

A01N

PRESERVATION OF BODIES OF HUMANS OR ANIMALS OR PLANTS OR PARTS THEREOF (preservation of food or foodstuff [A23](#)); BIOCIDES, e.g. AS DISINFECTANTS, AS PESTICIDES OR AS HERBICIDES (preparations for medical, dental or toiletry purposes which kill or prevent the growth or proliferation of unwanted organisms [A61K](#)); PEST REPELLANTS OR ATTRACTANTS; PLANT GROWTH REGULATORS

Definition statement

This place 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 or microorganisms);
- repelling (i.e. resisting or 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 sterilisation of invertebrates (e.g. insects).

Relationships with other classification places

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

The activities (e.g. rodenticidal or herbicidal) of biocidal, pest repellent, pest attractant or plant growth regulatory preparations must also be classified in subclass [A01P](#), when such activities are determined to be invention information.

When biocides, pest repellants, 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 classes [C01](#), [C07](#), [C08](#) or subclass [C12N](#).

Subclass [A01N](#) may overlap with many other subclasses relating to the use of biocides. In general, classification in subclass [A01N](#) is given to documents which are relevant for biocidal compositions or methods which are used on non-living subjects, plants, 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 subclass [A01N](#), whereas anthelmintic compositions are classified in subclass [A61K](#).

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

Relationships with other classification places

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 subclass [A61L](#) (disinfectant methods) or subclass [B27K](#) (wood impregnation). Only when a document relates to technical features that are essentially chemical (and biocidal) in nature should it be classified in subclass [A01N](#).

Documents disclosing chemical substances and/or the preparation thereof only are classified in subclass [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.

References

Limiting references

This place does not cover:

Preservation of foods, foodstuffs or non-alcoholic beverages	A23B
Preservation or chemical ripening of harvested fruits or vegetables	A23B 7/00
Processes specially adapted for the preservation of materials in order to produce animal feeding-stuffs	A23K 30/00
Compositions for medical, dental or toiletry purposes which kill or prevent the growth or proliferation of unwanted organisms	A61K
Sex sterilants for animals other than invertebrates	A61K

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Fungicidal, bactericidal, insecticidal, disinfecting or antiseptic paper	D21H
Biocidal agents, e.g. fungicidal, bactericidal, insecticidal agents which are in or on a paper	D21H 21/36

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 2/30
Devices for preserving flowers	A01G 5/06
Treatment of plants with carbon dioxide	A01G 7/02
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 or devices protecting against animals)	A01G 13/00
Stationary means for catching or killing insects	A01M 1/00
Catching insects in fields, gardens, or forests by movable appliances	A01M 5/00
Apparatus for destroying vermin in soil or foodstuffs	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
Disinfection or sterilisation of materials or objects, in general; Accessories therefor	A61L 2/00
Methods or apparatus for disinfecting or sterilising contact lenses	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 or 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
Microorganisms, 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 or proenzymes; compositions thereof	C12N 9/00
Recombinant DNA-technology	C12N 15/00
Treating fibres, yarns, fabrics or fibrous goods made from such materials with inorganic materials	D06M 11/00
Treating fibres, threads, yarns, fabrics or fibrous goods made from such materials with non-macromolecular organic compounds	D06M 13/00

Special rules of classification

In groups [A01N 27/00](#) - [A01N 65/00](#), in the absence of an indication to the contrary, classification is made in the last appropriate place for an active ingredient.

A composition, i.e. a mixture of two or more active ingredients is classified in the last of groups [A01N 27/00](#) - [A01N 65/00](#) that provides for at least one of these active ingredients.

Any part of a composition which is not identified by classification according to the last appropriate place of an active ingredient, and which itself is determined to be novel and non-obvious, must also be classified. The part can be either a single ingredient or a composition in itself.

Any part of a composition which is not identified by the classification according to the last appropriate place, and which is considered to represent information of interest for search, may also be classified. This can for example be the case when it is considered of interest to enable searching of compositions using a combination of classification symbols. Such non-obligatory classification should be given as "additional information".

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

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.

Special rules of classification

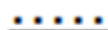
In this subclass, a foodstuff is not considered to be an active ingredient.

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.

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

(



) indicates one or two single bonds or a double bond.

Orthogonal indexing symbol [A01N 2300/00](#) shall not be used as a single symbol and is only used as a subsequent symbol in a C-Set. The information about how to use orthogonal indexing symbol [A01N 2300/00](#) in a C-Set can be found in C-Sets classification in group [A01N 27/00](#).

Combination sets [C-Sets] classification:

In this subclass, C-Sets classification is applied to the following groups listed in the table below if the document discloses a pertinent combination of technical features that cannot be covered by the allocation of a single symbol. The fourth column of the table indicates the place where the detailed information about the C-Sets construction and the associated syntax rules can be found, in the definition section "Special rules of classification".

C-SETS ID	BASE SYMBOL	SUBSEQUENT SYMBOLS	C-SETS FORMULA; LOCATION OF C-SETS RULES
#A1Na1	A01N 25/00 - A01N 25/34	A01N 25/00-A01N 65/48	(A01N 25/00 - A01N 25/34 , A01N 25/00 - A01N 65/48) Specific formulation or formulation auxiliaries; see A01N 25/00
#A1Na2	A01N 27/00 - A01N 65/48	A01N 25/00-A01N 25/34	(A01N 27/00-A01N 65/48 , A01N 25/00 - A01N 25/34) Defined active ingredient in a formulation or with formulation auxiliaries; see A01N 27/00
#A1Nb	A01N 27/00 - A01N 65/48	A01N 27/00-A01N 65/48	(A01N 27/00-A01N 65/48 , A01N 27/00 - A01N 65/48) Mixture or combined application of defined active ingredients; see A01N 27/00

#A1Nb(2300)	A01N 27/00 - A01N 65/48	A01N 2300/00	(A01N 27/00 – A01N 65/48 , A01N 2300/00) Mixture or combined application of at least one defined active ingredient with an undefined active ingredient; see A01N 27/00
#A1Nc	A01N 63/50 or A01N 63/60	A01N 63/00 - A01N 63/40	(A01N 63/50 – A01N 63/60 , A01N 63/00 – A01N 63/40) Isolated enzyme, protein, or nucleic acid active ingredient, and its origin; see A01N 63/50

The specific C-Sets rule is located at only one place of the base symbol in the section "Special rules of classification" in the definition. If the C-Sets rule is applicable to all groups of a subclass, it is located at the subclass level only. If the same C-Sets rule is applicable to multiple groups or subgroups within the same subclass, the C-Sets rule is placed at the highest group or subgroup of the multiple groups.

Glossary of terms

In this place, 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 or Fr
alkaline earth metal	one of the following elements: Ca, Sr, Ba or 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 or animal). Examples of a biocide are: acaricide, arthropodicide, fungicide, insecticide, molluscicide or 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 or At
heavy metal	metal other than light metal
herbicide	any substance or mixture of substances intended for preventing or destroying plant life or making them 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 or Mg
metal	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 or halogen
pesticide	any substance or mixture of substances intended for preventing or destroying any pest (e.g., insects, rodents) or making them less harmful
plant	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 or mice, or making them less harmful

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- Repellant and repellent

A01N 1/00

Preservation of bodies of humans or animals, or parts thereof

Definition statement

This place covers:

Compositions and methods intended for use in the preservation of dead bodies of humans or animals, for example to prevent them from further decay, or for use in taxidermy.

References

Limiting references

This place does not cover:

Preservation of foodstuffs	A23
Medicinal preparations containing materials from mammals or birds, e.g. blood, sperm	A61K 35/12

Informative references

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

Cell or tissue culture	C12N 5/00
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A01N 1/10

Preservation of living parts

Definition statement

This place covers:

Compositions, apparatus or methods for the preservation, including cryopreservation, of excised living body parts, such as organs and parts thereof, in order to maintain their viability.

Relationships with other classification places

Preservation of animal or human cells or tissues not excised is classified in [C12N 5/52](#) for chemical aspects, in [C12N 5/54](#) for mechanical aspects including apparatus or containers, and in [C12N 5/56](#) for physical preservation.

References

Informative references

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

Containers specially adapted for collecting, storing or administering blood or plasma	A61J 1/05
Cells and tissues of humans, animals or plants	C12N 5/00
Chemical aspects of preservation of animal cells or human cells	C12N 5/52
Mechanical aspects of preservation of animal cells or human cells; Apparatus or containers therefor	C12N 5/54
Physical preservation processes for animal cells or human cells	C12N 5/56

A01N 1/124

Disinfecting agents, e.g. antimicrobials

Definition statement

This place covers:

Compositions/methods in which disinfection agents are used for preservation purposes, for example, to increase the storage stability of, e.g. organs by inhibiting bacterial growth.

A01N 1/128

Chemically defined matrices for immobilising, holding or storing living parts, e.g. alginate gels; Chemically altering living parts, e.g. by cross-linking

Definition statement

This place covers:

Formulations like gels or solid fibrous matrices but also ice-seeding particles.

A01N 1/14**Mechanical aspects of preservation; Apparatus or containers therefor****Definition statement***This place covers:*

Mechanical inventions that are not covered by any of the groups defining containers, perfusion apparatus or refrigeration apparatus, e.g. access control for preserved samples.

A01N 1/146**Non-refrigerated containers specially adapted for transporting or storing living parts whilst preserving****Definition statement***This place covers:*

Containers not comprising mechanical means that actively alter temperature. The use of phase change materials, e.g. ice, to passively keep the living part cool is not considered "active" refrigeration.

Special rules of classification

Containers comprising cryogenics, e.g. liquid nitrogen dry shippers, should be classified in [A01N 1/145](#).

A01N 1/148**with provisions specially adapted for transporting****Definition statement***This place covers:*

Documents specifically addressing a transport aspect, e.g. providing means to counteract shocks or tilting.

Special rules of classification

Containers, which are suitable for transport but do not comprise such provisions specifically for transporting should be classified in [A01N 1/143](#), [A01N 1/146](#) or [A01N 1/147](#).

A01N 1/162**Temperature processes, e.g. following predefined temperature changes over time****Special rules of classification**

Processes comprising temperature changes inherently involved in freezing or cryopreservation wherein no specific technical effect is disclosed for the temperature profile are not classified in this group.

A01N 3/02

Keeping cut flowers fresh chemically

References

Informative references

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

Devices for preserving flowers	A01G 5/06
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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}; Substances for reducing the noxious effect of the active ingredients to organisms other than pests

Relationships with other classification places

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

References

Informative references

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

Apparatus for the destruction of noxious animals or noxious plants	A01M
Fungicidal, bactericidal, insecticidal, disinfecting or antiseptic paper	D21H

Special rules of classification

Combination sets [C-Sets] classification:

C-Sets classifications [#A1Na1 and #A1Na2] are used in [A01N 25/00](#).

If a document discloses a multitude of formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets statement: #A1Na1 and #A1Na2

- In groups [A01N 25/00-A01N 65/48](#), a mixture of an active ingredient with a formulation-relevant ingredient, or a composition that is characterized as a specific formulation, e.g., dispersion, emulsion, suspension, granule, particle, microcapsule, is classified in the form of C-Sets.
- Both #A1Na1 and #A1Na2 are used for linking the information of active agent (with symbols [A01N 27/00-A01N 65/48](#)) with the formulation type or formulation auxiliaries (with symbols [A01N 25/00-A01N 25/34](#)), which appear relevant to the invention.
- In #A1Na1, the base symbol, representing a formulation-relevant ingredient, is taken from the groups [A01N 25/00-A01N 25/34](#), which is followed by a subsequent symbol selected from [A01N 25/00-A01N 65/48](#). In #A1Na2, the base symbol is taken from groups [A01N 27/00-A01N 65/48](#), which is followed by a subsequent symbol selected from [A01N 25/00-A01N 25/34](#).

That said, it is important for a C-Set under #A1Na1 and #A1Na2 to represent the linked information by the base symbol and the subsequent symbol(s), while the choice of base symbol is discretionary; See discussion in C-Sets syntax rules below.

C-Sets syntax rules

- Each C-Set shall contain at least two symbols.
- Duplicate symbols are allowed in the C-Set.
- The choice of base symbol is discretionary as long as the C-Set represents the relationship between the formulation-relevant ingredient and the composition ingredients. The choice of base symbol may be based on what is considered the most important aspect of the invention. In many situations, the practicality of classifying the invention with the fewest C-sets may determine the choice of the base symbol. See examples below.
- The order of symbols in C-sets in #A1Na conveys the relationship between the base symbol and subsequent symbols. Only the base symbol has a relationship with the subsequent symbols and none of the subsequent symbols has a relationship with another subsequent symbol. Therefore, the order of subsequent symbols in a C-set in #A1Na is not critical as long as the information linking the base symbol and subsequent symbols is maintained.

C-Sets examples:

- #A1Na: The use of a particular solvent in aqueous formulations. Examples disclose formulations with glyphosate or 2,4-D is classified as ([A01N 25/02](#); [A01N 39/04](#), [A01N 57/20](#)).

Should a specific surfactant in the formulation be considered to also contribute to the invention, then a further C-set is required to indicate this information, linking the surfactant with the exemplified active agents. The information is classified as ([A01N 25/30](#), [A01N 39/04](#), [A01N 57/20](#)).

- #A1Na1 or #A1Na2: Microencapsulated imidacloprid is classified either as ([A01N 25/28](#), [A01N 51/00](#)) or ([A01N 51/00](#), [A01N 25/28](#)), but not both.
- #A1Na1 or #A1Na2: A microencapsulated pesticide that has either imidacloprid ([A01N 51/00](#)) or fipronil ([A01N 47/02](#)) as the pesticidal ingredient is classified as ([A01N 25/28](#), [A01N 51/00](#), [A01N 47/02](#)). Although it is also correct to classify it as two C-sets, ([A01N 51/00](#), [A01N 25/28](#)) and ([A01N 47/02](#), [A01N 25/28](#)), the first C-set ([A01N 25/28](#), [A01N 51/00](#), [A01N 47/02](#)) is preferable because it results in fewer C-sets (one instead of two) while conveying the same information.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 25/02

containing liquids as carriers, diluents or solvents

Definition statement

This place covers:

Compositions in which the solvent system is the distinguishing feature. 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, {emulsions, suspoemulsions, suspension concentrates} or gels (foams [A01N 25/16](#))

Definition statement

This place 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 place covers:

Also co-crystals or polymorphs.

A01N 25/14

wettable

Definition statement

This place covers:

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

A01N 25/18

Vapour or smoke emitting compositions with delayed or sustained release

Definition statement

This place 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.

References**Informative references**

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

Fumigators; Apparatus for distributing gases	A01M 13/00
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A01N 25/22**containing ingredients stabilising the active ingredients****Definition statement***This place 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 place 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 place covers:*

Tablet formulations and to formulations directed at nanosized particulate matter having a particular form such as nanofibers.

A01N 27/00**Biocides, pest repellants or attractants, or plant growth regulators containing hydrocarbons****Special rules of classification**

Ethylene generators (e.g. ethephon) are also classified in this group.

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb, and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb (2300) are described below.

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredients, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

If a document discloses an invention including a mixture of two or more defined active ingredients as a specific formulation, C-Sets rules #A1Na1, #A1Na2 and #A1Nb are used to classify the invention.

C-Sets statement: #A1Nb and #A1Nb(2300)

- In groups [A01N 27/00-A01N 65/48](#), a mixture of active ingredients or combined application of multiple active ingredients is classified in the form of C-Sets.
- #A1Nb vs. #A1Nb (2300): If a mixture of active ingredients or combined application of multiple active ingredients has defined active ingredients, C-Sets rule #A1Nb applies. If the mixture of active ingredients or combined application of multiple active ingredients has at least one defined active ingredient with an undefined active ingredient, C-Sets rule #A1Nb(2300) applies.
- In #A1Nb, the base symbol is taken from the groups [A01N 27/00-A01N 65/48](#), which is followed by subsequent symbol(s) that represent the rest of active ingredients, which is also taken from the groups [A01N 27/00-A01N 65/48](#).
- In #A1Nb (2300), the base symbol is taken from the groups [A01N 27/00-A01N 65/48](#), which is followed by the subsequent symbol [A01N 2300/00](#).

C-Sets syntax rules:

- Each C-Set shall contain at least two symbols.
- In #A1Nb, the choice of base symbol is up to the classifier as long as the relationship between the base symbol and symbols for the rest of the active ingredients and composition ingredients is maintained. The choice of base symbol may be based on what is considered the most important active ingredient, but in many situations, the practicality of classifying the invention with the fewest number of C-sets may determine the choice of the base symbol.

For example, a binary mixture of a biocide represented by symbol [A01N 43/90](#) and a biocidal yeast is classified as either ([A01N 43/90](#), [A01N 63/32](#)) or ([A01N 63/32](#); [A01N 43/90](#)) with equal validity, but not both.

- A special case occurs when a mixture of three or more defined active ingredients are disclosed. In this case, the C-set is given in a cascading way. For example, a mixture of biocidal *Bacillus* bacteria ([A01N 63/22](#)), biocidal yeast ([A01N 63/32](#)) and the chemical biocide represented by [A01N 43/90](#) requires two combination sets: ([A01N 63/22](#), [A01N 63/32](#), [A01N 43/90](#)) and ([A01N 63/32](#), [A01N 43/90](#)). The first C-set indicates the combination of bacteria with either yeast or chemical biocide, while the second indicates the combination of yeast with chemical biocide.
- Duplicate symbols are allowed in a C-Set #A1Nb. When the base symbol and a subsequent symbol are identical, the required number of C-Sets may be reduced in certain special situations. For example, a ternary mixture of two triazole fungicides epoxiconazole ([A01N 43/653](#)), tebuconazole ([A01N 43/653](#)), and a *Bacillus* strain ([A01N 63/22](#)) is classified as ([A01N 43/653](#), [A01N 43/653](#), [A01N 63/22](#)). Typically, a ternary mixture requires at least one more C-Set in a cascading way, but a second C-Set is not needed in this example because the information linking either of the triazole fungicides to the *Bacillus* strain is already covered.
- In #A1Nb, the order of symbols in C-sets in #A1Nb conveys the relationship between the base symbol and subsequent symbols. Only the base symbol has a relationship with the subsequent symbols and none of the subsequent symbols has a relationship with the other subsequent symbol(s). Therefore, the order of symbols in a C-set in #A1Nb is not critical when there are only two symbols in a C-set, but the order is critical when there are three or more symbols in a C-set.
- In #A1Nb(2300), the order of symbols in a C-set is relevant in that [A01N 2300/00](#) is always allocated as a subsequent symbol.
- For an invention including a mixture of two or more defined active ingredients as a specific formulation, both C-Sets rules #A1Na and #A1Nb are used to classify the invention.

C-Sets examples:

- #A1Nb: A mixture of glyphosate and dicamba is classified as ([A01N 57/20](#), [A01N 37/40](#)).
- #A1Nb: A mixture of glyphosate and 2,4-D is classified as ([A01N 57/20](#), [A01N 39/04](#)).
- #A1Nb: A mixture of glyphosate and a compound selected from dicamba and 2,4-D is classified as ([A01N 57/20](#), [A01N 37/40](#), [A01N 39/04](#)). Alternatively, it is also correct to classify the invention as two C-sets, ([A01N 57/20](#), [A01N 37/40](#)) and ([A01N 57/20](#), [A01N 39/04](#)). The first C-set

([A01N 57/20](#), [A01N 37/40](#), [A01N 39/04](#)) is preferable in this example because it results in fewer C-sets (one instead of two) while conveying the same information.

- #A1Nb: A mixture of amidosulfuron and chlorimuron is classified as ([A01N 47/36](#), [A01N 47/36](#)).
- #A1Nb: A mixture comprising glyphosate, dicamba, and 2,4-D: two C-sets are required in a cascading way, ([A01N 57/20](#), [A01N 37/40](#), [A01N 39/04](#)) and ([A01N 37/40](#), [A01N 39/04](#)).
- A mixture of glyphosate and dicamba, where the mixture is in the form of a wettable powder is classified as ([A01N 57/20](#), [A01N 37/40](#)) and ([A01N 25/14](#), [A01N 57/20](#), [A01N 37/40](#)). This is an example where both C-Sets rules #A1Na and #A1Nb must be used to classify the invention.
- #A01Nb(2300): A fungicidal mixture comprising a first compound selected from tebuconazole and propiconazole and a second compound selected from a long list of hundreds of compounds or a broadly written chemical structure that potentially encompasses thousands of compounds, wherein there is no specifically disclosed mixture embodiment in the disclosure is classified as ([A01N 43/653](#), [A01N 2300/00](#)).

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 29/00

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

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredients, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 31/00

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

Definition statement

This place covers:

Active ingredients containing oxygen or sulfur atoms attached to a carbon atom by a single bond only, for example aliphatic or aromatic alcohols or ethers.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 33/00

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

Definition statement

This place covers:

Active ingredients containing nitrogen atoms attached to a carbon atom by a single bond, for example amines or quaternary ammonium compounds.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

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

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 35/02

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

Definition statement

This place covers:

This group also covers biocides whose antimicrobial action derives from aldehydes generated by these compounds (e.g. formaldehyde releasers like imidazolinylurea or hydantoins). Such compounds are also classified in the corresponding subgroup for the aldehyde generating precursor itself (e.g. hydantoin is classified in both [A01N 35/02](#) and [A01N 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 or derivatives thereof, e.g. cyclopropane carboxylic acid nitriles, [A01N 53/00](#))

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 37/16

containing the group $\text{-CO-O-}\overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{Y}}}$; Thio analogues thereof

Definition statement

This place covers:

Peroxycarboxylic acids.

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 place covers:

In this group as well as in [A01N 37/38](#) - [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 regulators containing aryloxy- or arylthio-aliphatic or cycloaliphatic compounds, containing the group $\text{Ar-O-C}_n\equiv\text{Y}$ or $\text{Ar-S-C}_n\equiv\text{Y}$, e.g. phenoxyethylamine, phenylthio-acetonitrile, phenoxyacetone

Definition statement

This place covers:

Phenoxy-carboxylic acids such as Mecoprop ([A01N 39/02](#)) or 2,4-D ([A01N 39/04](#)).

Special rules of classification

In this group, the symbol C_n means a carbon skeleton, not containing an aromatic ring system wherein n ≥ 2.

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 41/00

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

Definition statement

This place covers:

Active ingredients comprising sulfur compounds such as sulfonic acids, sulfones or polysulfides.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 41/02

containing a sulfur-to-oxygen double bond

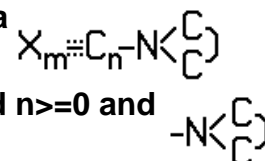
Definition statement

This place 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



containing only one heterocyclic ring, wherein $m \geq 1$ and $n \geq 0$ and

is unsubstituted or alkylsubstituted pyrrolidine, piperidine, morpholine, thiomorpholine, piperazine or a polymethyleneimine with four or more CH_2 groups, [A01N 33/00](#) - [A01N 41/12](#); containing cyclopropane carboxylic acids or derivatives thereof, e.g. esters having heterocyclic rings, [A01N 53/00](#))

References**Limiting references**

This place does not cover:

Containing compounds of the formula $X_m \equiv C_n - N \begin{array}{c} \diagup \text{C} \diagdown \\ \diagdown \text{C} \diagup \end{array}$ containing only one heterocyclic ring, wherein $m \geq 1$ and $n \geq 0$ and $-N \begin{array}{c} \diagup \text{C} \diagdown \\ \diagdown \text{C} \diagup \end{array}$ is unsubstituted or alkyl substituted pyrrolidine, piperidine, morpholine, thiomorpholine, piperazine or a polymethyleneimine with four or more CH_2 groups	A01N 33/00 – A01N 41/12
Containing cyclic anhydrides, cyclic imides	A01N 37/00
Containing cyclopropane carboxylic acids or derivatives thereof, e.g. esters having heterocyclic rings	A01N 53/00

Special rules of classification**Combination sets [C-Sets] classification:**

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

Glossary of terms

In this place, 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 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](#))

Definition statement

This place covers:

Active ingredients such as steroids or gibberellins.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

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](#))

Definition statement

This place covers:

Active ingredients such as (thio)carbamates, (thio)ureas or guanidines.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 47/02

the carbon atom having no bond to a nitrogen atom

Special rules of classification

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 47/40

the carbon atom having a double or triple bond to nitrogen, e.g. cyanates, cyanamides

References

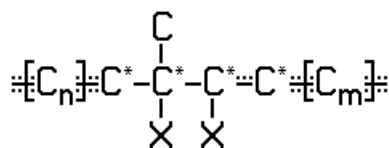
Informative references

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

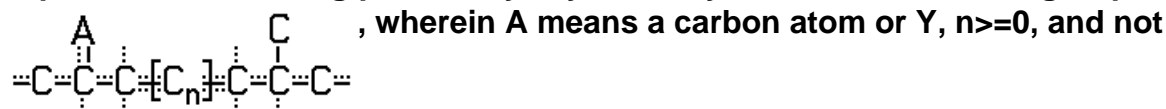
Inorganic cyanamides	A01N 59/24
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A01N 49/00

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



, 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](#))

Definition statement

This place covers:

Active ingredients containing an acyclic terpenoid (isoprenoid) structure such as methoprene or geraniol.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group.

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

Definition statement

This place covers:

Active ingredients comprising nitroguanidine compounds such as clothianidin or imidacloprid.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information, such as construction and the associated syntax rules, about the C-Sets rules #A1Na1 and #A1Na2, such as construction and the associated syntax rules, are described can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group.

A01N 53/00

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

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group.

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

Organosilicon compounds are classified in [A01N 55/00](#).

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 57/00

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

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 59/00

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

Definition statement

This place covers:

Inorganic halogen compounds (in particular hypochlorite or hypobromite) not covered by subgroups [A01N 59/02](#) - [A01N 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](#).

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 59/04

Carbon disulfide; Carbon monoxide; Carbon dioxide

Definition statement

This place covers:

This subgroup also covers bicarbonates.

References

Informative references

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

Treatment of plants with carbon dioxide	A01G 7/02
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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

Definition statement

This place covers:

Active ingredients which have no specified or well-defined chemical structure, are comprised of complex mixtures or are only defined by their method of preparation. For example mineral oils ([A01N 61/02](#)), humic acids or tannins are classified in this group.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the

document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 63/00

Biocides, pest repellants or attractants, or plant growth regulators containing microorganisms, viruses, microbial fungi, animals or substances produced by, or obtained from, microorganisms, viruses, microbial fungi or animals, e.g. enzymes or fermentates (containing compounds of determined constitution [A01N 27/00](#) - [A01N 59/00](#); unicellular algae [A01N 65/03](#))

Definition statement

This place covers:

Biocides as defined above which cannot be classified more precisely than according to their origin (animal, microbial fungi, bacteria, yeast or viruses).

Relationships with other classification places

Specified microorganisms are classified in the relevant [C12N](#) group(s).

Breeding of predatory insects is classified in [A01K 67/30](#).

References

Limiting references

This place does not cover:

Compounds of defined constitution	A01N 27/00 - A01N 59/00
Unicellular algae	A01N 65/03

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.

A01N 63/10

Animals; Substances produced thereby or obtained therefrom

Definition statement

This place covers:

Biocides based on animals or on substances derived from animals.

A01N 63/12

Nematodes

Definition statement

This place covers:

Biocides based on nematodes or on substances derived from nematodes.

A01N 63/14

Insects

Definition statement

This place covers:

Biocides based on insects, e.g. predatory insects, or on substances derived from insects.

A01N 63/16

Arachnids

Definition statement

This place covers:

Biocides based on arachnids, e.g. predatory spiders, or on substances derived from arachnids.

A01N 63/20

Bacteria; Substances produced thereby or obtained therefrom

Definition statement

This place covers:

Biocides based on bacteria or on substances derived from bacteria.

A01N 63/22

Bacillus

Definition statement

This place covers:

Biocides based on Bacillus or on substances derived from Bacillus.

A01N 63/23**B. thuringiensis****Definition statement**

This place covers:

Biocides based on *Bacillus thuringiensis* or on substances derived from *Bacillus thuringiensis*, such as Bt toxins.

A01N 63/25**Paenibacillus****Definition statement**

This place covers:

Biocides based on *Paenibacillus* or on substances derived from *Paenibacillus*.

A01N 63/27**Pseudomonas****Definition statement**

This place covers:

Biocides based on *Pseudomonas* or on substances derived from *Pseudomonas*.

A01N 63/28**Streptomyces****Definition statement**

This place covers:

Biocides based on *Streptomyces* or on substances derived from *Streptomyces*.

A01N 63/30**Microbial fungi; Substances produced thereby or obtained therefrom****Definition statement**

This place covers:

Biocides based on microbial fungi or on substances derived from microbial fungi or obtained therefrom.

A01N 63/32**Yeast****Definition statement**

This place covers:

Biocides based on yeast or on substances derived from yeast.

A01N 63/34**Aspergillus****Definition statement***This place covers:*

Biocides based on Aspergillus or on substances derived from Aspergillus.

A01N 63/36**Penicillium****Definition statement***This place covers:*

Biocides based on Penicillium or on substances derived from Penicillium.

A01N 63/38**Trichoderma****Definition statement***This place covers:*

Biocides based on Trichoderma or on substances derived from Trichoderma.

A01N 63/40**Viruses, e.g. bacteriophages****Definition statement***This place covers:*

Biocides based on viruses, e.g. bacteriophages, or on substances derived from viruses.

A01N 63/50**Isolated enzymes; Isolated proteins (peptides [A01N 37/46](#))****Definition statement***This place covers:*

Biocides containing isolated enzymes or isolated proteins.

References**Limiting references***This place does not cover:*

Peptides	A01N 37/46
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Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb, #A1Nb(2300) and #A1Nc] are used. The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

C-Sets rule #A1Nc is described below.

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets statement: #A1Nc:

In groups [A01N 63/50](#) and [A01N 63/60](#), a biocide, pest repellent or attractant, or plant growth regulator containing an isolated enzyme, isolated peptide, or isolated nucleic acid is classified in the form of C-Sets when the origin of the isolated enzyme, peptide, or nucleic acid is disclosed (e.g., bacteria, fungi, etc.).

- In the C-Sets, the base symbol is either [A01N 63/50](#) (in the case of isolated enzyme or isolated protein) or [A01N 63/60](#) (in the case of isolated nucleic acids), which is followed by a subsequent symbol representing the origin of the isolated enzyme, protein or nucleic acids.
- If a document discloses a multitude of active ingredients, only exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets syntax rules:

- Each C-Set shall contain two symbols.
- Duplicate symbols are not allowed in a C-Set.
- The order of the symbols in the C-Sets is relevant, in which the isolated enzyme, isolated protein, or isolated nucleic acid is allocated as a base symbol and the origin of the isolated enzyme, isolated protein, or isolated nucleic acid (e.g. bacteria or fungi, etc.) is allocated as a subsequent symbol.

C-Sets examples:

- #A01Nc: An isolated enzyme from a Bacillus strain is classified as ([A01N 63/50](#), [A01N 63/22](#))
- #A01Nc: A nucleic acid from a Bacillus strain is classified as ([A01N 63/60](#), [A01N 63/22](#)).

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group.

A01N 63/60

Isolated nucleic acids

Definition statement

This place covers:

Biocides containing nucleic acids, which are for instance capable of interfering with the transcription machinery.

Special rules of classification

C-Sets classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb, #A1Nb(2300) and #A1Nc] are used.

The detailed information about the construction and associated syntax rules of C-Sets rules #A1Na1 and #A1Na2 are found in the "Special rules of classification" in [A01N 25/00](#).

The C-Sets rules #A1Nb and #A1Nb(2300) are described in "Special rules of classification" in [A01N 27/00](#).

The C-Sets rule #A1Nc is described in "Special rules of classification" in [A01N 63/50](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to relevant C-Sets classification rules applicable to [A01N 63/60](#).

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](#) - [A01N 59/00](#))

Definition statement

This place covers:

Active ingredients of undetermined or complex constitution which are derived from plant materials such as extracts (including seed extracts), essential oils or fermentates.

Special rules of classification

Combination sets [C-Sets] classification:

In this group, C-Sets classifications [#A1Na1, #A1Na2, #A1Nb and #A1Nb(2300)] are used.

The detailed information, such as construction and the associated syntax rules, about the C-Sets rules #A1Na1 and #A1Na2, such as construction and the associated syntax rules, are described can be found in the "Special rules of classification" in [A01N 25/00](#).

C-Sets rules #A1Nb and #A1Nb(2300) are described in [A01N 27/00](#).

If a document discloses a multitude of mixtures of active ingredients or formulation-relevant ingredient, only the exemplified embodiments should be classified in C-Sets in order to avoid over-classification with C-Sets. However, if a document discloses a limited number of examples or no examples, but the document as a whole focuses on clearly specifically preferred embodiments, such clearly specifically preferred embodiments may be classified.

C-Sets searches:

C-Sets search queries may be made according to C-Sets classification rules applicable to this group and its subgroups.