regulators such as, for example, 2,4 D, dicamba, or to herbicides which inhibit essential plant enzymes, for example acetolactate synthases (ALS), EPSP synthases, glutamine synthases (GS) or hydroxyphenylpyruvate dioxygenases (HPPD), or to herbicides from the group of the sulfonylureas, glyphosate, glufosinate or benzoylisoaxazoles and analogous active
15 compounds, or to any combinations of these active compounds.

- Particularly preferably, the compounds according to the invention can be used in transgenic crop plants which are resistant to a combination of glyphosates and glufosinates, glyphosates and sulfonylureas or imidazolinones. Very particularly
20 preferably, the compounds according to the invention can be used in transgenic crop plants such as e.g. corn or soybean with the tradename or the name OptimumTM GATTM (glyphosate ALS tolerant).

- When the active compounds according to the invention are used in transgenic crops,
25 effects are frequently observed - in addition to the effects on harmful plants which can be observed in other crops - which are specific for the application in the transgenic crop in question, for example a modified or specifically widened spectrum of weeds which can be controlled, modified application rates which may be employed for application, preferably good combinability with the herbicides to which the transgenic
30 crop is resistant, and an effect on growth and yield of the transgenic crop plants.

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The invention therefore also relates to the use of the compounds of the formula (I) according to the invention as herbicides for controlling harmful plants in transgenic crop plants.

- 5 The compounds according to the invention can be used in the form of wettable powders, emulsifiable concentrates, sprayable solutions, dusting products or granules in the customary formulations. The invention therefore also provides herbicidal and plant-growth-regulating compositions which comprise the compounds according to the invention.

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The compounds according to the invention can be formulated in various ways according to which biological and/or physicochemical parameters are required. Possible formulations include, for example: wettable powders (WP), water-soluble powders (SP), water-soluble concentrates, emulsifiable concentrates (EC), emulsions
15 (EW) such as oil-in-water and water-in-oil emulsions, sprayable solutions, suspension concentrates (SC), oil- or water-based dispersions, oil-miscible solutions, capsule suspensions (CS), dusting products (DP), seed-dressing products, granules for scattering and soil application, granules (GR) in the form of microgranules, spray granules, coated granules and adsorption granules, water-dispersible granules (WG),
20 water-soluble granules (SG), ULV formulations, microcapsules and waxes.

20

These individual types of formulation are known in principle and are described, for example, in: Winnacker-Küchler, "Chemische Technologie" [Chemical technology], volume 7, C. Hanser Verlag Munich, 4th ed. 1986; Wade van Valkenburg, "Pesticide Formulations", Marcel Dekker, N.Y., 1973; K. Martens, "Spray Drying" Handbook, 3rd
25 ed. 1979, G. Goodwin Ltd. London.

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The necessary formulation assistants, such as inert materials, surfactants, solvents and further additives, are likewise known and are described, for example, in: Watkins, "Handbook of Insecticide Dust Diluents and Carriers", 2nd Ed., Darland Books,
30 Caldwell N.J., H.v. Olphen, "Introduction to Clay Colloid Chemistry"; 2nd Ed., J. Wiley & Sons, N.Y.; C. Marsden, "Solvents Guide"; 2nd Ed., Interscience, N.Y. 1963, McCutcheon's "Detergents and Emulsifiers Annual", MC Publ. Corp., Ridgewood N.J.; Sisley and Wood, "Encyclopedia of

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Surface Active Agents", Chem. Publ. Co. Inc., N.Y. 1964; Schönfeldt, "Grenzflächenaktive Äthylenoxidaddukte" [Interface-active Ethylene Oxide Adducts], Wiss. Verlagsgesell., Stuttgart 1976; Winnacker-Küchler, "Chemische Technologie", volume 7, C. Hanser Verlag Munich, 4th ed. 1986.

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Based on these formulations, it is also possible to produce combinations with other pesticidally active compounds, such as, for example, insecticides, acaricides, herbicides, fungicides, and also with safeners, fertilizers and/or growth regulators, for example in the form of a finished formulation or as a tank mix. Suitable safeners are, 10 for example, mefenpyr-diethyl, cyprosulfamide, isoxadifen-ethyl, cloquintocet-mexyl and dichlormid.

Wettable powders are preparations which can be dispersed uniformly in water and, as well as the active compound, apart from a diluent or inert substance, also comprise 15 surfactants of the ionic and/or nonionic type (wetting agents, dispersants), for example polyoxyethylated alkylphenols, polyoxyethylated fatty alcohols, polyoxyethylated fatty amines, fatty alcohol polyglycol ether sulfates, alkanesulfonates, alkylbenzenesulfonates, sodium lignosulfonate, sodium 2,2'-dinaphthylmethane-6,6'-disulfonate, sodium dibutyl naphthalenesulfonate or else sodium oleoylmethyltaurate. 20 To prepare the wettable powders, the herbicidally active compounds are ground finely, for example in customary apparatuses such as hammer mills, blower mills and air-jet mills, and simultaneously or subsequently mixed with the formulation assistants.

Emulsifiable concentrates are prepared by dissolving the active compound in an 25 organic solvent, for example butanol, cyclohexanone, dimethylformamide, xylene or else relatively high-boiling aromatics or hydrocarbons or mixtures of the organic solvents with addition of one or more surfactants of the ionic and/or nonionic type (emulsifiers). The emulsifiers used may, for example, be: calcium alkylarylsulfonate salts such as calcium dodecylbenzenesulfonate, or nonionic emulsifier, such as fatty 30 acid polyglycol esters, alkylaryl polyglycol ethers, fatty alcohol polyglycol ethers, propylene oxide-ethylene oxide condensation products, alkyl polyethers, sorbitan esters, for example sorbitan fatty acid esters, or polyoxyethylene sorbitan esters, for

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example polyoxyethylene sorbitan fatty acid esters.

Dusts are obtained by grinding the active compound with finely distributed solid substances, for example talc, natural clays, such as kaolin, bentonite and pyrophyllite,
5 or diatomaceous earth.

Suspension concentrates may be water- or oil-based. They may be prepared, for example, by wet grinding by means of commercial bead mills and optional addition of surfactants as have, for example, already been listed above for the other formulation
10 types.

Emulsions, for example oil-in-water emulsions (EW), can be prepared, for example, by means of stirrers, colloid mills and/or static mixers using aqueous organic solvents and optionally surfactants, as have, for example, already been listed above for the other
15 formulation types.

Granules can be prepared either by spraying the active compound onto granulated inert material capable of adsorption or by applying active compound concentrates to the surface of carrier substances, such as sand, kaolinites or granulated inert material,
20 by means of adhesives, for example polyvinyl alcohol, sodium polyacrylate or mineral oils. Suitable active compounds can also be granulated in the manner customary for the production of fertilizer granules - if desired as a mixture with fertilizers.

Water-dispersible granules are prepared generally by the customary processes such
25 as spray-drying, fluidized bed granulation, pan granulation, mixing with high-speed mixers and extrusion without solid inert material.

For the production of pan granules, fluidized bed granules, extruder granules and spray granules, see, for example, processes in "Spray-Drying Handbook" 3rd ed.
30 1979, G. Goodwin Ltd., London; J.E. Browning, "Agglomeration", Chemical and Engineering 1967, pages 147 ff.; "Perry's Chemical Engineer's Handbook", 5th Ed., McGraw-Hill, New York 1973, pp. 8-57.

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For further details regarding the formulation of crop protection compositions, see, for example, G.C. Klingman, "Weed Control as a Science", John Wiley and Sons, Inc., New York, 1961, pages 81-96 and J.D. Freyer, S.A. Evans, "Weed Control Handbook", 5th ed., Blackwell Scientific Publications, Oxford, 1968, pages 101-103.

The agrochemical formulations contain generally from 0.1 to 99% by weight, in particular from 0.1 to 95% by weight, of compounds according to the invention. In wettable powders, the active compound concentration is, for example, from about 10 to 90% by weight, the remainder to 100% by weight consisting of customary formulation components. In the case of emulsifiable concentrates, the active compound concentration can be from about 1 to 90, preferably from 5 to 80, % by weight. Formulations in the form of dusts comprise from 1 to 30% by weight of active compound, preferably usually from 5 to 20% by weight of active compound; sprayable solutions contain from about 0.05 to 80% by weight, preferably from 2 to 50% by weight of active compound. In the case of water-dispersible granules, the active compound content depends partially on whether the active compound is present in liquid or solid form and on which granulation auxiliaries, fillers, etc., are used. In the water-dispersible granules, the content of active compound is, for example, between 1 and 95% by weight, preferably between 10 and 80% by weight.

In addition, the active compound formulations mentioned optionally comprise the respectively customary adhesives, wetting agents, dispersants, emulsifiers, penetrants, preservatives, antifreeze agents and solvents, fillers, carriers and dyes, defoamers, evaporation inhibitors and agents which influence the pH and the viscosity.

Based on these formulations, it is also possible to produce combinations with other pesticidally active compounds, such as, for example, insecticides, acaricides, herbicides, fungicides, and also with safeners, fertilizers and/or growth regulators, for example in the form of a finished formulation or as a tank mix.

Active compounds which can be employed in combination with the compounds

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according to the invention in mixed formulations or in the tank mix are, for example, known active compounds which are based on the inhibition of, for example, acetolactate synthase, acetyl-CoA carboxylase, cellulose synthase, enolpyruvylshikimate-3-phosphate synthase, glutamine synthetase, p-
 5 hydroxyphenylpyruvate dioxygenase, phytoen desaturase, photosystem I, photosystem II, protoporphyrinogen oxidase, as are described in, for example, Weed Research 26 (1986) 441-445 or "The Pesticide Manual", 15th edition, The British Crop Protection Council and the Royal Soc. of Chemistry, 2009 and the literature cited therein. Known herbicides or plant growth regulators which can be combined with the
 10 compounds according to the invention are, for example, the following active compounds (the compounds are either designated by the common name according to the International Organization for Standardization (ISO) or by the chemical name, or by the code number) and always comprise all use forms such as acids, salts, esters and isomers such as stereoisomers and optical isomers. Here, by way of example, one and
 15 in some cases a plurality of use forms are mentioned:

acetochlor, acibenzolar, acibenzolar-S-methyl, acifluorfen, acifluorfen-sodium, aclonifen, alachlor, allidochlor, alloxymid, alloxymid-sodium, ametryne, amicarbazone, amidochlor, amidosulfuron, aminocyclopyrachlor, aminopyralid, amitrole, ammonium
 20 sulphamate, ancymidol, anilofos, asulam, atrazine, azafenidin, azimsulfuron, aziprotryne, beflubutamid, benazolin, benazolin-ethyl, bencarbazone, benfluralin, benfuresate, bensulide, bensulfuron, bensulfuron-methyl, bentazone, benzfendizone, benzobicyclon, benzofenap, benzofluor, benzoylprop, bicyclopyrone, bifenox, bilanafos, bilanafos-sodium, bispyribac, bispyribac-sodium, bromacil, bromobutide,
 25 bromofenoxim, bromoxynil, bromuron, buminafos, busoxinone, butachlor, butafenacil, butamifos, butenachlor, butralin, butroxydim, butylate, cafenstrole, carbetamide, carfentrazone, carfentrazone-ethyl, chlomethoxyfen, chloramben, chlorazifop, chlorazifop-butyl, chlorbromuron, chlorbufam, chlorfenac, chlorfenac-sodium, chlorfenprop, chlorflurenol, chlorflurenol-methyl, chloridazon, chlorimuron, chlorimuron-
 30 ethyl, chlormequat-chloride, chlornitrofen, chlorophthalim, chlorthal-dimethyl, chlortoluron, chlorsulfuron, cinidon, cinidon-ethyl, cinmethylin, cinosulfuron, clethodim, clodinafop, clodinafop-propargyl, clofencet, clomazone, clomeprop, cloprop, clopyralid,

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cloransulam, cloransulam-methyl, cumyluron, cyanamide, cyanazine, cyclanilide,
 cycloate, cyclosulfamuron, cycloxydim, cycluron, cyhalofop, cyhalofop-butyl,
 cyperquat, cyprazine, cyprazole, 2,4-D, 2,4-DB, daimuron/dymron, dalapon,
 daminozide, dazomet, n-decanol, desmedipham, desmetryn, detosyl-pyrazolate (DTP),
 5 diallate, dicamba, dichlobenil, dichlorprop, dichlorprop-P, diclofop, diclofop-methyl,
 diclofop-P-methyl, diclosulam, diethatyl, diethatyl-ethyl, difenoxuron, difenzoquat,
 diflufenican, diflufenzopyr, diflufenzopyr-sodium, dimefuron, dikegulac-sodium,
 dimefuron, dimepiperate, dimethachlor, dimethametryn, dimethenamid, dimethenamid-
 P, dimethipin, dimetrasulfuron, dinitramine, dinoseb, dinoterb, diphenamid, dipropetryn,
 10 diquat, diquat-dibromide, dithiopyr, diuron, DNOC, eglinazine-ethyl, endothal, EPTC,
 esprocarb, ethalfluralin, ethametsulfuron, ethametsulfuron-methyl, ethephon,
 ethidimuron, ethiozin, ethofumesate, ethoxyfen, ethoxyfen-ethyl, ethoxysulfuron,
 etobenzanid, F-5331, i.e. N-[2-chloro-4-fluoro-5-[4-(3-fluoropropyl)-4,5-dihydro-5-oxo-
 1H-tetrazol-1-yl]phenyl]ethanesulfonamide, F-7967, i.e. 3-[7-chloro-5-fluoro-2-
 15 (trifluoromethyl)-1H-benzimidazol-4-yl]-1-methyl-6-(trifluoromethyl)pyrimidine-
 2,4(1H,3H)-dione, fenoprop, fenoxaprop, fenoxaprop-P, fenoxaprop-ethyl, fenoxaprop-
 P-ethyl, fenoxasulfone, fentrazamide, fenuron, flamprop, flamprop-M-isopropyl,
 flamprop-M-methyl, flazasulfuron, florasulam, fluazifop, fluazifop-P, fluazifop-butyl,
 fluazifop-P-butyl, fluazolate, flucarbazone, flucarbazone-sodium, flucetosulfuron,
 20 fluchloralin, flufenacet (thiaflumide), flufenpyr, flufenpyr-ethyl, flumetralin,
 flumetsulam, flumiclorac, flumiclorac-pentyl, flumioxazin, flumipropyn, fluometuron,
 fluorodifen, fluoroglycofen, fluoroglycofen-ethyl, flupoxam, flupropacil, flupropanate,
 flupyrsulfuron, flupyrsulfuron-methyl-sodium, flurenol, flurenol-butyl, fluridone,
 flurochloridone, fluroxypyr, fluroxypyr-meptyl, flurprimidol, flurtamone, fluthiacet,
 25 fluthiacet-methyl, fluthiamide, fomesafen, foramsulfuron, forchlorfenuron, fosamine,
 furyloxyfen, gibberellic acid, glufosinate, glufosinate-ammonium, glufosinate-P,
 glufosinate-P-ammonium, glufosinate-P-sodium, glyphosate, glyphosate-
 isopropylammonium, H-9201, i.e. O-(2,4-dimethyl-6-nitrophenyl) O-ethyl
 isopropylphosphoramidothioate, halosafen, halosulfuron, halosulfuron-methyl,
 30 haloxyfop, haloxyfop-P, haloxyfop-ethoxyethyl, haloxyfop-P-ethoxyethyl, haloxyfop-
 methyl, haloxyfop-P-methyl, hexazinone, HW-02, i.e. 1-(dimethoxyphosphoryl)ethyl
 (2,4-dichlorophenoxy)acetate, imazamethabenz, imazamethabenz-methyl, imazamox,

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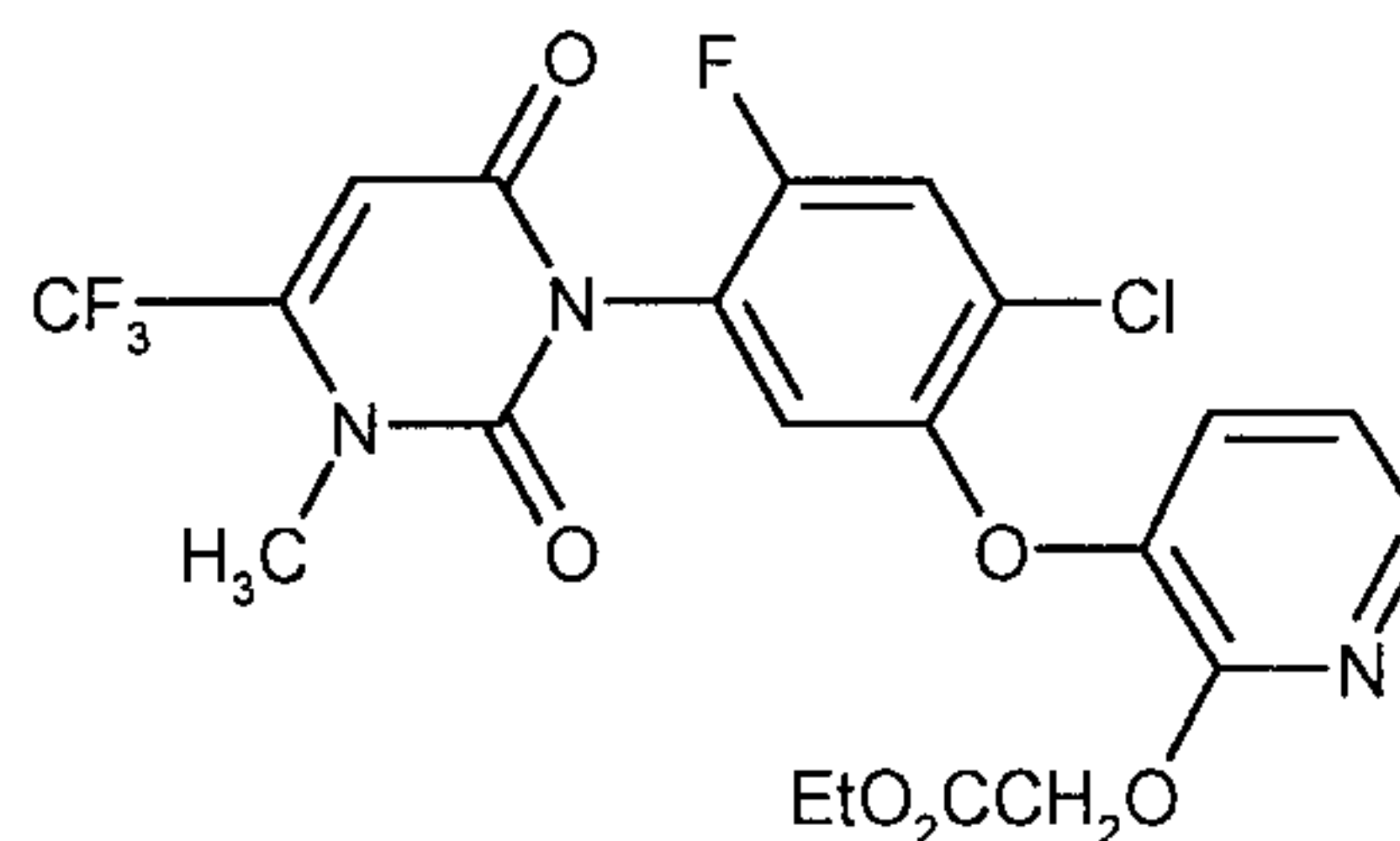
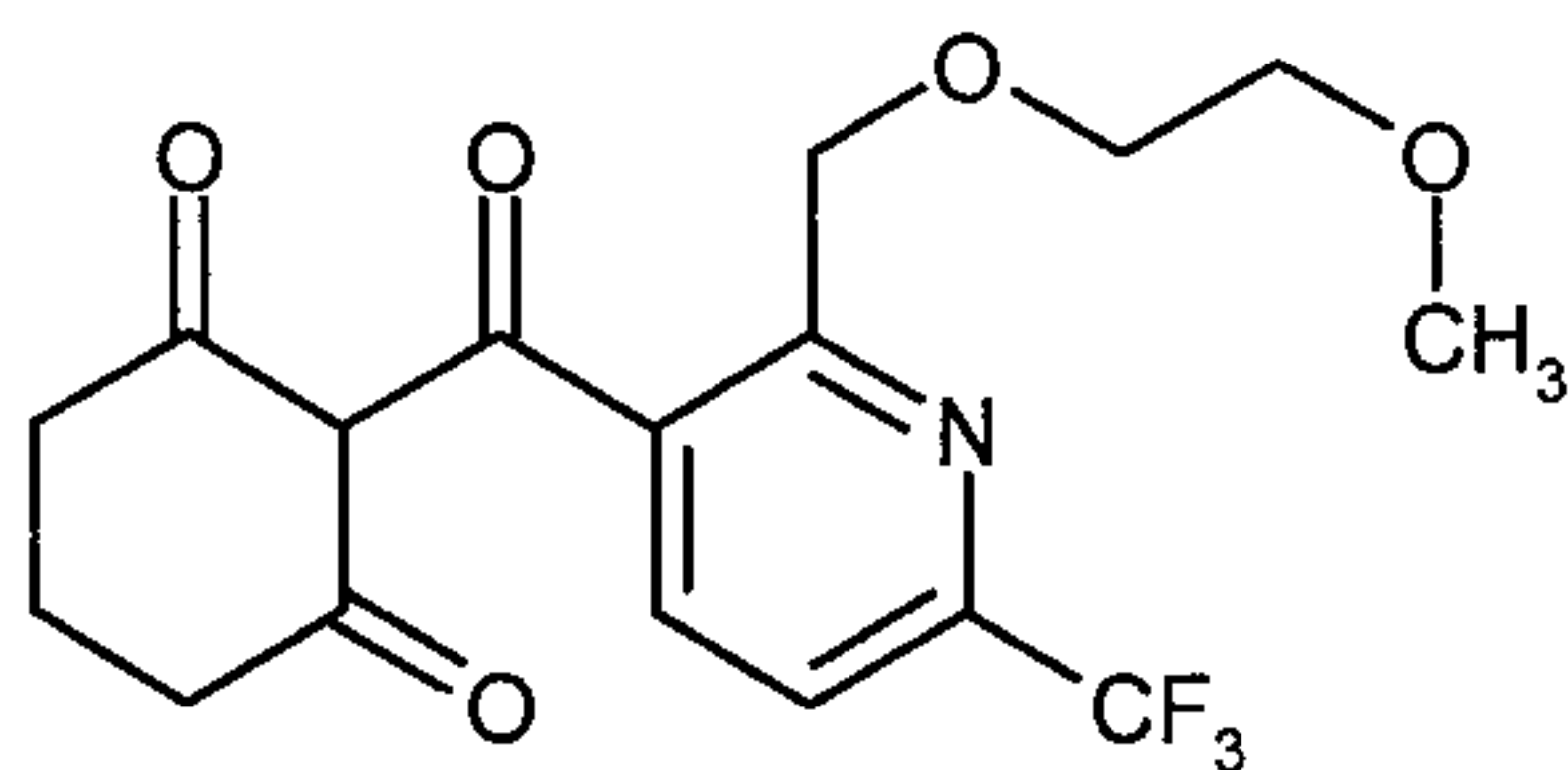
imazamox-ammonium, imazapic, imazapyr, imazapyr-isopropylammonium, imazaquin,
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 inabenfide, indanofan, indaziflam, indoleacetic acid (IAA), 4-indol-3-ylbutyric acid
 (IBA), iodosulfuron, iodosulfuron-methyl-sodium, ioxynil, ipfencarbazone, isocarbamid,
 5 isopropalin, isoproturon, isouron, isoxaben, isoxachlortole, isoxaflutole, isoxapyrifop,
 KUH-043, i.e. 3-([5-(difluoromethyl)-1-methyl-3-(trifluoromethyl)-1H-pyrazol-4-
 yl]methyl)sulfonyl)-5,5-dimethyl-4,5-dihydro-1,2-oxazole, karbutilate, ketospiradox,
 lactofen, lenacil, linuron, maleic hydrazide, MCPA, MCPB, MCPB-methyl, -ethyl and -
 sodium, mecoprop, mecoprop-sodium, mecoprop-butotyl, mecoprop-P-butotyl,
 10 mecoprop-P-dimethylammonium, mecoprop-P-2-ethylhexyl, mecoprop-P-potassium,
 mefenacet, mefluidide, mepiquat-chloride, mesosulfuron, mesosulfuron-methyl,
 mesotrione, methabenzthiazuron, metam, metamifop, metamitron, metazachlor,
 metazasulfuron, methazole, methiopyrsulfuron, methiozolin, methoxyphenone,
 methyldymron, 1-methylcyclopropene, methyl isothiocyanate, metobenzuron,
 15 metobromuron, metolachlor, S-metolachlor, metosulam, metoxuron, metribuzin,
 metsulfuron, metsulfuron-methyl, molinate, monalide, monocarbamide,
 monocarbamide dihydrogensulfate, monolinuron, monosulfuron, monosulfuron ester,
 monuron, MT-128, i.e. 6-chloro-N-[(2E)-3-chloroprop-2-en-1-yl]-5-methyl-N-
 phenylpyridazine-3-amine, MT-5950, i.e. N-[3-chloro-4-(1-methylethyl)phenyl]-2-
 20 methylpentanamide, NGGC-011, naproanilide, napropamide, naptalam, NC-310, i.e. 4-
 (2,4-dichlorobenzoyl)-1-methyl-5-benzyloxypyrazole, neburon, nicosulfuron,
 nipyraclufen, nitralin, nitrofen, nitrophenolate-sodium (isomer mixture), nitrofluorfen,
 nonanoic acid, norflurazon, orbencarb, orthosulfamuron, oryzalin, oxadiargyl,
 oxadiazon, oxasulfuron, oxaziclomefone, oxyfluorfen, paclobutrazole, paraquat,
 25 paraquat dichloride, pelargonic acid (nonanoic acid), pendimethalin, pendralin,
 penoxsulam, pentanochlor, pentoxazone, perfluidone, pethoxamid, phenisopham,
 phenmedipham, phenmedipham-ethyl, picloram, picolinafen, pinoxaden, piperophos,
 pirifenop, pirifenop-butyl, pretilachlor, primisulfuron, primisulfuron-methyl, probenazole,
 profluazole, procyazine, prodiamine, prifluraline, profoxydim, prohexadione,
 30 prohexadione-calcium, prohydrojasmon, prometon, prometryn, propachlor, propanil,
 propaquizafop, propazine, propham, propisochlor, propoxycarbazone,
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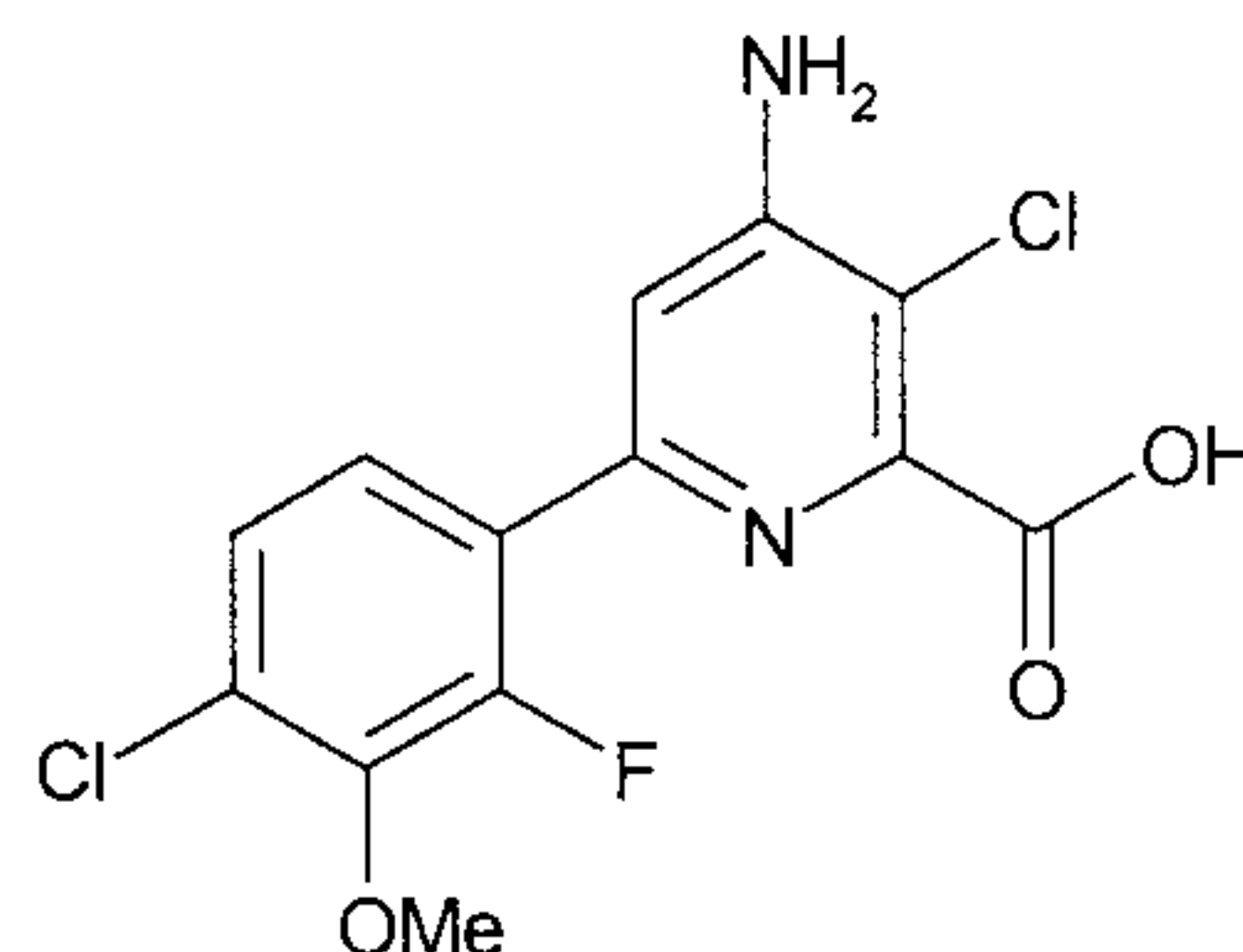
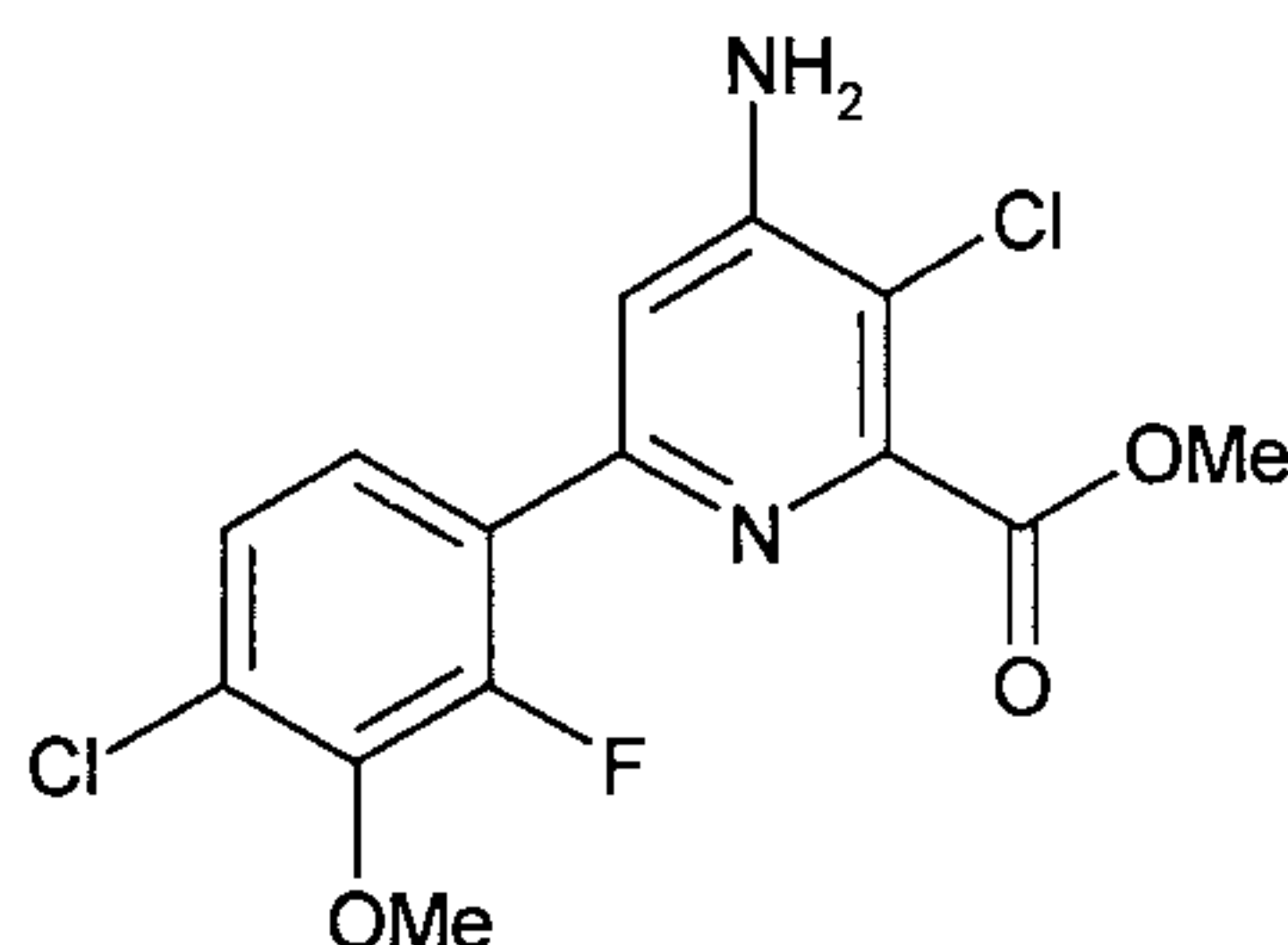
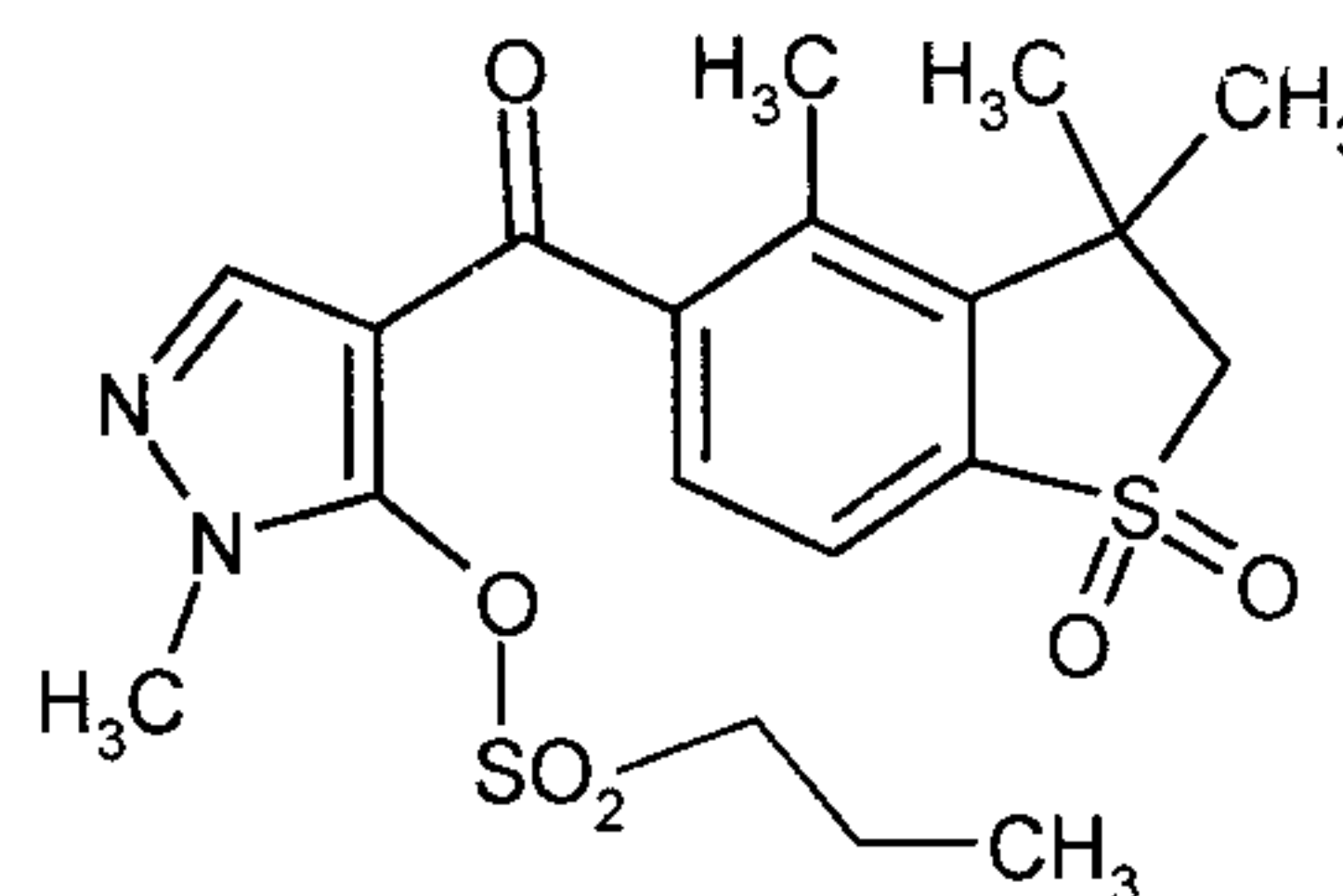
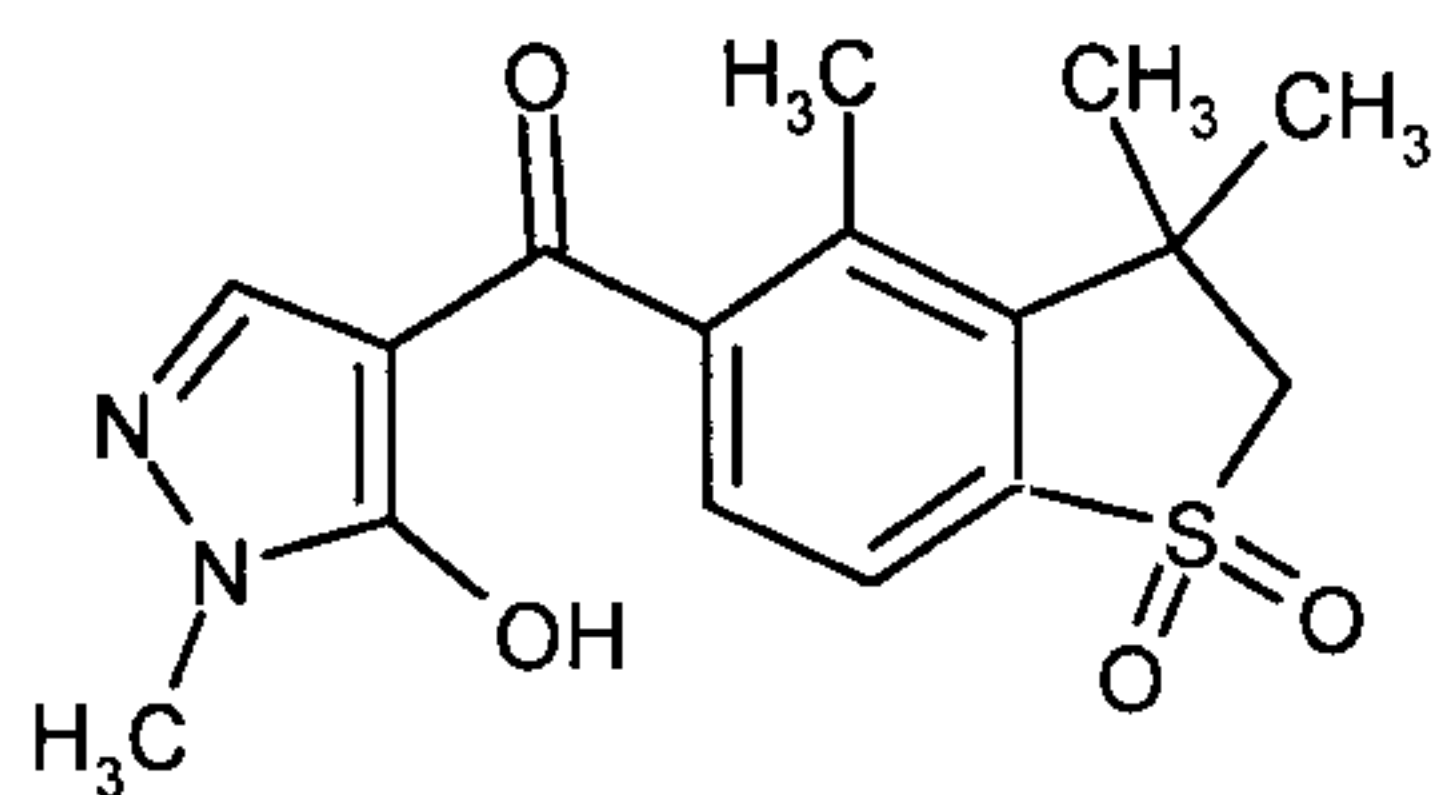
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 pyribambenz, pyribambenz-isopropyl, pyribambenz-propyl, pyribenzoxim, pyributicarb,
 pyridafol, pyridate, pyriftalid, pyriminobac, pyriminobac-methyl, pyrimisulfan,
 5 pyriothiac, pyriothiac-sodium, pyroxasulfone, pyroxulam, quinclorac, quinmerac,
 quinclamine, quizalofop, quizalofop-ethyl, quizalofop-P, quizalofop-P-ethyl,
 quizalofop-P-tefuryl, rimsulfuron, saflufenacil, secbumeton, sethoxydim, siduron,
 simazine, simetryn, SN-106279, i.e. methyl (2R)-2-({7-[2-chloro-4-
 (trifluoromethyl)phenoxy]-2-naphthyl}oxy)propanoate, sulcotrione, sulfallate (CDEC),
 10 sulfentrazone, sulfometuron, sulfometuron-methyl, sulfosate (glyphosate-trimesium),
 sulfosulfuron, SYN-523, SYP-249, i.e. 1-ethoxy-3-methyl-1-oxobut-3-en-2-yl 5-[2-
 chloro-4-(trifluoromethyl)phenoxy]-2-nitrobenzoate, SYP-300, i.e. 1-[7-fluoro-3-oxo-4-
 (prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-3-propyl-2-thioxoimidazolidine-
 4,5-dione, tebutam, tebuthiuron, tecnazene, tefuryltrione, tembotrione, tepraloxym,
 15 terbacil, terbucarb, terbutylchlor, terbumeton, terbuthylazine, terbutryne, thenylchlor,
 thiafluamide, thiazafluron, thiazopyr, thidiazimin, thidiazuron, thien carbazon,
 thien carbazon-methyl, thifensulfuron, thifensulfuron-methyl, thiobencarb, tiocarbamil,
 topramezone, tralkoxydim, triallate, triasulfuron, triaziflam, triazofenamide, tribenuron,
 tribenuron-methyl, trichloroacetic acid (TCA), triclopyr, tridiphane, trietazine,
 20 trifloxysulfuron, trifloxysulfuron-sodium, trifluralin, triflusulfuron, triflusulfuron-methyl,
 trimeturon, trinexapac, trinexapac-ethyl, tritosulfuron, tsitodef, uniconazole,
 uniconazole-P, vernolate, ZJ-0862, i.e. 3,4-dichloro-N-{2-[(4,6-dimethoxypyrimidin-2-
 yl)oxy]benzyl}aniline, and the following compounds:



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For application, the formulations present in commercial form are, if appropriate, diluted in a customary manner, for example in the case of wettable powders, emulsifiable concentrates, dispersions and water-dispersible granules with water. Preparations in the form of dusts, granules for soil application or granules for broadcasting and sprayable solutions are usually not diluted further with other inert substances prior to application.

The required application rate of the compounds of the formula (I) varies according to the external conditions such as, inter alia, temperature, humidity and the type of herbicide used. It may vary within wide limits, for example between 0.001 and 1.0 kg/ha or more of active substance; however, preferably it is between 0.005 and 750 g/ha.

The examples below illustrate the invention:

A. Chemical examples

1. Preparation of methyl 4-amino-3-chloro-6-(7-fluoro-2-phenyl-1,3-benzoxazol-6-yl)pyridine-2-carboxylate (Example No. 8.019)

0.024 g (0.03 mmol) of $(PPh_3)_2PdCl_2$ is added to a solution of 0.3 g (1.13 mmol) of methyl 4-amino-6-bromo-3-chloropyridine-2-carboxylate in 20 ml of dioxane, and this

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mixture is stirred at room temperature (RT) for 30 min. In succession, 0.35 g (1.35 mmol) of (7-fluoro-2-phenyl-1,3-benzoxazol-6-yl)boronic acid, 0.47 g (3.4 mmol) of K_2CO_3 and 2 g (111 mmol) of H_2O are then added to this mixture, which is then stirred under reflux for 6 h. The mixture is allowed to stand at RT for a further 12 h and then added to 40 ml of H_2O . This mixture is extracted repeatedly with CH_2Cl_2 , and the combined organic phase is dried over Na_2SO_4 and then concentrated. Purification by chromatography on silica gel using the mobile phase heptane/ethyl acetate (3/7) gives 0.16 g (36%) of product. ^1H -NMR ($CDCl_3$): δ 8.30, 8.00, 7.55 (3m, 5H, C_6H_5), 7.60, 7.55 (2d, 2H, benzoxazole ring), 7.30 (s, 1H, pyridine) 4.85 (bs, 2H, NH_2), 4.00 (S, 3H, $COOCH_3$).

2. Preparation of methyl 4-amino-3-chloro-6-(1,3-benzoxazol-6-yl)pyridine-2-carboxylate (Example No. 8.013)

0.024 g (0.03 mmol) of $(PPh_3)_2PdCl_2$ is added to a solution of 0.3 g (1.13 mmol) of methyl 4-amino-6-bromo-3-chloropyridine-2-carboxylate in 20 ml of dioxane, and this mixture is stirred at RT for 30 min. In succession, 0.28 g (1.13 mmol) of 6-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1,3-benzoxazole, 0.47 g (3.4 mmol) of K_2CO_3 and 2 g (111 mmol) of H_2O are then added to this mixture, which is then stirred under reflux for 6 h. The mixture is allowed to stand at RT for a further 12 h and then added to 40 ml of H_2O . This mixture is extracted repeatedly with CH_2Cl_2 , and the combined organic phase is dried over Na_2SO_4 and then concentrated. Purification by chromatography on silica gel using the mobile phase heptane/ethyl acetate (3/7) gives 0.1 g (29%) of product. ^1H -NMR ($CDCl_3$): δ 8.25 (s, 1H, benzoxazole), 8.15 (s, 1H, benzoxazole), 7.90, 7.80 (2d, 2H, benzoxazole), 7.20 (s, 1H, pyridine), 4.80 (bs, 2H, NH_2), 4.00 (s, 3H, $COOCH_3$).

3. Preparation of methyl 6-amino-5-chloro-2-(2-methyl-1,3-benzoxazol-5-yl)pyrimidine-4-carboxylate (Example No. 30.014)

0.024 g (0.03 mmol) of $(PPh_3)_2PdCl_2$ is added to a solution of 0.3 g (1.13 mmol) of methyl 6-amino-2-bromo-5-chloropyridine-4-carboxylate in 20 ml of dioxane, and this mixture is stirred at RT for 30 min. 0.29 g (1.13 mmol) of 2-methyl-5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1,3-benzoxazole, 0.47 g (3.4 mmol) of K_2CO_3 and

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- 2 g (111 mmol) of H₂O are then added, and the mixture is then stirred under reflux for 6 h. The reaction mixture is allowed to stand at RT for a further 12 h and then added to 40 ml of H₂O. This mixture is extracted repeatedly with CH₂Cl₂, and the combined organic phase is dried over Na₂SO₄ and then concentrated. Purification by
- 5 chromatography on silica gel using the mobile phase heptane/ethyl acetate (3/7) gives 0.06 g (17%) of product. ¹H-NMR (CDCl₃): δ 8.65 (d, 1H, benzoxazole), 8.40 (dd, 1H, benzoxazole), 7.50 (d, 1H, benzoxazole), 5.55 (bs, 2H, NH₂), 4.05 (s, 3H, COOCH₃) 2.70 (s, 3H, -CH₃).
- 10 In the table below, the NMR data of some compounds according to the invention are listed for characterization.

Ex. No.	¹ H-NMR δ (ppm)
1.012	CDCl ₃ : 8.40d, 1H; 7.83d, 1H; 7.65, 1H; 7.53d, 1H; 7.12s, 1H; 4.80bs, 2H, NH ₂ ; 4.05s, 3H, COOMe
1.038	CDCl ₃ : 8.40d, 1H; 7.62d, 1H; 7.57d, 1H; 7.20s, 1H; 6.70d, 1H; 4.80bs, 2H, NH ₂ ; 4.00s, 3H, COOMe
2.012	CDCl ₃ : 8.40d, 1H; 7.92d, 1H; 7.88dd, 1H; 7.46d, 1H; 7.39d, 1H; 7.18s, 1H; 4.8bs, NH ₂ ; 4.02s, 3H, COOMe
2.038	CDCl ₃ : 8.40d, 1H; 7.60d, 1H; 7.40d, 1H; 7.35d, 1H; 7.25s, 1H; 4.85bs, 2H, NH ₂ ; 4.00s, 3H, COOMe
8.007	DMSO-d ₆ : 8.45d, 2H; 8.20m, 1H; 7.80s, 1H; 7.70m, 3H; 7.40m, 1H
8.013	CDCl ₃ : 8.30s, 1H; 8.13s, 1H; 8.05d, 2H; 7.62d, 1H; 7.13s, 1H; 4.82bs, NH ₂ ; 4.0s, 3H, COOMe
8.014	CDCl ₃ : 8.10s, 1H; 7.90d, 1H; 7.50d, 1H; 7.10s, 1H; 4.70bs, 2H, NH ₂ ; 4.00s, 3H, COOMe; 2.65s, 3H, CH ₃
8.019	CDCl ₃ : 8.30m, 2H; 8.15m, 1H; 7.59m, 4H; 7.18m, 1H; 4.95bs, 2H, NH ₂ ; 4.05s, 3H, COOMe
8.039	CDCl ₃ : 7.85s, 1H; 7.70d, 1H; 7.30d, 1H; 7.10s, 1H; 4.95bs, 2H, NH ₂ ; 4.80bs, 2H, NH ₂ ; 4.00s, 3H, COOMe
9.013	CDCl ₃ : 9.00s, 1H; 8.60s, 1H; 8.12d, 1H; 8.00d, 1H; 7.20s, 1H; 4.85bs, 2H, NH ₂ ; 4.00s, 3H, COOMe
9.014	CDCl ₃ : 8.40s, 1H; 8.00d, 1H; 7.85d, 1H; 7.18s, 1H; 4.80bs, 2H, NH ₂ ; 4.00s, 3H, COOMe
10.013	CDCl ₃ : 8.25s, 1H; 8.15s, 1H; 8.92d, 1H; 8.82d, 1H; 7.18s, 1H; 4.80bs, 2H, NH ₂ ; 4.00s, 3H, COOMe
10.014	CDCl ₃ : 8.10s, 1H; 7.82d, 1H; 7.68d, 1H; 7.14s, 1H; 4.80bs, 2H, NH ₂ ; 4.00s, 3H,

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Ex. No.	¹ H-NMR δ (ppm)
	COOMe; 2.68s, 3H, CH ₃
10.019	CDCl ₃ : 8.30m, 2H; 8.00dd, 1H; 7.60d, 1H; 7.57m, 3H; 7.30s, 1H; 4.85bs, 2H, NH ₂ ; 4.00s 3H, COOMe
10.023	CDCl ₃ : 8.30m, 2H; 7.73d, 1H; 7.67s, 1H; 7.60m, 3H; 7.14s, 1H; 4.90bs, 2H, NH ₂ ; 4.00s, 3H, COOMe
11.014	CDCl ₃ : 8.50s, 1H; 7.98d, 1H; 7.90d, 1H; 7.15s, 1H; 4.85bs, 2H, NH ₂ ; 4.00s, 3H, COOMe; 2.85s, 3H, CH ₃
14.061	CDCl ₃ : 8.20s, 1H; 7.80d, 1H; 7.65d, 1H; 7.60d, 1H; 7.15s, 1H; 6.78d, 1H; 4.80bs, 2H, NH ₂ ; 4.02s, 3H, COOMe
14.081	CDCl ₃ : 7.85dd, 1H; 7.70d, 2H; 7.40d, 2H; 7.30s, 1H; 6.70d, 1H; 4.80bs, 2H, NH ₂ ; 4.00s, 3H, COOMe
15.061	CDCl ₃ : 8.50s, 1H; 7.89d, 1H; 7.85d, 1H; 7.50d, 1H; 7.35d, 1H; 7.20s, 1H; 4.80bs, 2H, NH ₂ ; 4.03s, 3H, COOMe
16.064	CDCl ₃ : 8.10s, 1H; 8.00bs, 1H, NH; 7.60m, 2H; 7.20s, 1H; 7.00s, 1H; 4.70bs, 2H, NH ₂ ; 4.00s, 3H, COOMe; 2.35s, 3H, CH ₃
16.073	CDCl ₃ : 8.10bs, 1H, NH; 7.95s, 1H; 7.50m, 2H; 7.10s, 1H; 6.20s, 1H; 4.75bs, 2H; NH ₂ ; 4.00s, 3H, COOMe; 2.45s, 3H, CH ₃
24.012	CDCl ₃ : 8.84s, 1H; 8.35d, 1H; 7.93d, 1H; 7.48d, 1H; 7.42d, 1H; 5.60bs, 2H, NH ₂ ; 4.00s, 3H; COOMe
30.014	CDCl ₃ : 8.65s, 1H; 8.40d, 1H; 7.50d, 1H; 5.60bs, 2H, NH ₂ ; 4.05s, 3H, COOMe; 2.70s, 3H, CH ₃
31.013	CDCl ₃ : 9.15s, 1H; 9.05s, 1H; 8.50d, 1H; 8.00d, 1H; 5.60bs, 2H, NH ₂ ; 4.05s, 3H, COOMe
32.013	CDCl ₃ : 8.60s, 1H; 8.45d, 1H; 8.18s, 1H; 7.70d, 1H; 5.60bs, 2H, NH ₂ ; 4.05s, 3H, COOMe
33.014	CDCl ₃ : 8.85s, 1H; 8.45d, 1H; 7.95d, 1H; 5.60bs, 2H, NH ₂ ; 4.00s, 3H; COOMe; 2.85s, 3H, CH ₃
38.061	CDCl ₃ : 8.48s, 1H; 8.30bs, NH; 8.15d, 1H; 7.70d, 1H; 7.30d, 1H; 6.60d, 1H; 5.50bs, 2H, NH ₂ ; 4.00s, 3H, COOMe

B. Formulation examples

1. Dusts

- 5 A dust is obtained by mixing 10 parts by weight of a compound of the general formula (I) and 90 parts by weight of talc as inert substance and comminuting the mixture in a hammer mill.

2. Dispersible powder

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

3. Dispersion concentrate

A readily water-dispersible dispersion concentrate is obtained by mixing 20 parts by weight of a compound of the general 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 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.

4. Emulsifiable concentrate

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

5. Water-dispersible granules

Water-dispersible granules are obtained by mixing

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

10 " of calcium lignosulfonate,

5 " of sodium laurylsulfate,

25 3 " of polyvinyl alcohol and

7 " of kaolin,

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

30 Water-dispersible granules are also obtained by homogenizing and precomminuting, in a colloid mill,

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

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5 " of sodium 2,2'-dinaphthylmethane-6,6'-disulfonate,
 2 " of sodium oleoylmethyltaurate,
 1 " of polyvinyl alcohol,
 17 " of calcium carbonate and
 5 50 " of water,
 subsequently grinding the mixture in a bead mill and atomizing and drying the resulting
 suspension in a spray tower by means of a single-substance nozzle.

10 C. Biological examples

1. Pre-emergence herbicidal action against harmful plants

Seeds or rhizome pieces of mono- and dicotyledonous harmful plants are placed in
 sandy loam soil in pots having a diameter of 9 to 13 cm and covered with soil. The
 herbicides, formulated as emulsifiable concentrates or dusts, are then applied in
 15 various dosages as aqueous dispersions or suspensions or emulsions at an
 application rate of 300 to 800 l of water/ha (converted) to the surface of the covering
 soil. For further cultivation of the plants, the pots are then kept under optimum
 conditions in a greenhouse. After the test plants were left to stand in the greenhouse
 for 3 to 4 weeks under optimum growth conditions, the activity of the compounds
 20 according to the invention is scored visually. Thus, for example, the compounds of nos.
 1.012, 1.038, 14.061 and 15.061 each show, at an application rate of 320 grams per
 hectare, an activity of at least 90% against *Echinochloa crus galli*, *Abutilon theophrasti*,
Amaranthus retroflexus, *Matricaria inodora*, *Stellaria media* and *Veronica persica*.

25 2. Post-emergence herbicidal action against harmful plants

Seeds of monocotyledonous and dicotyledonous harmful plants are placed in sandy
 loam soil in cardboard pots, covered with soil and cultivated in a greenhouse under
 good growth conditions. Two to three weeks after sowing, the test plants are treated at
 the three-leaf stage. The compounds according to the invention, formulated as
 30 wettable powders or as emulsion concentrates, are sprayed onto the surface of the
 green parts of the plants at an application rate of 600 to 800 l of water/ha (converted).
 After the test plants were left to stand in the greenhouse for 3 to 4 weeks under

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optimum growth conditions, the effect of the compounds according to the invention is scored visually. Thus, for example, the compounds of nos. 1.012, 14.061 and 15.061 each show, at an application rate of 80 grams per hectare, an activity of at least 90% against *Echinocloa crus galli*, *Abutilon theophrasti*, *Amaranthus retroflexus* and

5 *Matricaria inodora*.

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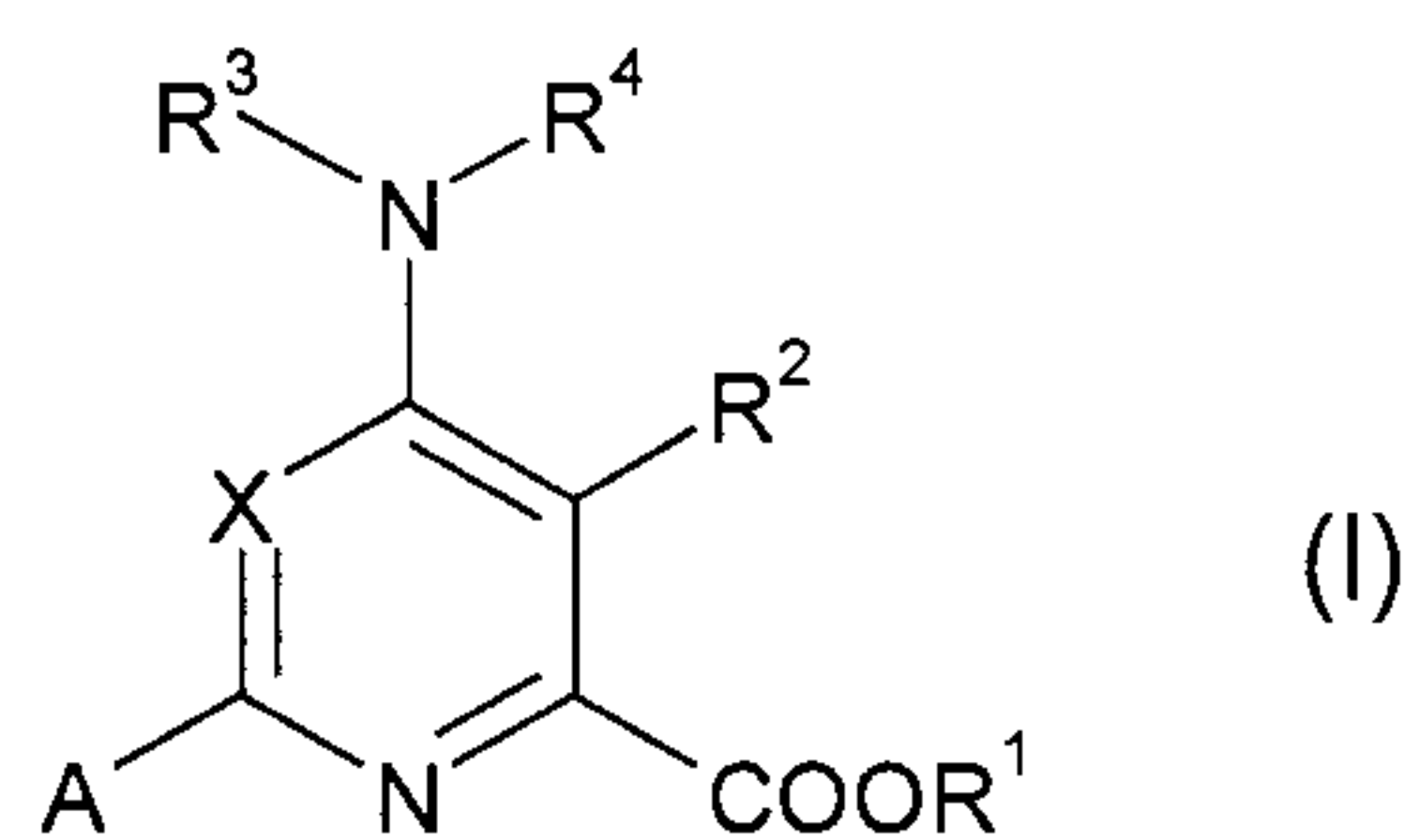
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Claims:

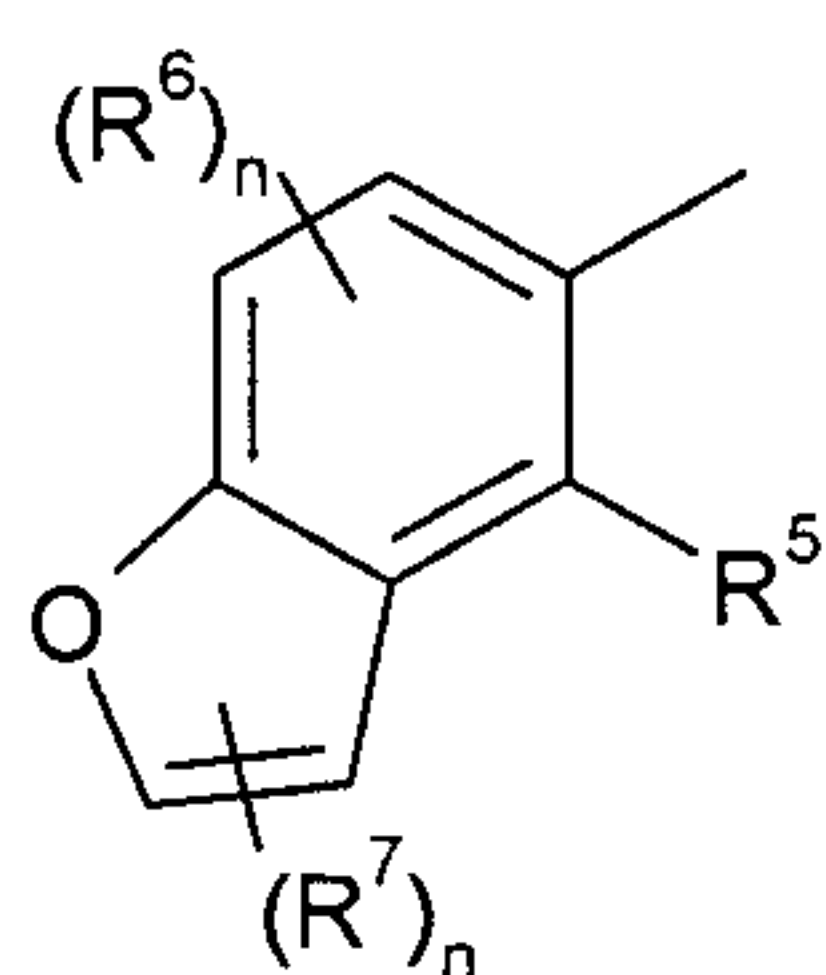
1. Compounds of the formula (I), their N-oxides or their salts

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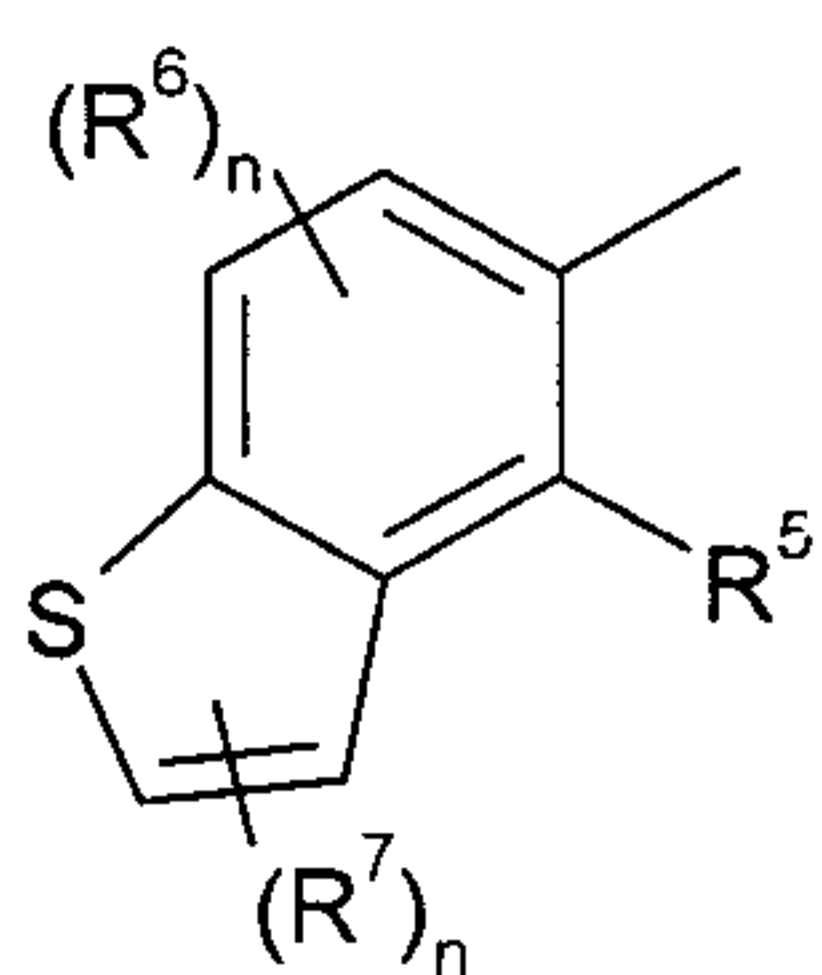


A represents a radical from the group consisting of A1 to A20,

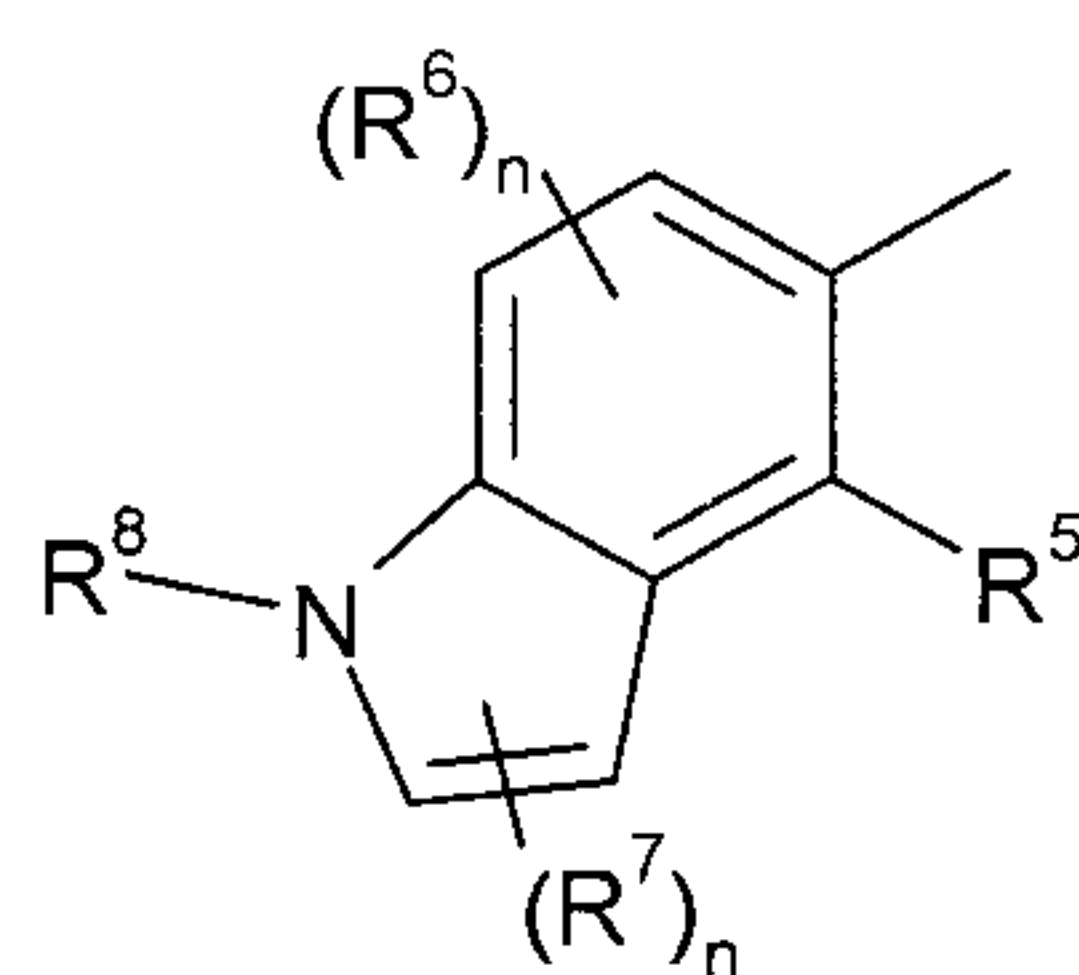
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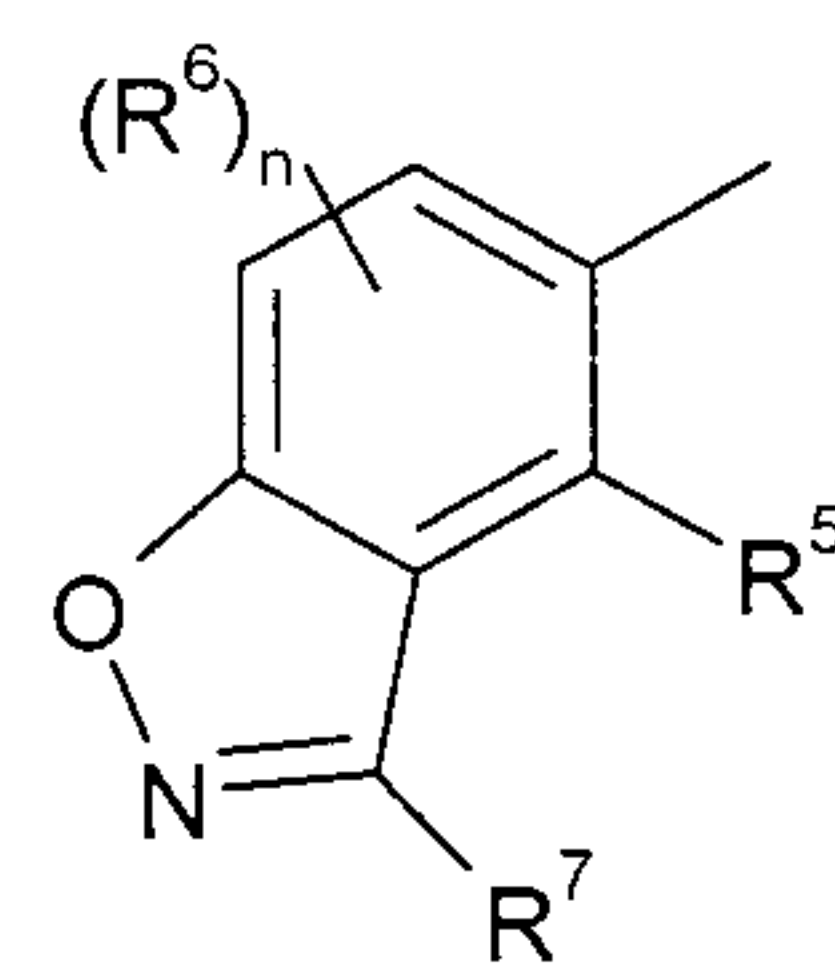
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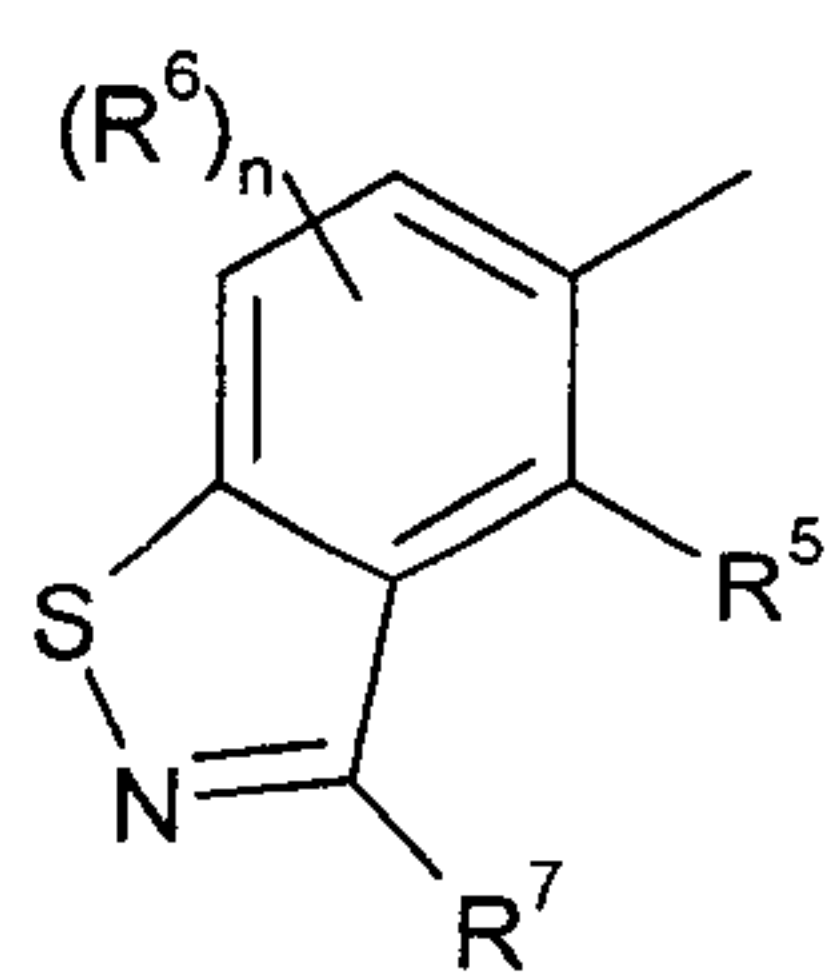
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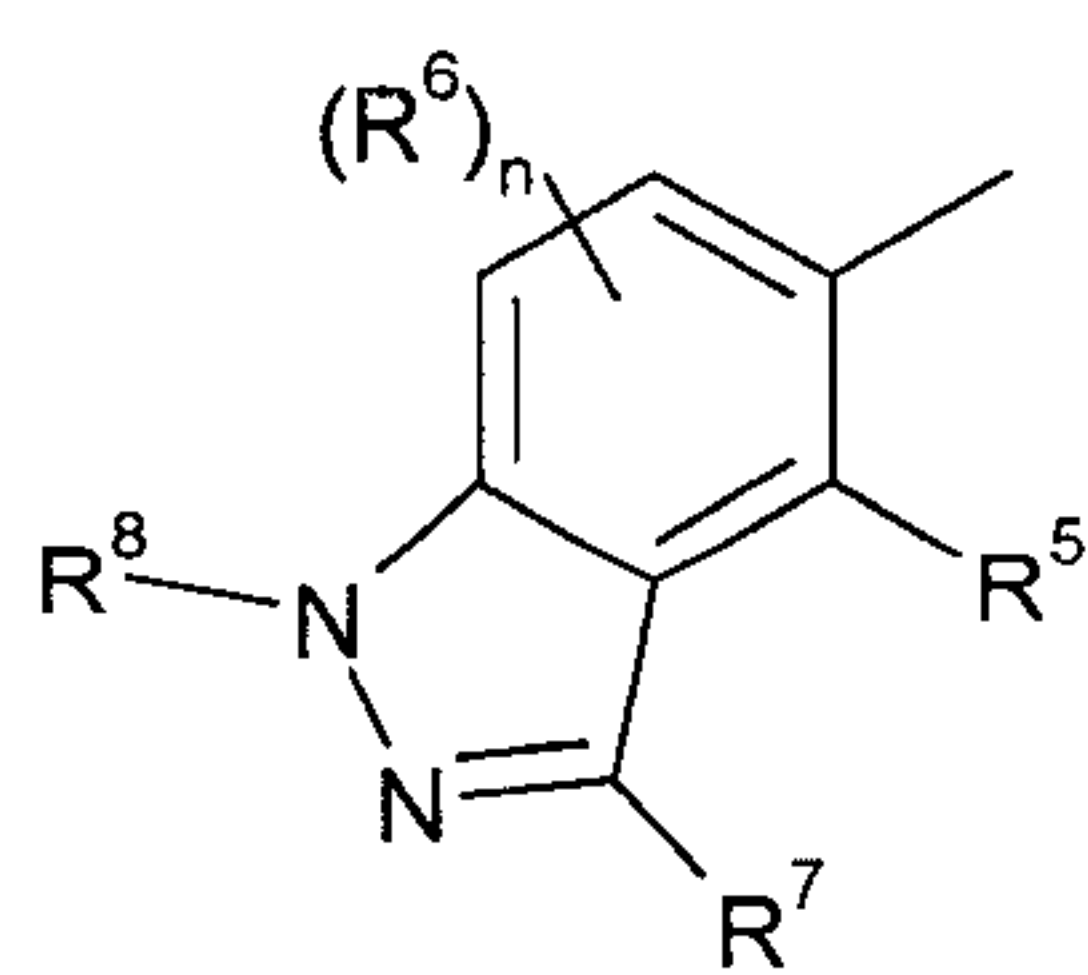
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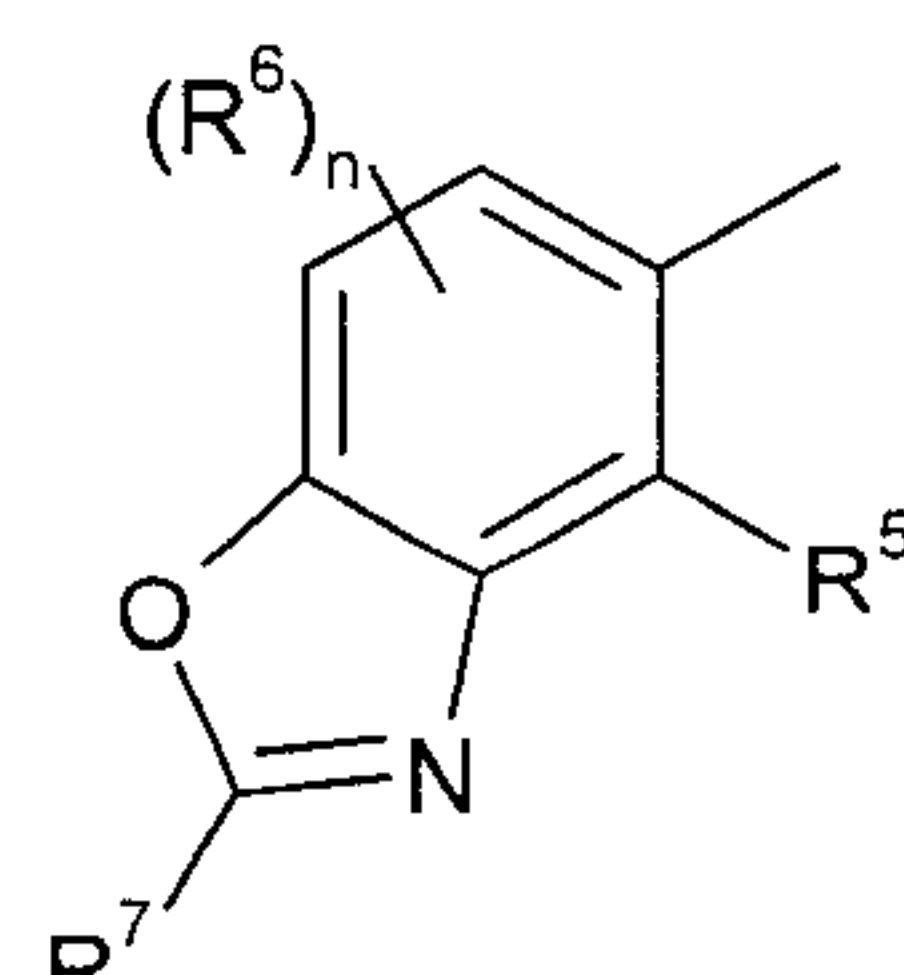
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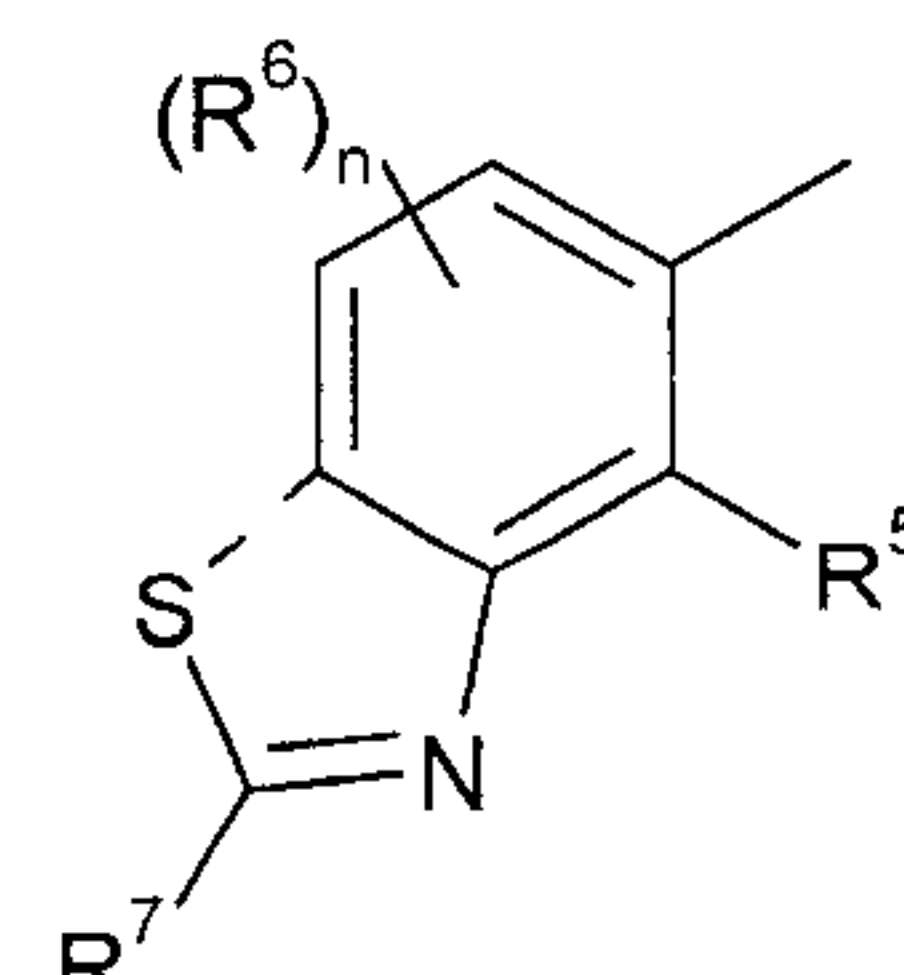
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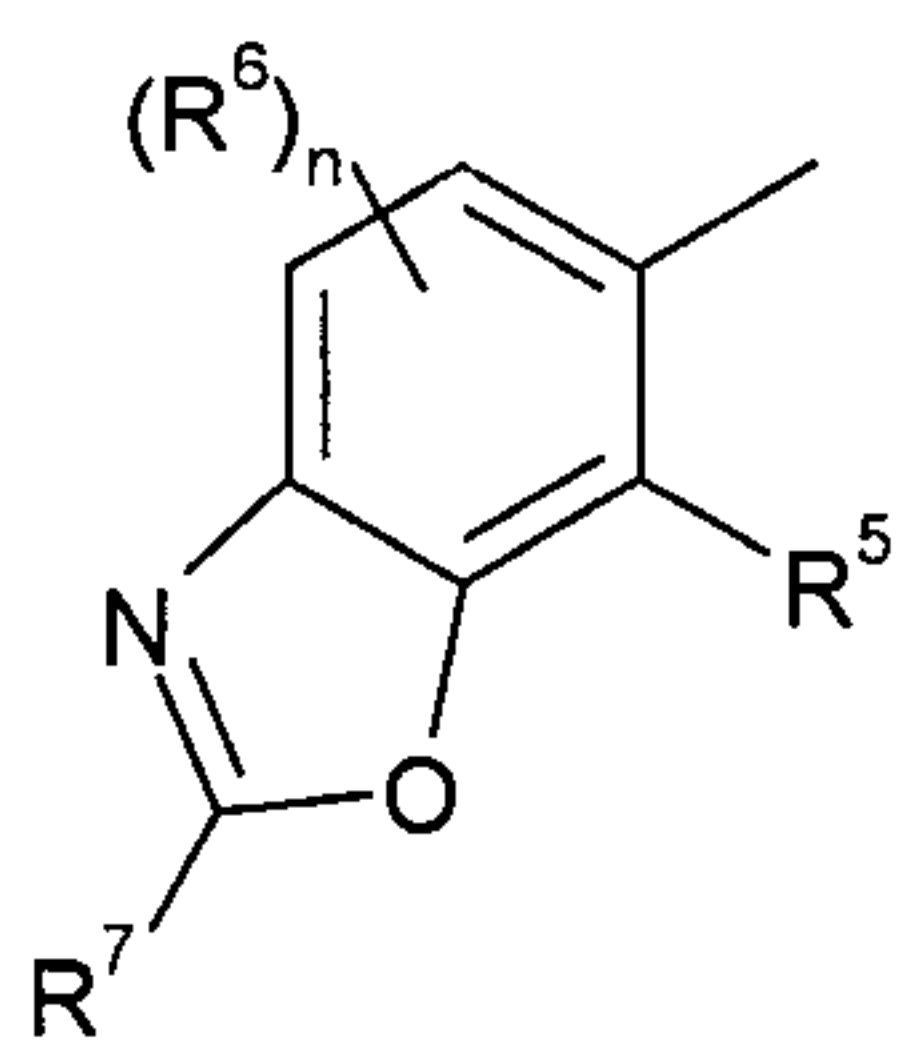
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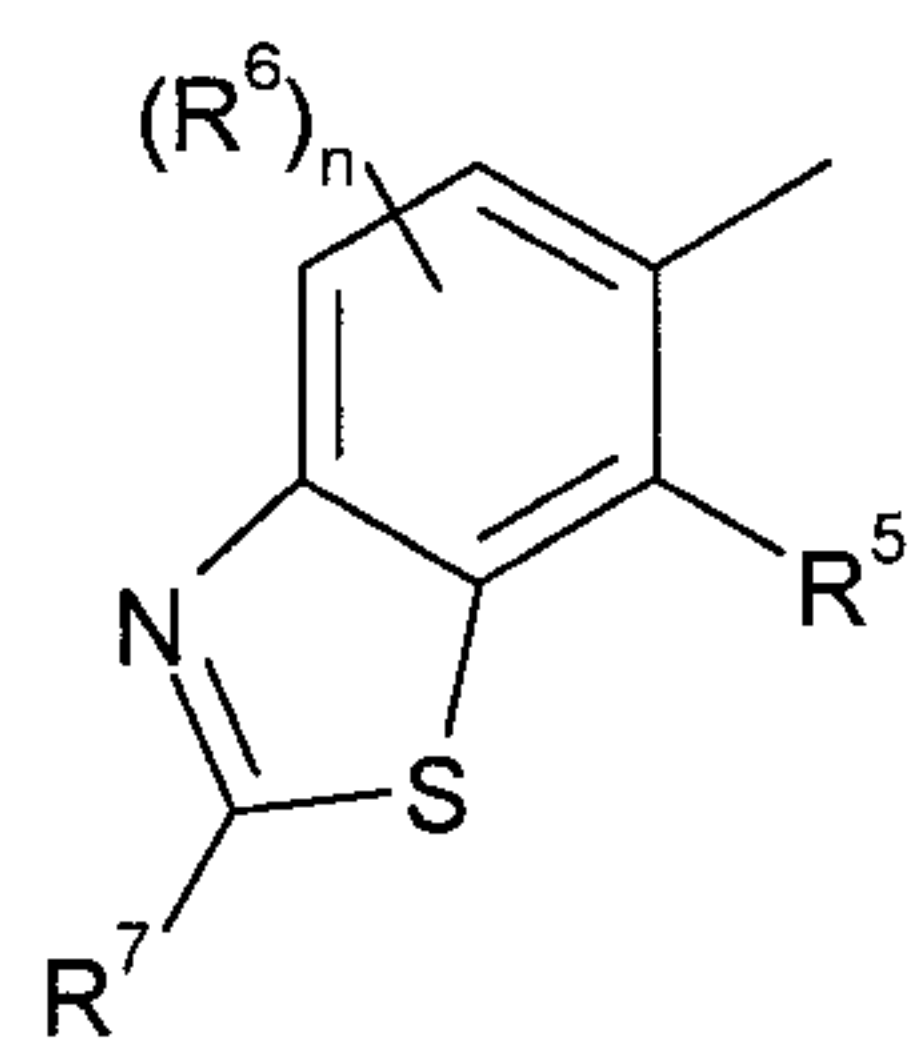
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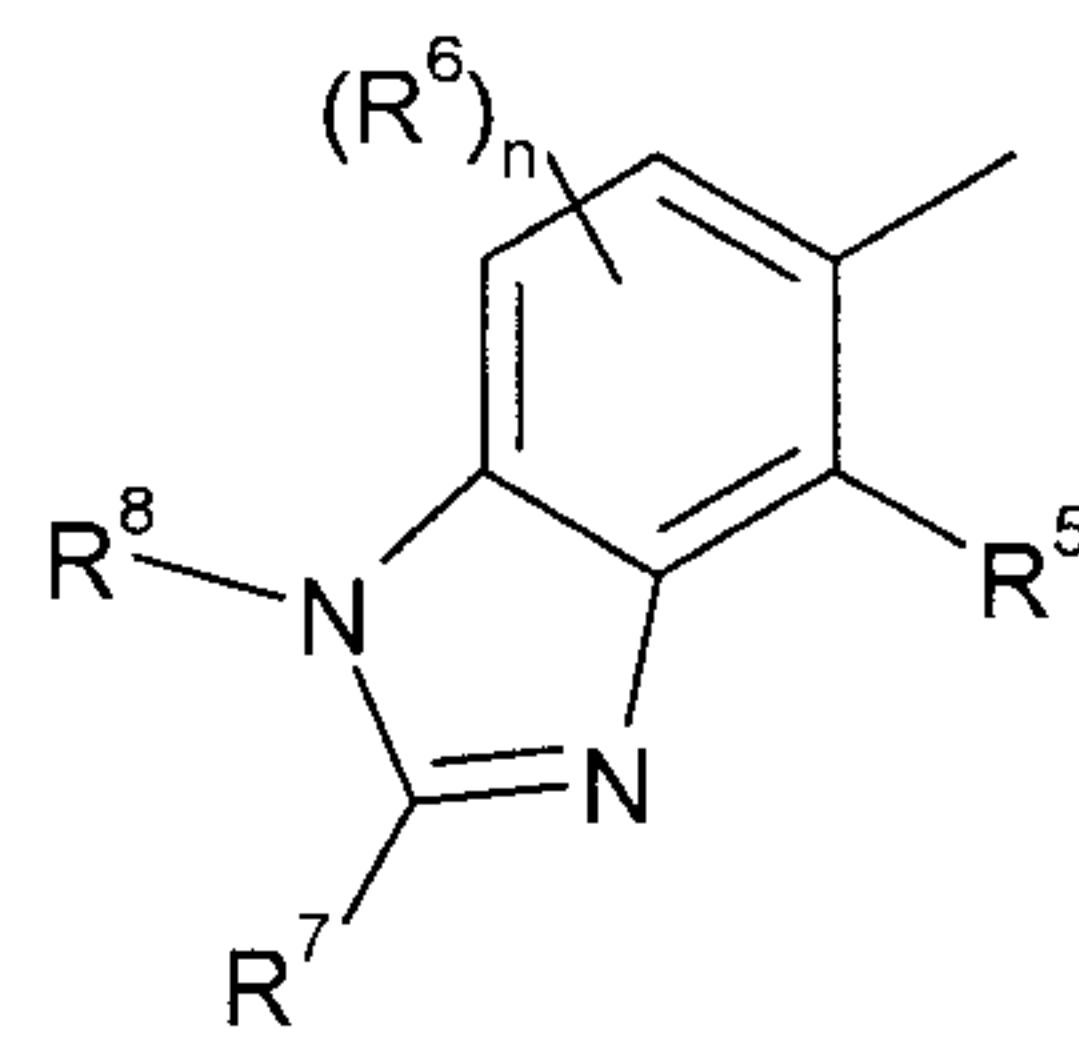
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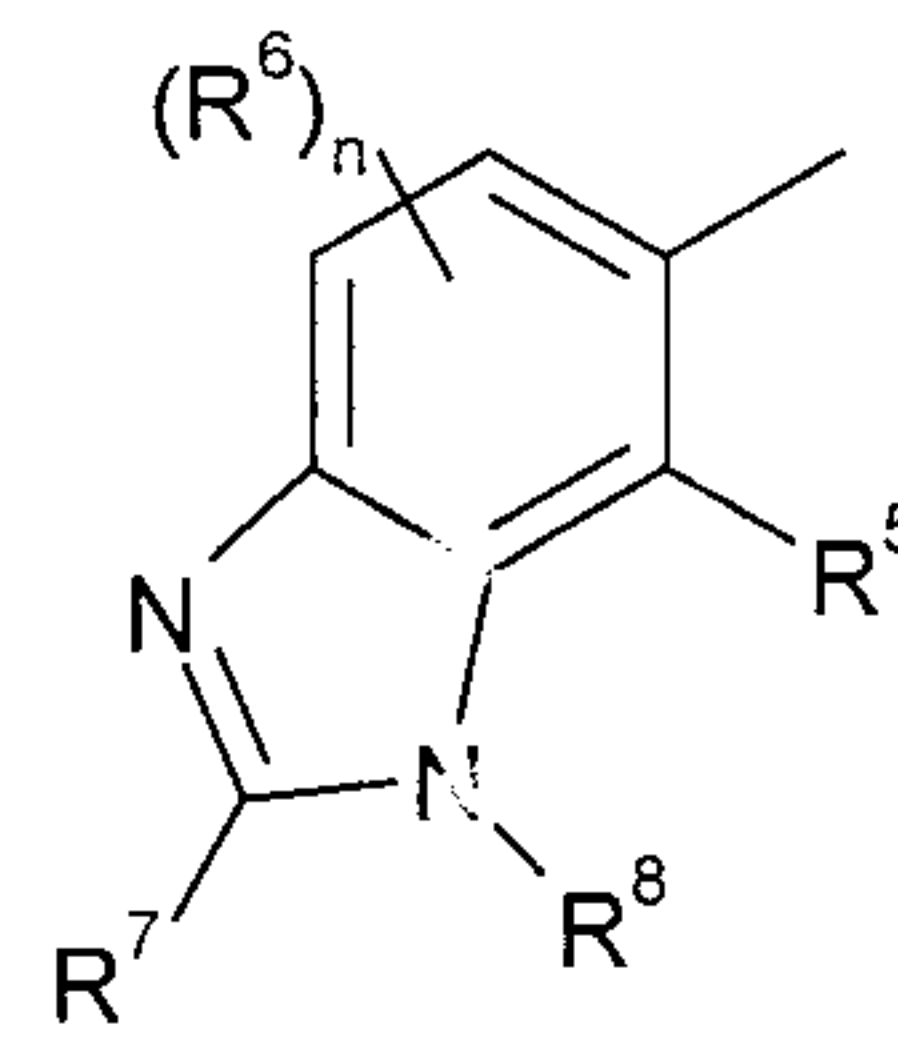
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A10



A11



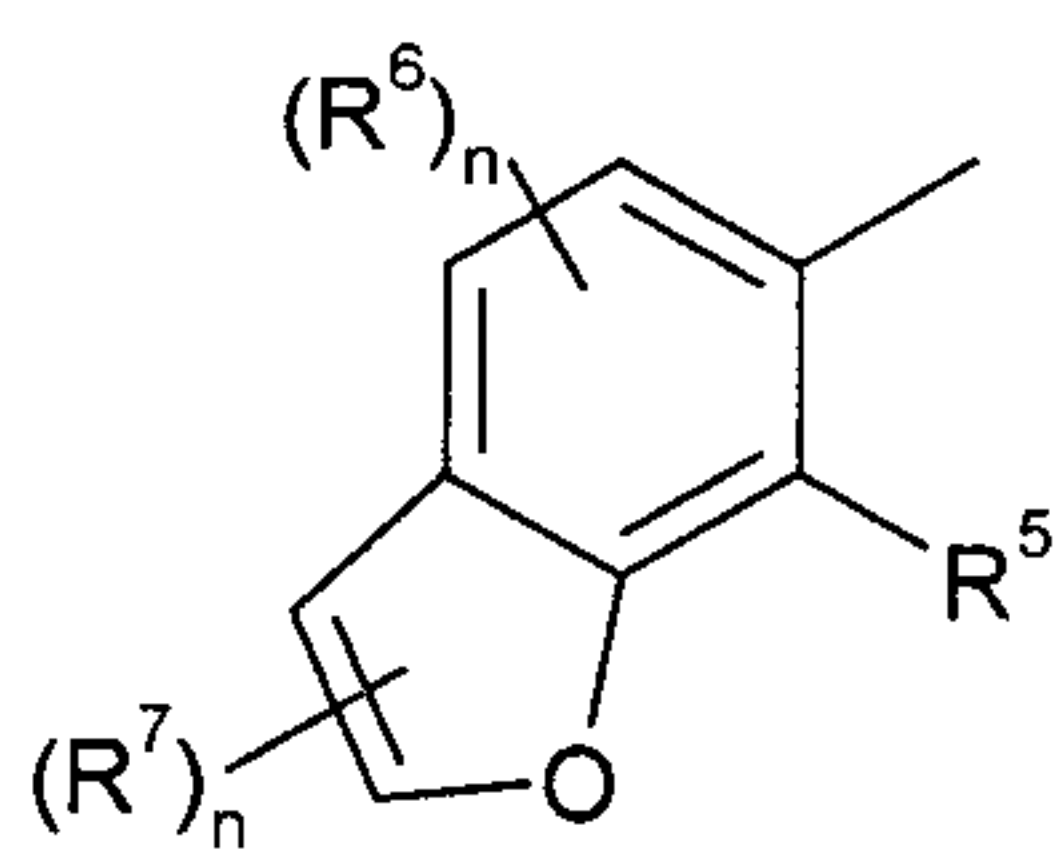
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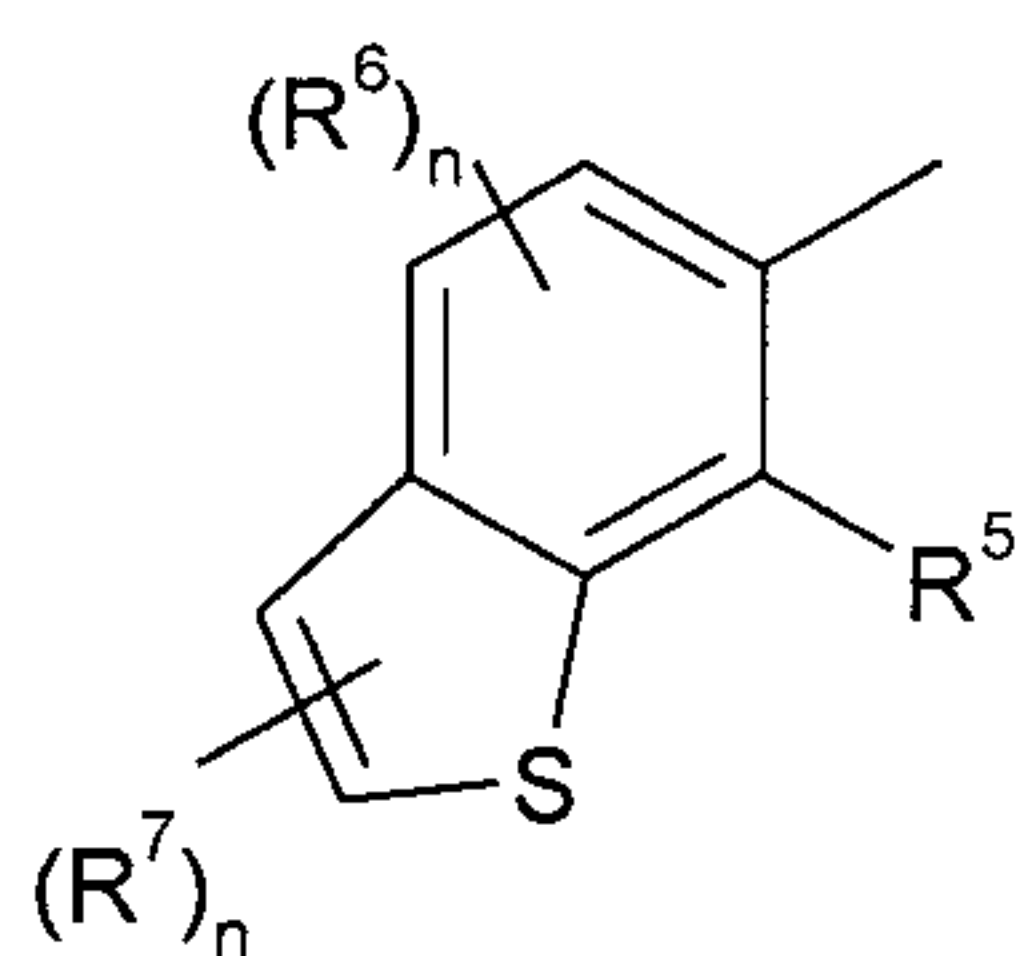
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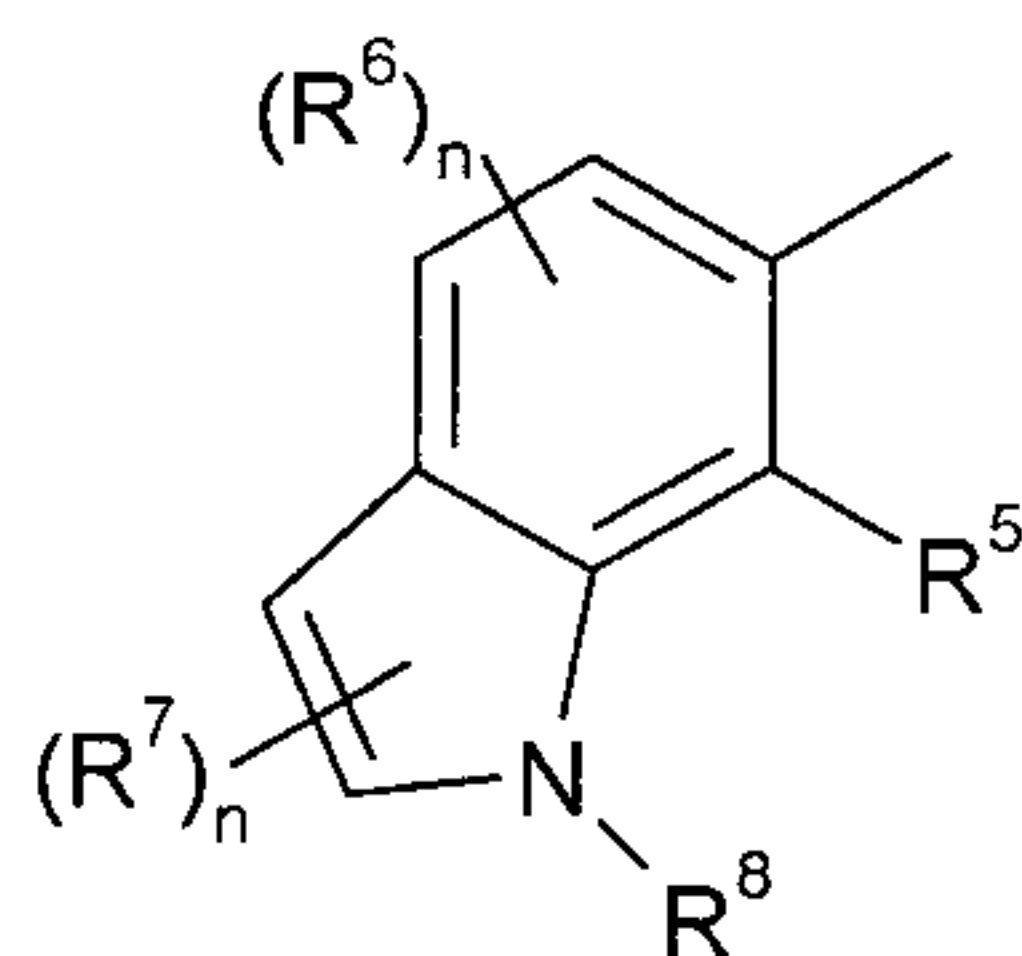
133



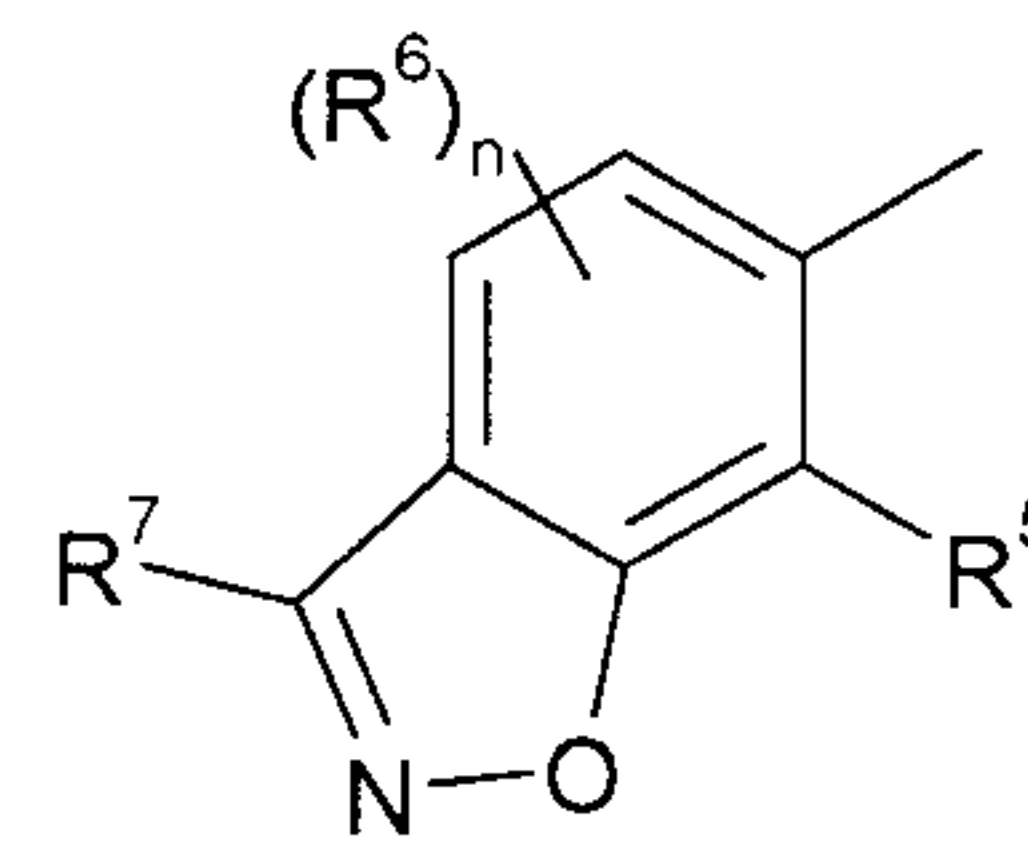
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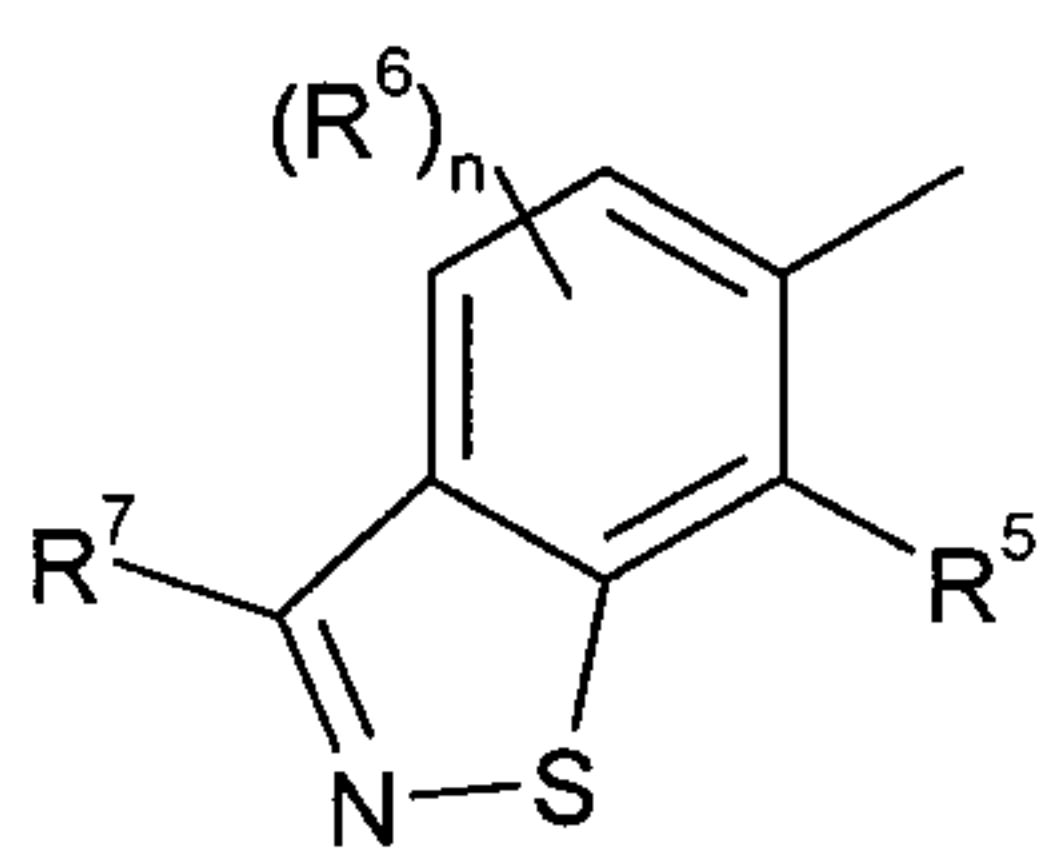
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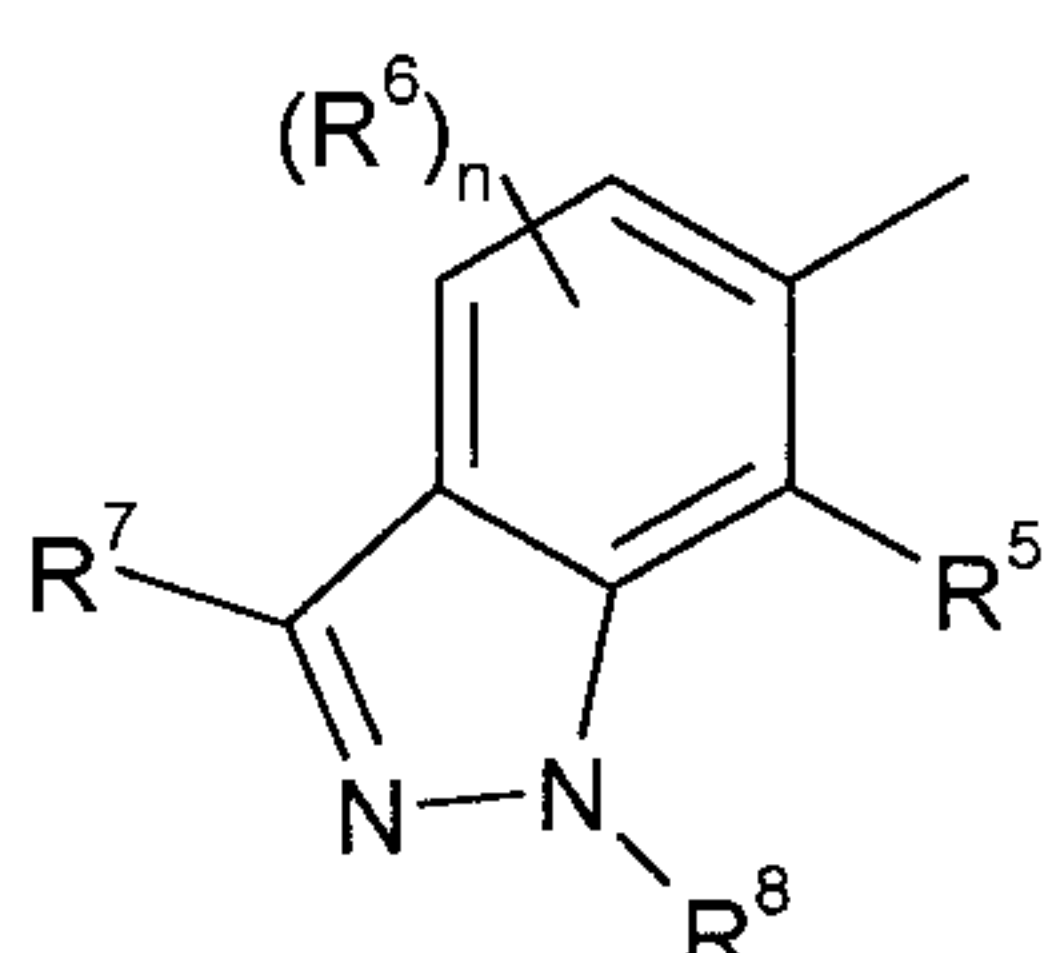
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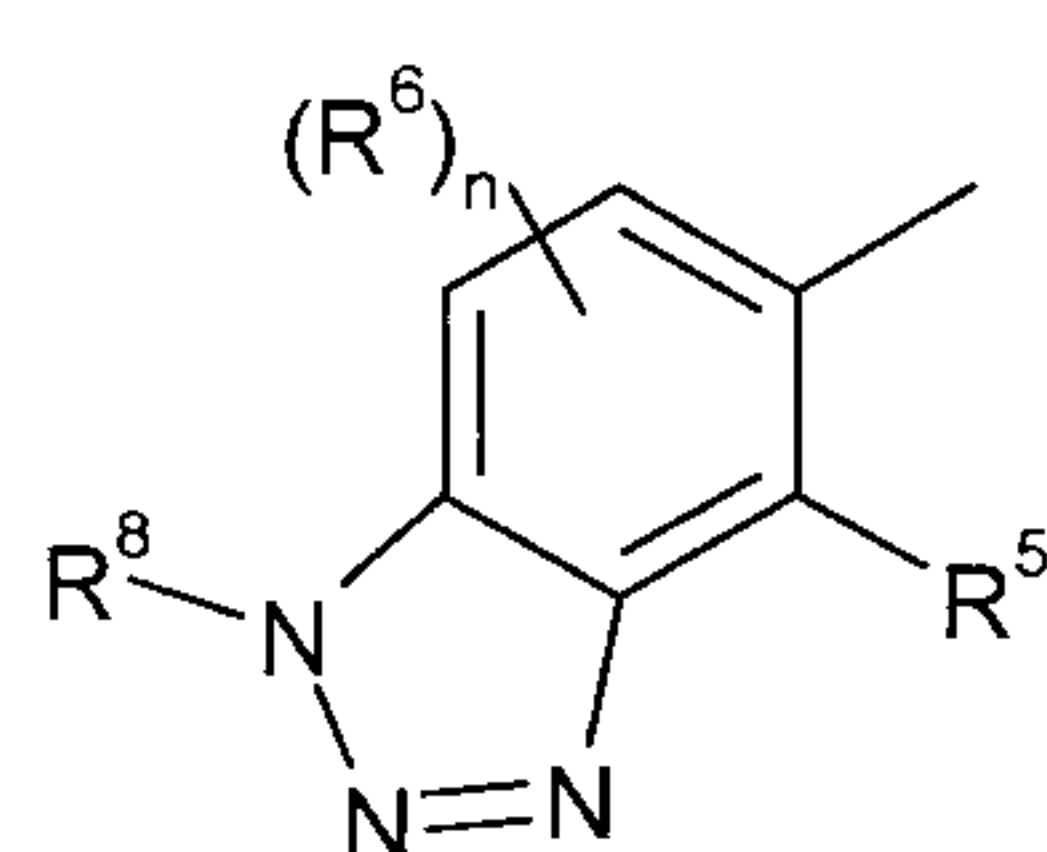
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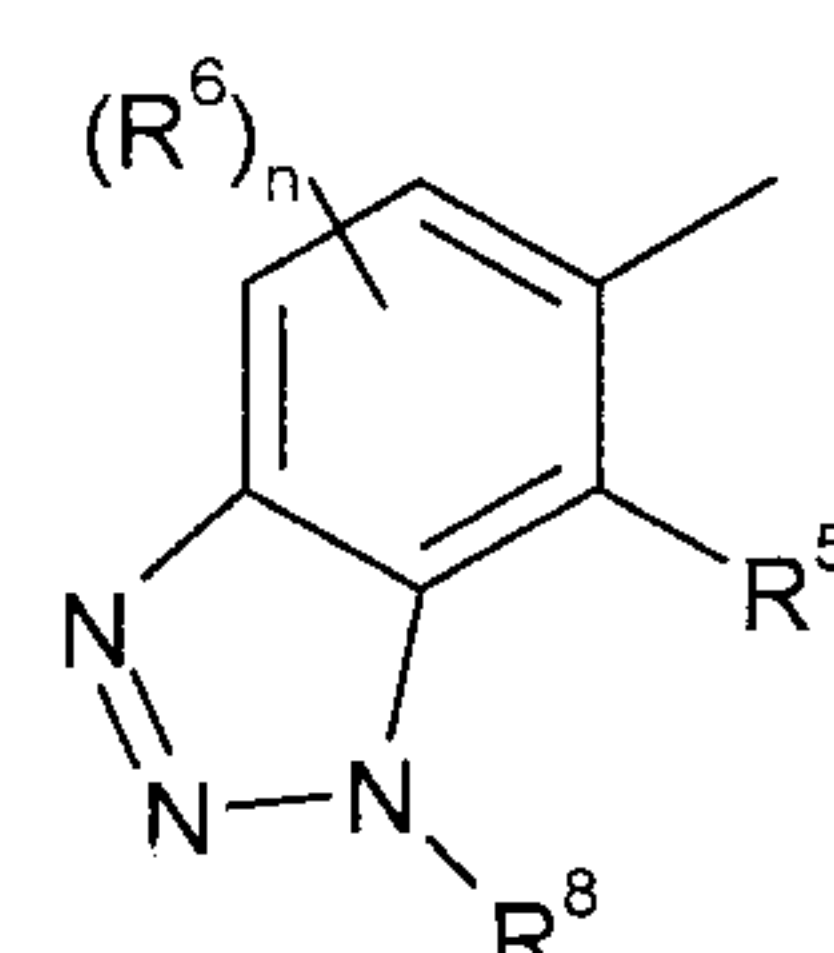
A17



A18



A19



A20

5 R^1 represents hydrogen or (C₁-C₄)-alkyl,

R^2 represents chlorine,

R^3 represents hydrogen,

10

R^4 represents hydrogen,

R^5 represents hydrogen, halogen, OH, NH₂, CN, (C₁-C₃)-alkyl, (C₁-C₃)-alkoxy, C₁-C₃-alkylamino or cyclopropyl,

15

R^6 represents hydrogen, halogen, OH, NH₂, CN, (C₁-C₃)-alkyl, (C₁-C₃)-alkoxy, cyclopropyl or vinyl,

R^7 represents hydrogen, halogen, (C₁-C₃)-alkyl, (C₁-C₃)-alkoxy, (C₁-C₃)-alkylthio, cyclopropyl, (C₁-C₃)-alkylamino or phenyl,

20

R^8 represents hydrogen, (C₁-C₃)-alkyl, phenyl or (C₁-C₃)-alkylcarbonyl,

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X represents N, CH, CCl, CF or CBr,

n represents 0, 1 or 2.

5 2. Herbicidal compositions, characterized in that they comprise a herbicidally effective amount of at least one compound of the formula (I) as claimed in claim 1.

3. Herbicidal compositions as claimed in claim 2 in a mixture with formulation auxiliaries.

10

4. Herbicidal compositions as claimed in claim 2 or 3, comprising at least one further pesticidally active compound from the group of the insecticides, acaricides, herbicides, fungicides, safeners and growth regulators.

15 5. Herbicidal compositions as claimed in claim 4, comprising a saferer.

6. Herbicidal compositions as claimed in claim 5, comprising a further herbicide.

7. A method for controlling unwanted plants, characterized in that an effective
20 amount of at least one compound of the formula (I) as claimed in claim 1 or a herbicidal composition as claimed in any of claims 2 to 6 is applied to the plants or on the site of the unwanted plant growth.

8. Use of compounds of the formula (I) as claimed in claim 1 or of a herbicidal
25 composition as claimed in any of claims 2 to 6 for controlling unwanted plants.

9. The use as claimed in claim 8, characterized in that the compounds of the formula (I) are used for controlling unwanted plants in crops of useful plants.

30 10. The use as claimed in claim 9, characterized in that the useful plants are transgenic useful plants.

