

A01N

PRESERVATION OF BODIES OF HUMANS OR ANIMALS OR PLANTS OR PARTS THEREOF; BIOCIDES, e.g. AS DISINFECTANTS, AS PESTICIDES OR AS HERBICIDES (preparations for medical, dental or toilet purposes [A61K](#); methods or apparatus for disinfection or sterilisation in general, or for deodorising of air [A61L](#)); PEST REPELLANTS OR ATTRACTANTS (decoys [A01M 1/06](#); medicinal preparations [A61K](#)); PLANT GROWTH REGULATORS (compounds in general C01, C07, C08; fertilisers C05; soil conditioners or stabilisers [C09K 17/00](#))

Definition statement

This subclass/group covers:

Compositions, physical forms thereof, and the application or method of use of specific materials, compositions, or single compounds for the following purposes:

- preserving or preventing the decay of dead human or animal bodies or parts thereof;
- preserving living parts of human or animal bodies;
- preserving or maintaining the freshness of plants or plant parts;
- reducing the noxious effect of active ingredients on organisms other than unwanted organisms;
- killing or preventing the growth or proliferation of unwanted organisms (e.g. insects, weeds, micro-organisms);
- repelling (i.e. resisting, warding off) or luring pests;
- affecting plant growth through a chemical modification of the metabolism of plants using plant growth regulators, such as auxins.

Compositions used to protect the wound and scions of newly grafted plants or to cover the wounds on pruned plants (i.e. grafting wax).

Chemical agents used for the sexual sterilization of invertebrates (e.g. insects).

Relationship between large subject matter areas

Subclass [A01N](#) may overlap with many other subclasses relating to the use of biocides. In general, classification in [A01N](#) is given to documents which are relevant for biocidal compositions or methods which are used on non-living subjects or on plants or on humans or animals when the desired effect is not

mainly pharmaceutical or cosmetic. For example, compositions for protecting pets against insect pests are classified in [A01N](#), whereas anthelmintic compositions are classified in [A61K](#).

Insect repellent compositions or anti-lice shampoos are classified in [A01N](#), whereas compositions where such an effect is only optional are classified in [A61K](#).

Further, documents, in which the disinfectant or biocidal effect depends on the application of a particular method or apparatus, are classified in the relevant classes such as [A61L](#) (disinfectant methods) or [B27K](#) (wood impregnation). Only when a document relates to technical features that are essentially chemical (and biocidal) in nature it should be classified in [A01N](#).

Documents disclosing chemical substances and/or the preparation thereof only are classified in [A01N](#) in cases where the biocidal or pesticidal effect is an essential part of the disclosure, for example when it is demonstrated in an example.

While substances that chemically modify a plant's metabolism are classified in [A01N](#), compositions that affect the growth of a plant solely by supplying nutrients ordinarily required for growth, e.g. fertiliser, plant food, are classified in C05. Materials used to prevent or cure mineral deficiencies in plants, such as iron chelates used to cure iron chlorosis, are also classified in C05.

When biocides, pest repellents, pest attractants or plant growth regulators are compounds or contain compounds which are determined to be invention information, the compounds must also be classified in C01, C07, C08 or [C12N](#). When these compounds are considered to be of interest for search purposes, they may also be classified in C01, C07, C08 or [C12N](#).

References relevant to classification in this subclass

This subclass/group does not cover:

Preservation of food or foodstuff, e.g. pasteurizing, sterilizing	A23B , A23K 3/00 , A23L 3/00
Preservation or chemical ripening of harvested fruits or vegetables	A23B 7/00
Compositions for medical, dental or toilet purposes which kill or prevent the growth or proliferation of unwanted organisms	A61K
Sex sterilants for animals other than invertebrates	A61K
Fungicidal, bactericidal, insecticidal, disinfecting or antiseptic paper	D21H

Informative references

Attention is drawn to the following places, which may be of interest for search:

Apparatus, or methods of use thereof, for testing or treating seed, roots or the like; coating or dressing of seed	A01C
Plant grafting	A01G 1/06
Devices for preserving flowers	A01G 5/06
Electric or magnetic treatment of plants for promoting growth	A01G 7/04
Sterilizing soil by steam	A01G 11/00
Protecting plants (e.g. protective covers; devices for generating heat, smoke or fog; devices protecting against animals)	A01G 13/00
Means for catching or killing insects	A01M 1/00 , A01M 5/00
Apparatus for destroying vermin in soil or food stuffs	A01M 17/00
Apparatus for the destruction of vegetation	A01M 21/00
Scaring devices e.g. bird-scaring apparatus	A01M 29/00
Hunting decoys	A01M 31/06
Methods or apparatus for disinfection or sterilization of materials not characterized by the agent employed	A61L 2/00 , A61L 12/00
Impregnating wood	B27K
Treatment of water, waste water or sewage	C02F 1/00
Mixtures of fertilizers with pesticides	C05G

Coating compositions	C09D
Paints containing biocides, e.g. fungicides, insecticides, pesticides	C09D 5/14
Anti-fouling paints and underwater paints	C09D 5/16
Soil-conditioning materials or soil-stabilizing materials	C09K 17/00
Detergent compositions based essentially on surface-active compounds; use of these compounds as detergent	C11D
Micro-organisms, e.g. protozoa, fungi, bacteria; compositions thereof	C12N 1/00
Undifferentiated human, animal or plant cells or tissues and their cultivation and maintenance	C12N 5/00
Enzymes; proenzymes; compositions thereof	C12N 9/00
Recombinant DNA-technology	C12N 15/00
Treating fibers, yarns, fabrics or fibrous goods made from such materials	D06M 11/00 - D06M 13/00
Biocidal agents (e.g. fungicidal, bactericidal, or insecticidal agents) which are in or on paper	D21H 21/36

Special rules of classification within this subclass

In groups [A01N 27/00](#) to [A01N 65/00](#) classification is made in the last appropriate place for an active ingredient, unless otherwise indicated ('Last place rule').

Where a compound is described as existing in tautomeric forms, it is classified as if existing in the form which is classified last in the system.

Compounds covered by different main groups according to alternatively specified parts of their formulae are classified in all of the relevant main groups. (However, for practical reasons, for example to avoid too many classification symbols, only preferred or exemplified embodiments may be classified instead of every possible entity within the scope of a formula).

Generally, compounds are classified according to their chemical structure. However, in case the active ingredient is known to be a particular metabolite or derivative of the parent compound, the class for the actually active species should be given or at least also be given (see also the remarks under groups [A01N 27/00](#), [A01N 35/02](#) or [A01N 59/00](#)).

Salts formed between two or more organic compounds are classified as the compound providing the essential ion and it is also classified as the compound providing the other ion.

Salts or metal chelates of an organic compound are classified as that compound.

(However, in case the metal ion is the active species, this should be classified as well, for example as combination-sets (see below)).

In this subclass, a foodstuff is not considered as an active ingredient.

Different materials applied in sequence, at different times, are considered as a mixture of all materials employed. Synergistic or potentiated compositions are classified as if the synergist or potentiator is an active ingredient.

With respect to the classification of mixtures of active or formulation ingredients: see combination-sets below.

For this subclass the definitions of groups of chemical elements as given under the title of section C is used.

In groups [A01N 25/00](#) to [A01N 65/00](#) the symbol X means nitrogen, oxygen, sulfur or a halogen; Y means nitrogen, oxygen or sulfur. A dotted line between atoms indicates an optional bond, e.g.



indicates a single or double bond.

Classification of complementary information:

For compositions containing one or more active ingredients in combination or with formulation relevant ingredients (such as surfactants), for example particular formulations such as emulsions or mixtures of active ingredients, the symbol [A01N 2300/00](#) is added to the classification symbol (e.g. [A01N 57/20](#), [A01N 2300/00](#) for compositions comprising glyphosate as main ingredient and a second active or a particular surfactant as second or further ingredient. The second ingredient is then added to the combination-set, in this case [A01N 25/30](#) (in case the surfactant is essential) or the particular group of

the second active ingredient).

Combination-sets

In groups [A01N 25/00](#) to [A01N 65/00](#), it is required to use combination-sets for classifying mixtures of (active or formulation-relevant) ingredients.

In this system classes of additional ingredients of mixtures or specific formulation types are added to the combination-set of the main ingredient. The additional ingredient may be a further active ingredient (for example in case of synergistic mixtures) or may relate to a particular special formulation-ingredient (such as a surfactant or safener (which in this case also considered a formulation-ingredient: see also the remarks under class [A01N 25/32](#)) or to a special formulation embodiment (like a wettable powder or microcapsule).

For example: a document disclosing a mixture of active ingredient A with further active ingredients B, C or D obtains as main classification for active ingredient A with the additional classifications for B, C and D in the combination-set. In case a document discloses as essential feature a particular formulation of compound A, a [A01N25/xx](#) classification is added to the combination-set (in these cases the main classification for A receives the additional symbol [A01N 2300/00](#)).

NB: Groups [A01N 25/00](#) to [A01N 25/34](#) do not obtain a [A01N 2300/00](#)-class, but these groups may be added to the combination-set of active ingredients.

Alternatively, in case a document discloses a particular formulation type which may be used for various active ingredients, the main classification is the relevant [A01N25/xx](#) group (without [A01N 2300/00](#)) with as additional combination-set the classifications for the active ingredients for which the disclosed formulation is envisaged.

In order to avoid an infinite number of additional classifications, only the most preferred second ingredients or exemplified embodiments should be classified in cases where a document discloses a multitude of active ingredients.

A special case occurs when mixtures of more than two active ingredients are disclosed: then the combination-set is given in a cascading way: for example: a document discloses a

composition comprising 3 active ingredients (A with classification [A01Naa/bb](#), B with classification [A01Nbb/cc](#) and C with classification [A01Ncc/dd](#) and 1 specific surfactant. The following classifications are then given:

1. [A01N 25/30](#), with [A01Naa/bb](#), [A01Nbb/cc](#) and [A01Ncc/dd](#) in the combination-set;
2. [A01Naa/bb](#), [A01N 2300/00](#) with [A01Nbb/cc](#) and [A01Ncc/dd](#) in the combination-set;
3. [A01Nbb/cc](#), [A01N 2300/00](#) with [A01Ncc/dd](#) in the combination-set.

An example with real groups could be the following.

A document disclosing a mixture of microencapsulated neonicotinoid insecticides (imidacloprid or acetamiprid) with (non-encapsulated) pyrethroids (the latter preferably containing the synergist PBO) obtains the following classifications:

[A01N 51/00](#), [A01N 2300/00](#) with [A01N 25/28](#), [A01N 53/00](#) and [A01N 43/30](#) in the combination-set; and

[A01N 47/40](#), [A01N 2300/00](#) with [A01N 25/28](#), [A01N 53/00](#) and [A01N 43/30](#) in the combination-set as well as [A01N 53/00](#), [A01N 2300/00](#) with [A01N 43/30](#).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Acaricide	Any substance or mixture of substances intended for preventing or destroying mites and ticks or making them less harmful.
Alkali metal	One of the following elements: Li, Na, K, Rb, Cs, Fr.
Alkaline earth metal	One of the following elements: Ca, Sr, Ba, Ra.
Arthropodicide	Any substance or mixture of substances intended for preventing or destroying arthropods, e.g. insects, arachnids, crustaceans or making them less harmful.
Biocide	Any substance or mixture of substances intended for preventing, destroying, or mitigating any living organism (e.g., plant, animal). Examples of a biocide are: acaricide, arthropodicide, fungicide, insecticide, molluscicide, rodenticide (see Synonyms and Keywords).
Disinfectant	Any substance or mixture of substances intended for preventing, destroying, or mitigating microorganisms.
Fungicide	Any substance or mixture of

	substances intended for preventing or destroying moulds and fungi or making them less harmful.
Halogen	One of the following elements: F, Cl, Br, I, At.
Heavy metal	A metal other than light metal.
Herbicide	Any substance or mixture of substances intended for preventing or destroying plant life or making it less harmful.
Insecticide	Any substance or mixture of substances intended for preventing or destroying insects or making them less harmful.
Light metal	One of the following elements: alkali metal, alkaline earth metal, Be, Al, Mg.
Metal	An element other than non-metal.
Molluscicide	Any substance or mixture of substances intended for preventing or destroying molluscs, e.g. snails, clams or making them less harmful.
Non-metal	One of the following elements: H, B, C, Si, N, P, O, S, Se, Te, noble gas, halogen.
Pesticide	Any substance or mixture of substances intended for preventing or destroying any pest (e.g., insects, rodents) or making it less harmful.
Plant	A young tree, shrub, vegetable, or flower newly planted, or intended for planting
Plant growth regulator	Materials which alter the plant or may affect plant growth through a chemical modification of the plant metabolism, such as auxins.

Rodenticide	Any substance or mixture of substances intended for preventing or destroying rodents, e.g. rats, mice or making them less harmful.
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A01N 1/00

Preservation of bodies of humans or animals, or parts thereof (preservation of foodstuffs A23; medicinal preparations containing materials from mammals or birds, e.g. blood, sperm, [A61K 35/12](#); cell or tissue culture [C12N 5/00](#))

A01N 1/02

Preservation of living parts

Definition statement

This subclass/group covers:

This group only applies to compositions/methods that are applied on explanted body parts.

A01N 1/0215

Disinfecting agents, e.g. antimicrobials for preserving living parts

Definition statement

This subclass/group covers:

Notice that disinfecting does not in itself count as a preservation step, so make sure that other processes are involved.

A01N 1/0231

Chemically defined matrices, e.g. alginate gels, for immobilising, holding or storing cells, tissue or organs for preservation purposes; Chemically altering or fixing cells, tissue or organs, e.g. by cross-linking, for preservation purposes

Definition statement

This subclass/group covers:

This group includes formulations like gels, solid fibrous matrices but also

ice-seeding particles.

A01N 1/0236

Mechanical aspects

Definition statement

This subclass/group covers:

Group designed for any mechanical inventions which are not covered by one of the groups defining containers, perfusion apparatus or refrigeration apparatus, e.g. access control for preserved samples.

A01N 1/0263

Non-refrigerated containers specially adapted for transporting or storing living parts whilst preserving, e.g. cool boxes, blood bags or "straws" for cryopreservation (containers for collecting, administering, analyzing and storing without specific measures for preservation, e.g. blood bags as such, [A61J 1/10](#))

Definition statement

This subclass/group covers:

Non-refrigerated in this case means no mechanical apparatus that alters temperature. Using ice, liquid or nitrogen to passively keep the tissue cool does not count as "active" refrigeration in this case.

A01N 1/0273

Transport containers ([A01N 1/0268](#) takes precedence.)

Definition statement

This subclass/group covers:

Containers for storing blood [A61J 1/05](#).

Only documents specifically stating that the container is used for transport are classified in this section. Containers which remain stationary most of the time but can be moved (picked up and moved to another fridge for instance) should be classified in [A01N 1/0263](#) or [A01N 1/0268](#).

A01N 1/0294

Electromagnetic, i.e. using electromagnetic radiation or electromagnetic fields

Definition statement

This subclass/group covers:

This group includes the use of any electro-magnetic phenomenon, in the broadest possible sense. This includes electro-magnetic fields but also all forms of radiation, be it UV, IR, microwaves, radiowaves or alpha, beta or gamma waves.

A01N 3/00

Preservation of plants or parts thereof, e.g. inhibiting evaporation, improvement of the appearance of leaves, protection against physical influences (e. g. UV radiation) using chemical compositions (preservation of foodstuffs [A23](#); preservation or chemical ripening of fruit or vegetables [A23B 7/00](#); protective coverings: [A01G 13/02](#)); Grafting wax

A01N 25/00

Biocides, pest repellants or attractants, or plant growth regulators, characterised by their forms, or by their non-active ingredients or by their methods of application, e. g. seed treatment or sequential application (apparatus for the destruction of noxious animals or noxious plants [A01M](#); fungicidal, bactericidal, insecticidal, disinfecting or antiseptic paper [D21H](#)); Substances for reducing the noxious effect of the active ingredients to organisms other than pests

Relationship between large subject matter areas

Apparatus for treating/dressing seeds or methods of use thereof [A01C 1/06](#).

Special rules of classification within this subclass/group

[A01N25/xx](#) subgroups do not obtain a [A01N 2300/00](#) code.

A01N 25/02

containing liquids as carriers, diluents or solvents

Definition statement

This subclass/group covers:

Decisive is the actually disclosed form: solutions which are intended to be emulsified or dispersed such as emulsifiable or dispersible concentrates usually obtain the classification [A01N 25/02](#) whereas the final diluted products obtain classification [A01N 25/04](#).

A01N 25/04

Dispersions, suspensions, emulsions, suspoemulsions, suspension concentrates or gels (foams [A01N 25/16](#))

Definition statement

This subclass/group covers:

This group also covers nanoemulsions or nanodispersions.

In accordance with the Specification Guidelines for Liquid Formulated Pesticides of the FAO (cf.

<http://www.fao.org/docrep/007/y4353e/y4353e0b.htm>), emulsifiable or dispersible concentrates are considered solutions whereas suspension concentrates, flowable concentrates, capsule suspensions and oil-based suspension concentrates are suspensions.

A01N 25/12

Powders or granules ([A01N 25/26](#) takes precedence)

Definition statement

This subclass/group covers:

Co-crystals or polymorphs.

A01N 25/14

wettable

Definition statement

This subclass/group covers:

Wettable powders are exclusively suspendable or dispersible powders or granulates. (Water) soluble powders: [A01N 25/12](#).

A01N 25/18

Vapor or smoke emitting compositions with delayed or sustained release (fumigators [A01M 13/00](#))

Definition statement

This subclass/group covers:

Compositions/methods relating to sustained/delayed release of compounds in the vapor phase and not to a release in the liquid phase. In case of doubt this classification may be given.

A01N 25/22

containing ingredients stabilising the active ingredients

Definition statement

This subclass/group covers:

Ingredients which chemically stabilise the active ingredient(s). Physical stabilisation such as crystallisation inhibition does not obtain this classification.

A01N 25/32

Ingredients for reducing the noxious effect of the active substances to organisms other than pests, e.g. toxicity reducing compositions, self-destructing compositions

Definition statement

This subclass/group covers:

Only given as main (first) classification in cases where a compound is used for the first time as safener. When a known safener is used for the first time with a particular active ingredient, [A01N 25/32](#) is given as combination-set.

A01N 25/34

Shaped forms, e.g. sheets, not provided for in any other sub-group of this main group

Definition statement

This subclass/group covers:

Tablet formulations and to formulations directed at nano-sized particulate matter such as nanofibers.

A01N 27/00

Biocides, pest repellants or attractants, or plant growth regulators containing hydrocarbons

Special rules of rules of classification within this group

This class is also given to ethylene generators (e.g. ethephon).

A01N 29/00

Biocides, pest repellants or attractants, or plant growth

regulators containing halogenated hydrocarbons

A01N 31/00

Biocides, pest repellants or attractants, or plant growth regulators containing organic oxygen or sulfur compounds

Definition statement

This subclass/group covers:

The oxygen or sulfur atom attached to a carbon atom by a single bond

A01N 33/00

Biocides, pest repellants or attractants, or plant growth regulators containing organic nitrogen compounds

Definition statement

This subclass/group covers:

The nitrogen atom attached to a carbon atom by a single bond

A01N 35/00

Biocides, pest repellants or attractants, or plant growth regulators containing organic compounds containing a carbon atom having two bonds to hetero atoms with at the most one bond to halogen, e.g. aldehyde radical

A01N 35/02

containing aliphatically bound aldehyde or keto groups, or thio analogues thereof; Derivatives thereof, e.g. acetals

Definition statement

This subclass/group covers:

This group also covers biocides whose antimicrobial action derives from aldehydes generated by these compounds (e.g. formaldehyde releasers like imidazoliny lurea or hydantoin) Such compounds are also classified in the corresponding subgroup for the aldehyde generating precursor itself (e.g. hydantoin is classified in both 35/02 and 43/50).

A01N 37/00

Biocides, pest repellants or attractants, or plant growth regulators containing organic compounds containing a

carbon atom having three bonds to hetero atoms with at the most two bonds to halogen, e.g. carboxylic acids (containing cyclopropane carboxylic acids [A01N 53/00](#))

A01N 37/16

containing the group
-CO-O-Y...
; Thio analogues thereof

Definition statement

This subclass/group covers:

Peroxy-carboxylic acids

Attention is drawn to the following places, which may be of interest for search:

A01N 37/36

containing at least one carboxylic group or a thio analogue, or a derivative thereof, and a singly bound oxygen or sulfur atom attached to the same carbon skeleton, this oxygen or sulfur atom not being a member of a carboxylic group or of a thio analogue, or of a derivative thereof, e.g. hydroxy-carboxylic acids

Definition statement

This subclass/group covers:

In this group as well as in [A01N 37/38](#) to [A01N 37/50](#), CN-groups are considered as derivatives of carboxylic acid.

Compounds like Bromoxynil hence are not classified in [A01N 37/34](#), but in the relevant lower subgroup (Bromoxynil [A01N 37/44](#)).

A01N 39/00

Biocides, pest repellants or attractants, or plant growth regulator containing aryloxy- or arylthio-aliphatic or cycloaliphatic compounds, containing the group
Ar-O-Cn...Y or Ar-S-Cn...Y,
e.g. phenoxyethylamine, phenylthio-acetonitrile,
phenoxyacetone

Special rules of classification within this subclass/group

In this group, the symbol Cn means a carbon skeleton, not containing an

aromatic ring system wherein
 $n \geq 2$

A01N 41/00

Biocides, pest repellants or attractants, or plant growth regulators containing organic compounds containing a sulfur atom bound to a hetero atom

A01N 41/02

containing a sulfur-to-oxygen double bond

Definition statement

This subclass/group covers:

This subgroup covers organic sulfates (when used as active ingredient), since these are not sulfone or sulfonic acid derivatives.

A01N 43/00

Biocides, pest repellants or attractants, or plant growth regulators containing heterocyclic compounds (containing cyclic anhydrides, cyclic imides [A01N 37/00](#); containing compounds of the formula

$X_m \dots C_n - N(-C \dots)$

containing only one heterocyclic ring, wherein

$m \geq 1$ and $n \geq 0$

and $N(-C \dots)$ is unsubstituted or alkylsubstituted pyrrolidine, piperidine, morpholine, thiomorpholine, piperazine or a polymethyleneimine with four or more CH_2 groups, [A01N 33/00](#) to [A01N 41/12](#))

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Hetero ring	Ring having at least one halogen, nitrogen, oxygen or sulfur atom as ring member
Bridged	The presence of at least one fusion other than ortho, peri and spiro
Condensed rings	Two rings that at least have one

	shared ring member, i.e. spiro and bridged are considered condensed
Condensed ring system	A ring system in which all rings are condensed among themselves
Number of rings	The number of rings in a condensed ring system equals the number of scissions necessary to convert the ring system into one acyclic system. The relevant rings in a condensed system are chosen according to the following consecutive criteria: (i) lowest number of ring members; (ii) highest number of heteroatoms as ring members (ring members shared by 2 or more rings are regarded as being a member of each of these rings).

A01N 43/82

five-membered rings with three ring hetero atoms

Special rules of classification within this subclass/group

NB: The lower IPC subgroups **A01N43/824-A01N43/836** are not used.

A01N 45/00

Biocides, pest repellants or attractants, or plant growth regulators, containing compounds having three or more carbocyclic rings condensed among themselves, at least one ring not being a six-membered ring (halogenated hydrocarbons [A01N 29/08](#); condensed with heterocyclic rings [A01N 43/00](#))

A01N 47/00

Biocides, pest repellants or attractants, or plant growth regulators containing organic compounds containing a carbon atom not being member of a ring and having no bond to a carbon or hydrogen atom, e.g. derivatives of carbonic acid (carbon tetrahalides [A01N 29/02](#))

A01N 47/02

the carbon atom having no bond to a nitrogen atom

Special rules of classification within this subclass/group

This subgroup does not cover O-CF₃ or S-CF₃ substituents. These are to be treated as if they were -O/S-CH₃-groups. -S(=O) 1,2-CF₃ is classified in [A01N 47/02](#) (or, when S binds to N, [A01N 47/04](#)). Other -O/S-CHal₃ (Hal defining identical or different halogens) are classified in [A01N 47/02](#) or [A01N 47/04](#).

A01N 47/34

containing the groups

>N-CO-N-CO-,
>N-CO-N-C-O-, >N-CO-N...S...,
>N-CO-N...N- or
>N-CO-N-C-N<

e.g. biuret; Thio analogues thereof; Urea-aldehyde condensation products

A01N 49/00

Biocides, pest repellants or attractants, or plant growth regulators, containing compounds containing the group

...[C_n...]C*-C* (-C) (-X)-C* (-X)...C* ...[C_m...],

wherein

$m + n \geq 1$

, both X together may also mean -Y- or a direct carbon-to-carbon bond, and the carbon atoms marked with an asterisk are not part of any ring system other than that which may be formed by the atoms X, the carbon atoms in square brackets being part of any acyclic or cyclic structure, or the group ...C...C(...A)...C...[C_n...]C...C(-C)...C... , wherein A means a carbon atom or Y,

$n \geq 0$

, and not more than one of these carbon atoms being a member of the same ring system, e.g. juvenile insect hormones or mimics thereof (containing hydrocarbons [A01N 27/00](#))

A01N 51/00

Biocides, pest repellants or attractants, or plant growth regulators containing organic compounds having the

sequences of atoms O-N-S, X-O-S, N-N-S, O-N-N or O-halogen, regardless of the number of bonds each atom has and with no atom of these sequences forming part of a heterocyclic ring

A01N 53/00

Biocides, pest repellants or attractants, or plant growth regulators containing cyclopropane carboxylic acids or derivatives thereof

Special rules of classification within this subclass/group

The lower IPC subgroups of **A01N53/02-A01N53/14** are not used.

A01N 55/00

Biocides, pest repellants or attractants, or plant growth regulators, containing organic compounds containing elements other than carbon, hydrogen, halogen, oxygen, nitrogen and sulfur (containing organo-phosphorus compounds [A01N 57/00](#))

Special rules of classification within this subclass/group

The lower IPC subgroup **A01N55/10** is not used. Organosilicon compounds are classified in [A01N 55/00](#).

A01N 57/00

Biocides, pest repellants or attractants, or plant growth regulators containing organic phosphorus compounds

A01N 59/00

Biocides, pest repellants or attractants, or plant growth regulators containing elements or inorganic compounds

Definition statement

This subclass/group covers:

Inorganic halogen compounds (in particular hypochlorite or hypobromite) not covered by subgroups 59/02 - 59/26, hydrogen peroxide, silica and carbonates. Halogen releasing compounds (e.g. hydantoin derivatives or trichloroisocyanurate) are classified under [A01N 59/00](#) in addition to classification under [A01N 27/00-A01N 57/00](#).

A01N 59/04

**Carbon disulfide; Carbon monoxide; Carbon dioxide
(treatment of plants with carbon dioxide [A01G 7/02](#))**

Definition statement

This subclass/group covers:

This subgroup also covers bicarbonates.

A01N 61/00

Biocides, pest repellants or attractants, or plant growth regulators containing substances of unknown or undetermined composition, e.g. substances characterised only by the mode of action

A01N 63/00

Biocides, pest repellants or attractants, or plant growth regulators containing micro-organisms, viruses, microbial fungi, enzymes, fermentates or substances produced by, or extracted from, micro-organisms or animal material (containing compounds of determined constitution [A01N 27/00](#) to [A01N 59/00](#))

Special rules of classification within this subclass/group

In case the document relates to the organism or microorganism itself, classification in [A01N 63/00](#) is given (except when it concerns fungi, which are classified in [A01N 63/04](#)).

A01N 63/02

Fermentates or substances produced by, or extracted from, micro-organisms or animal material

Definition statement

This subclass/group covers:

This subgroup also covers genetically modified crops containing genes derived from microorganisms in case the given trait determines or contributes to the desired pesticidal activity.

A01N 65/00

Biocides, pest repellants or attractants, or plant growth regulators containing material from algae, lichens, bryophyta, multi-cellular fungi or plants, or extracts thereof (containing

compounds of determined constitution [A01N 27/00](#) to [A01N 59/00](#))

Special rules of classification within this subclass/group

[A01N 65/00](#) is obligatory for biocides derived from plant materials, either as main classification or as combination-set.

Groups [A01N 65/03](#)-[A01N 65/48](#) are only used as an additional internal classification or as combination-sets in cases where the invention is directed to materials derived from a specific plant species or family. In such cases classification is also done in [A01N 65/00](#). For biocides derived from tobacco classification in [A01N 65/385](#) is obligatory.