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Pesticides and other agrochemicals — Principles for the selection of common names

Produits phytosanitaires et assimilés — Principes pour le choix des noms communs

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Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 257 was prepared by Technical Committee ISO/TC 81, *Common names for pesticides and other agrochemicals*.

This third edition cancels and replaces the second edition (ISO 257:1988), which has been technically revised.

Introduction

This International Standard contains principles for the construction of common names for pesticides and other agrochemicals. The intention is to create short, distinctive, easily pronounced names, which will be common to all languages, as far as is possible. This International Standard contains recommended names for common ions and radicals, as well as recommended stems for different chemical structures. Therefore the common name should reflect any relationship with chemicals of a similar structure. However, it is important to avoid confusion between common names and existing names, whether they are other common names, trade names or chemical names. Recommendations on how to name isomers, salts, esters, etc. are also included.

These principles are defined for the guidance of proposers of such common names and for the operation of ISO/TC 81.

Pesticides and other agrochemicals — Principles for the selection of common names

1 Scope

This International Standard gives principles for creating common names for pesticides and other agrochemicals. These principles are defined for the guidance of proposers of such common names.

The procedure for the establishment of common names is given in Annex A.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1750, *Pesticides and other agrochemicals — Common names*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
common name
name freely available for common use in identifying a chemical substance without recourse to its systematic chemical name

4 Purpose of common names

4.1 The purpose of a common name (see ISO 1750) is to provide a short, distinctive, easily pronounced name for a substance, the full chemical name of which is too complex for convenient use in science, commerce and official regulations.

4.2 Because a common name has to be freely available for use in describing the substance for which it has been coined, it should not be permitted to become a privately owned trade mark with respect to identical or similar goods.

4.3 In order to achieve the desired goal of creating a common name that is generally acceptable internationally, rejection of any proposed common name by individual ISO Member Bodies [see A.3.1.3 and A.4.1.1 e)] should only be based on serious grounds and then only after every possible effort has been made to overcome the impediment to local acceptability.

5 Principles for selection

5.1 General

5.1.1 No substance should be given a common name if its chemical name is reasonably short and distinctive (e.g. metaldehyde, carbon tetrachloride).

5.1.2 The identity of a common name should be maintained in all languages, subject to necessary linguistic variations.

5.1.3 Common names should be as short as is practicable, but should not include single letters and/or numerals except as structural qualifiers.

NOTE While the formation of common names from initials and numerals is no longer acceptable, exceptions (e.g. MCPA, 2,4,5-T) have been made for substances which are so well known by such names that to use other names would cause confusion.

5.1.4 Common names should be distinctive in sound and spelling and should be neither difficult to pronounce nor liable to confusion with existing names (see 5.5.1).

5.1.5 To facilitate international spelling and translation, “f” instead of “ph” should be used in common names; the suffix “-phenyl” in the names of esters, however, should retain its normal spelling. Similarly “t” should be used instead of “th” with the permitted exceptions “thrin” and “thiuron”. Methyl and ethyl esters retain their normal spelling.

5.2 Salts and esters

5.2.1 Simple salts

The common name for a simple salt should be that of the parent acid, alcohol or base. In the case of an acid or alcohol, the complementary cation may be given as a hyphenated suffix and, in the case of a base, the complementary anion may be stated. A quaternary ammonium or phosphonium salt should be treated as a salt of a base.

EXAMPLES:

— alloxydim-sodium,

— bromoxynil-potassium,

— imazalil nitrate,

— chlormequat chloride.

5.2.2 Simple esters

Similarly, where the substance is a simple ester or other derivative, and the existence of biological activity derives from the parent form, the common name should be that of the parent. This should be taken as the case if other esters or derivatives are known, or are expected, to exhibit similar biological activity.

The complementary esterifying radical may be indicated.

EXAMPLES:

— mecoprop-methyl,

— dinoseb acetate.

5.2.3 Complex esters and salts

If neither moiety of an ester or salt is simple, the common name should be that of the whole molecule.

EXAMPLES:

— bupirimate,

— decafentin.

5.2.4 Recommended names for ions and radicals

Recommended names have been developed for some of the more commonly occurring ions and radicals. These are listed in Table 1 and should be used in place of the chemical names.

Table 1 — Names for ions and radicals

Recommended name	Chemical name
albesilate	alkylbenzenesulfonate
butometyl	2-butoxy-1-methylethyl
butotyl	2-butoxyethyl
diclexine	dicyclohexylammonium
dimolamine	(2-hydroxyethyl)dimethylammonium
diolamine	bis(2-hydroxyethyl)ammonium
ethadyl	ethylene (ethane-1,2-diyl)
etotyl	2-ethoxyethyl
isoctyl	"iso-octyl" (mixed C-8 alkyl radical)
meptyl	1-methylheptyl
metilsulfate	methylsulfate
mexyl	1-methylhexyl
olamine	2-hydroxyethylammonium
tefuryl	tetrahydrofurfuryl
trimesium	trimethylsulfonium
trolamine	tris(2-hydroxyethyl)ammonium

Traditional names for radicals, as retained in Reference [2], should be used in place of systematic or semi-systematic names that include locants.

EXAMPLES:

— butyrate,

— dimethylammonium,

— fumarate,

— isobutyl,

— isopropyl,

— isopropylammonium,

— methylammonium,

— triethylammonium.

5.2.5 Multiplying affixes

Multiplying affixes should be used when the parent is a dibasic (or higher) acid, alcohol or base and more than one possible derivative could be produced. Affixes should also be used in any other case where there is a need to avoid ambiguity.

EXAMPLES:

— chlorthal-dimethyl,

— chlorthal-monomethyl,

— diquat dibromide,

— iminoctadine triacetate,

— streptomycin sesquisulfate,

— thiosultap-disodium.

It is not normally necessary to use multiplying affixes with the parent substance.

EXAMPLES:

— dalapon-magnesium [2:1 ratio],

— fosetyl-aluminium [3:1 ratio],

— oxpoconazole fumarate [2:1 ratio].

5.3 Purity of chemicals

Although common names should be given to chemical entities of known structure, in exceptional cases they may be given to mixtures whose composition is constant for all practical purposes and whose concentrations of active components can be specified.

Such exceptional cases may include:

a) a reaction product mixture, provided that the concentrations of the main active components fall within acceptable limits about specified proportions;

b) a polymeric reaction product mixture, provided that the concentrations of the main active component polymers (the repeating units of which are specified) in the reaction product mixture are known and are constant to within acceptable limits;

c) an extract or derivative of a natural product (from animal, plant, fungal or bacterial sources), the composition of which is constant within acceptable limits.

5.4 Isomers and isomeric mixtures

5.4.1 The following special considerations should be taken into account when coining names for mixtures of isomers.

5.4.2 The common name for a substance that can exist in enantiomeric (optically isomeric) forms owing to a single asymmetric centre should be assigned, without affixes, either to the racemate or to one of the enantiomers, depending on the form for which the common name is first required. If a common name is required subsequently for another stereochemical variant, it should be the original common name with the appended suffix "-MP", "-M" or "-P", for the racemate, the (–) isomer or the (+) isomer, respectively.

If more than one chiral centre is present, it may be necessary to adopt special measures, such as a system based on appropriate modification of the original common name, for example that developed for the synthetic pyrethroids (see Annex B).

5.4.3 The common name of a substance which consists of complementary geometrical isomers should indicate the essential familial features (see 5.6). A specific isomer or subgroup of isomers of such a substance may be assigned a common name [which may include a syllable or letter(s) implying a *cis*-, *trans*-, (*E*)- or (*Z*)-form] only if the substance is produced commercially in a substantially pure form.

If a normal commercial product consists of a mixture of a single pair of isomers, the common name should apply to any mixture of the two. Individual isomers should be identified by suitable qualifiers, for example *cis* and *trans* or (*E*) and (*Z*).

If it is commercially possible to produce mixtures with different ratios of isomers, the ratio should be stated on the commercial product, for example "60:40". The ratios will not form part of the common name.

5.4.4 The common name for a substance that consists of a mixture of optical and geometric isomers should be one that is appropriate to the mixture and may be modified by qualifiers, to specify subgroups or individual isomers.

5.4.5 If a substance consists of a mixture of structural isomers, only one of which has the stated biological activity, the common name should be assigned only to the active isomer. However, if the substance consists of a mixture of pesticidally active isomers, and if the isomerism consists of variations in chain branching or position of substituents, the common name should be assigned to the mixture, which should be defined as an isomeric reaction product mixture of A + B.... In ISO 1750, footnotes giving indications of the usual proportions are included. If necessary, names for individual isomers may be derived by modifying the common name applied to the mixture.

5.5 Additional requirements

5.5.1 A common name should not be liable to confusion with

a) established chemical names,

b) common names already either officially authorized or in well-recognized use for other pharmaceutical, pesticidal or related substances, or

c) trade marks enjoying legal protection with respect to pharmaceutical, pesticidal or related substances, unless the prior consent of the trade mark owner has been secured in writing.

5.5.2 In accordance with its definition and purpose (Clauses 3 and 4), a common name cannot be a proprietary name with respect to goods broadly of the same category. However, in some cases, circumstances may exist during an interim period which make it desirable for proprietary rights to be maintained as, for example, where the proposer has agreed to surrender his proprietary rights subject to acceptance of the name as an official common name. In such cases, the proprietor should first agree in writing to discontinue the use of the name as a trade mark as soon as official recognition as a common name is given by ISO, and thus

a) to permit the use of the name as the approved common name by any party whatsoever who is properly using it, and

b) to surrender all proprietary rights as soon as the special circumstances justifying their retention have ceased to exist.