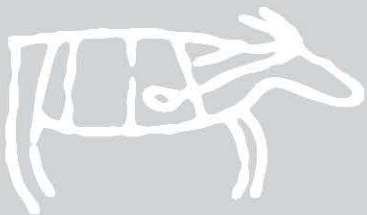

Guidelines for ATCvet classification | 2024

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WHO Collaborating Centre for Drug Statistics Methodology

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Guidelines for ATCvet classification

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Preface

The *A*natomical *T*herapeutic *C*hemical classification system for *vet*erinary medicinal products, *ATCvet*, has been developed by the Nordic Council on Medicines (NLN) in collaboration with the NLN's ATCvet working group.

The ATCvet system is based on the same main principles as the ATC classification system for substances used in human medicine. The ATCvet system has been developed in association with the WHO Collaborating Centre for Drug Statistics Methodology in Oslo. The WHO Collaborating Centre for Drug Statistics Methodology is responsible for developing and maintaining the ATC system under the guidance of WHO, and has since January 2001 also had the responsibility for the ATCvet classification system. The first edition of the *Guidelines on ATCvet classification* was published in 1992 followed by revised editions in 1995 and in 1999. Since 2002 the Guidelines have been revised annually.

The ATCvet classification system will be continuously revised in line with the ATC system and in response to the expanding range of preparations available in the field of veterinary medicine.

Details of the classification codes assigned to all the substances classified can be found in the *ATCvet Index*, which is issued annually. The *Guidelines on ATCvet classification* are needed to explain and provide comments on the classifications recommended.

Copies of the Guidelines and the Index can be ordered from the WHO Collaborating Centre for Drug Statistics Methodology.

The *ATCvet Index*, as well as further information about the ATCvet classification system, is also available at the website of the WHO Collaborating Centre, https://atcddd.fhi.no/atcvet/.

Oslo, March 2024

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1 Introduction to the ATCvet classification system

1.1 History of the ATC/DDD- and the ATCvet systems

The basis for the ATCvet classification system is the ATC (*A*natomical *T*herapeutic *C*hemical) classification system for human medicines, which was developed in Norway in the early seventies. The use of the ATC classification and the DDD (*D*efined *D*aily *D*ose defined as the assumed average daily dose of a substance used in its main indication in adults) as a unit of measurement was introduced in the Nordic countries in 1976.
In 1982, the WHO Regional Office for Europe established the WHO Collaborating Centre for Drug Statistics Methodology in Oslo. The main tasks of the Centre are to develop and maintain the ATC/DDD system, and to stimulate and influence the practical use of the ATC system by co-operating with researchers in the drug utilization field.
In 1996 WHO Headquarters in Geneva decided to recommend the ATC/DDD system as an international standard for drug utilization studies. The WHO appointed an expert group for the ATC/DDD system. The WHO International Working Group for Drug Statistics Methodology includes people from all regions. The Group meets twice annually.

The Nordic Council on Medicines established the ATCvet classification system in 1990. In January 2001, the ATCvet was taken over by the WHO Collaborating Centre. The Norwegian authorities fund the work with ATCvet.

1.2 The purpose of the ATCvet classification system

ATCvet is a system for the classification of substances intended for therapeutic use and can serve as a tool for the classification of medicinal products.

The ATCvet system provides an administrative tool for putting groups of drugs into systems according to therapeutic categories. The aim is to:

- facilitate exchanges of data for pharmacovigilance studies;
- improve the comparability of statistics on sales of veterinary medicinal products;
- provide authors of scientific articles with a tool for identifying medicines; and
- help veterinarians and pharmacists in their everyday work.

In many European countries, veterinary medicinal products are presented in accordance with the ATCvet system in *drug catalogues,* and the system is used as an *administrative tool* by the health authorities. Since many substances are used in both human and veterinary medicine, the possibility of linking the classification systems for the two areas is of considerable value. The ATCvet system is therefore being developed in close association with the ATC system.

1.3 Relationship between the ATCvet system and the ATC system for medicines for human use

These Guidelines for ATCvet classification should be read in conjunction with the Guidelines for ATC classification and DDD assignment, which provide detailed information regarding ATC classification.
(https://atcddd.fhi.no/atc_ddd_index_and_guidelines/guidelines/)

The *ATCvet system* is based on the ATC system for substances used in human medicine. Many of the substances may thus not have a well-established use or may be of limited relevance for veterinary medicine. However, pharmacotherapy in veterinary medicine is rapidly developing, and substances and groups of drugs regarded to be of limited relevance some years ago, are now included in armamentarium of the veterinarians.

The ATCvet system as it is outlined in the ATCvet Index and Guidelines for ATCvet classification should be regarded as a maximum selection to choose from when classifying products in veterinary medicine. Derived from the ATC system the ATCvet system is modified with some minor adaptations created to better fit the system to its purpose. In most cases an ATCvet code can be created by placing the letter Q in front of an existing ATC code in the human ATC system when classifying a product in the ATCvet system. In some cases, specific ATCvet codes are created. An additional 1st level, QI - *Immunologicals*, is also included to accommodate vaccines and immunologicals according to species. The ATCvet system is updated annually.

1.4 The ATCvet classification system

In both the ATC and the ATCvet system, preparations are divided into groups according to their therapeutic use. First, they are divided into 15 *anatomical groups* (1st level), classified as QA-QV in the ATCvet system.

Within most of the 1st level groups, preparations are subdivided into different *therapeutic main groups* (2nd level), coded for example as QA01, QA02, QA03. Two levels of *chemical/therapeutic/pharmacological subgroups* (3rd and 4th levels), e.g. QA02A, QA02B at the 3rd level and QA02AA, QA02AB etc. at the 4th level, provide further subdivisions. At a 5th level, e.g. QA02AA01, *chemical substances* are classified.

Anatomical groups (1st level):

ATCvet 1st level		**ATC**
QA	Alimentary tract and metabolism	A
QB	Blood and blood forming organs	B
QC	Cardiovascular system	C
QD	Dermatologicals	D
QG	Genito urinary system and sex hormones	G
QH	Systemic hormonal preparations, excl. sex hormones and insulins	H
QI	Immunologicals	-

QJ	Antiinfectives for systemic use	J
QL	Antineoplastic and immunomodulating agents	L
QM	Musculo-skeletal system	M
QN	Nervous system	N
QP	Antiparasitic products, insecticides and repellents	P
QR	Respiratory system	R
QS	Sensory organs	S
QV	Various	V

The complete classification of *ampicillin* for systemic use illustrates the structure of the ATC code:

J General antiinfectives for systemic use (1st level, anatomical main group)
- **01** Antibacterials for systemic use (2nd level group, therapeutic main group)
  - **C** Beta-lactam antibacterials, penicillins (3rd level group, therapeutic subgroup)
    - **A** Penicillins with extended spectrum (4th level group, chemical/therapeutic subgroup)
      - **01** ampicillin (5th level code, subgroup for chemical substance)

Thus, in the ATC system, all plain ampicillin products for systemic use should be classified using the code **J01CA01.**

In most cases an ATC code exists which can be used to classify a product in the ATCvet system. The ATCvet code is then created by placing the letter Q in front of the ATC code.

An ATCvet classification code is thus built up as follows:

Example: Ampicillin

Level	*1*	*2*	*3*	*4*	*5*
ATC code	J	01	C	A	01
ATCvet code	**Q**J	01	C	A	01

2. Classification principles

2.1 General principles

The ATCvet system for the classification of veterinary medicines is based on the same overall principles as the ATC system for substances used in human medicine. In most cases, an ATC code exists which can be used to classify a product in the ATCvet system. The ATCvet code is then created by placing the letter Q in front of the ATC code.

When the human classification is not considered relevant, a specific ATCvet group or 5th level code can be established in order to make the classification more relevant for veterinary medicine. However, such changes are kept down to a minimum in order to leave the two systems as similar as possible.

Usually, specific ATCvet groups are only established for veterinary products whose indications differ from those of similar human products, e.g. immunologicals for veterinary use (QI), antibacterials for intramammary use (QJ51) and gynecological antiinfectives and antiseptics for intrauterine use (QG51).

Classification according to the main therapeutic use or pharmacological class of a medicinal product

Every medicinal product is classified according to its main therapeutic use or pharmacological class. One product may be used for two or more equally important indications and the main therapeutic use may differ from species to species and from one country to another.

When a product is used for more than one indication, an ATCvet code is assigned based on its main therapeutic use, as decided by the ATCvet Working Group.

Different pharmaceutical forms of the same substance

One substance may be marketed in several pharmaceutical forms. Pharmaceutical forms for topical and systemic use are given separate ATCvet codes, e.g. oxytetracycline is given the following ATCvet codes for its different pharmaceutical forms:

Oxytetracycline
QA01AB25 for local oral treatment
QD06AA03 for topical use
QG01AA07 for gynecological use
QG51AA01 for intrauterine use
QJ01AA06 for systemic use
QJ51AA06 for intramammary use
QS01AA04 for ophthalmological use

When there are several alternative classifications for a particular substance, explanations and cross-references are given in the Guidelines.

Drugs classified in the same 4th level group

Drugs assigned to the same 4th level group should not be considered pharmacotherapeutically equivalent, since their adverse drug reaction profiles, modes of action and therapeutic effects may differ.

Example:
QM02AA *Antiinflammatory preparations, non-steroids for topical use*
QM02AA01 *phenylbutazone*
QM02AA23 *indometacin*

To avoid a situation of several 4th levels with only one single substance in each, new 4th levels are as a general rule only established when at least two substances with marketing authorisations fit in the group. In addition, a new 4th level should be regarded a benefit for drug utilization research.

'Other' groups

As a general rule, a new product not clearly belonging to any of the existing ATCvet 4th level groups will be classified in an 'Other' group (usually an X group), e.g. QR06AX - *Other antihistamines for systemic use*. New and innovative medicinal products will therefore often be classified in an X group and such groups could be established for only one single substance.

Example:
QR06AA *Aminoalkyl ethers*
QR06AA01 *bromazine*
QR06AB *Substituted alkylamines*
QR06AB01 *brompheniramine*
QR06AX *Other antihistamines for systemic use*
QR06AX01 *bamipine*

Specific veterinary groups

Specific veterinary groups have been created, e.g. for immunologicals (QI), to allow a subdivision by species. The ATC system's subdivision of sulfonamides on the basis of their biological half-life in humans is irrelevant to veterinary use and a veterinary classification has therefore been established (QJ01EQ). A specific classification has also been established for antiparasitic products (QP), since there are considerable differences in the use of these products and the variety of substances available, compared with the situation in human medicine.

When specific ATCvet codes are created, the following digits/letters in the ATC system are reserved for use in the ATCvet classification system:

level 1:	Q
level 2:	50-69
levels 3 and 4:	Q, V, W, Y and Z
level 5:	90-99

At level 5, the digits 90-98 are used to classify products containing plain substances, while 99 has been used for combined products.

Example:
QJ51 - *Antibacterials for intramammary use*, and QA07CQ - *Oral rehydration formulations for veterinary use*, are examples of ATCvet codes for which there are no equivalents in the ATC system (i.e. neither J51 nor A07CQ exists in the ATC system).

Classification problems are discussed by the ATCvet Working Group, which then decides on the final classification.

Nomenclature in the ATCvet system

- International Nonproprietary Names (INN) are preferred.
  If INN names have not been assigned, United States Adopted Names (USAN) or British Approved Names (BAN) are to be chosen. For herbal medicinal products, Latin names are used.

Lists of INN names are published by the World Health Organization (WHO), Geneva, and are published continuously in *WHO Drug Information.* Lists of USAN names are published by the US Phamacopoeia and lists of BAN names are available in the British pharmacopoeia.

- Non-specific terms like *others* and *various* should be avoided as group/subgroup names whenever possible.

2.2 Classification of plain preparations

Plain preparations are defined as:

Preparations containing one active component (including stereoisomeric mixtures), and additional substances intended to

- increase the stability of the preparations (e.g. acetylsalicylic acid + ascorbic acid), or
- increase the duration of the effect (e.g. depot formulations), or
- increase the absorption of the active component (e.g. different solvents in dermatologicals).

Different salts of the active ingredient are usually given one and the same 5th level ATCvet code, but prodrugs and stereoisomers with differing pharmacological activity may be assigned separate 5th level codes.

2.3 Classification of combination products

Products containing two or more active components are classified as combination products in accordance with the principles of the ATC system. In general, the main therapeutic use decides which ATCvet code is to be used.

Combination products are classified according to two main principles:

1. A commonly used principle for combination products containing two or more active components *not* belonging to the same therapeutic 4th level group are classified using 50-series codes.

   Example:
   QJ01AA06 *oxytetracycline* (plain)
   QJ01AA56 *oxytetracycline, combinations*

   Combination products with the same main active ingredient are usually given the same ATCvet code. Thus oxytetracycline + flunixin and oxytetracycline + neomycin are both assigned the code QJ01AA56.

   The names of all active ingredients of a combination are given in some ATCvet 5th levels. This principle has been used more frequently in recent years in order to give a better identification of the various combinations.

Packages comprising two or more different medicinal products marketed under a common brand name are also considered as combination products.
E.g.: Sotalol tablets and aspirin tablets in one combination package is classified in QC07FX02 *sotalol and acetylsalicylic acid*.

2. Combination products containing two or more active ingredients belonging to the same therapeutic 4th level group are classified using the 5th level codes 20 or 30.

   Example:
   QJ01CA *Penicillins with extended spectrum*
   QJ01CA02 *pivampicillin*
   QJ01CA08 *pivmecillinam*
   QJ01CA20 *combinations*

   For example, pivampicillin and pivmecillinam, and any other combinations including two or more active ingredients belonging to QJ01CA - *Penicillins with extended spectrum*, are given the ATCvet code QJ01CA20.

Combinations of substances used exclusively in veterinary medicine have been given the 5th level code 99.

Separate ATCvet 3rd or 4th level codes have been assigned to certain important combinations, e.g. QJ51R - *Combinations of antibacterials for intramammary use*.

The main therapeutic use decides which ATCvet code is to be used. A product containing vitamins and iron used primarily as an iron product should be classified in QB03 - *Antianemic preparations*. Likewise, a product containing vitamins and antibiotics should be assigned to QJ - *Antiinfectives for systemic use*.

The sequence of classification codes of combination products should as far as possible agree with the order of classification of the single substances in question. In some ATCvet groups a ranking is needed in order to classify combination products (e.g. in QN02B, QJ01RA and QJ51R). This ranking is described in the Guidelines and shows which substances take precedence over others when the classification is decided.

3. Procedures and data requirements for ATCvet classifications and alterations

3.1 Classification of new substances and data requirements

Requests for classifications of new substances should be addressed to the WHO Collaborating Centre for Drug Statistics Methodology. It is recommended that requests are made using the special application form available from our website at https://atcddd.fhi.no/atcvet/.

A new medicinal substance is normally not included in the ATCvet system before an application for marketing authorisation is ready for submission in at least one country. In

some cases, it may be necessary to await a classification until the new substance has been approved in at least one country (especially for substances where it is considered difficult to establish a new 5th level). These conditions are set to avoid including too many substances which never become marketed in the ATCvet system.

Data requirements:
The following data should be submitted when requesting an ATCvet code for a substance:

- Chemical structure and relationship to similar drugs.
- Pharmacology and mechanism of action, including relationship to similar drugs.
- Main indication.
- Other indications.
- Proposed ATCvet classification, with justification based on the evidence submitted.

3.2 Principles regarding alterations to the ATCvet system

As the range of preparations available is continually expanding, regular revisions of the ATCvet system will always be necessary.

Changes to currently valid codes should be kept to a minimum. A gap in the sequence is preferable to changing existing codes. Before alterations are made, the difficulties they may cause for users of the ATCvet system should be considered and weighed against the possible benefits.

Specific ATCvet codes will be changed if new relevant ATC codes are established. ATCvet codes should be identical to the corresponding ATC codes whenever possible, the only difference being the additional Q at level 1.

- Revisions of human ATC codes are normally incorporated in ATCvet.
- Old ATCvet codes for deleted products will not be used for any new substances.
- When a group is changed, consideration should be given to whether certain substances or parts of other groups (e.g. from group QV) could be included in the new group.

The Guidelines on ATCvet classification are updated in accordance with changes made to the ATC system.

Procedure for alterations
Proposals for changes to ATCvet classifications should be sent by email (whocc@fhi.no) to the WHO Collaborating Centre for Drug Statistics Methodology.

All proposed changes will be scrutinized by experts and discussed by the ATCvet Working Group before a decision is made.

3.3 Reporting

The WHO Collaborating Centre is responsible for reporting all alterations to the ATCvet classification system to users of the system. Subscriptions to ATCvet alterations can be arranged free of charge with the WHO Collaborating Centre. ATCvet alterations are also available from the WHO Collaborating Centres website at https://atcddd.fhi.no/atcvet/.

All requests for new ATCvet codes, comments on existing ATCvet classifications and suggestions for alterations should be addressed to the WHO Collaborating Centre. The reasons for any proposed reclassification should also be given, preferably on the special application form which can be downloaded from the WHO Collaborating Centres website.

4. ATCvet Index

The WHO Collaborating Centre for Drug Statistics Methodology publishes a new issue of the complete ATCvet Index annually. The complete ATCvet Index consists of one list sorted according to ATCvet codes, listing all the ATCvet codes established, and one list alphabetically sorted according to nonproprietory drug names, including all ATCvet 5th levels. The searchable Index is freely available on the website https://atcddd.fhi.no/atcvet/ or can be ordered as hard copy or as an electronic file from the WHO Collaborating Centre. The *Guidelines for ATCvet classification* are also available at the WHO Collaborating Centres website as a pdf file.

The ATCvet system has been developed in association with the ATC system for human medicine, which is developed and maintained by the WHO Collaborating Centre for Drug Statistics Methodology in Oslo. The ATCvet system is based on the same main principles as the human ATC system, and the naming of levels is adapted from this system. Alterations and new codes in the ATC system are normally implemented also in the ATCvet system.

In general, the names of the levels are kept consistent with the human ATC system and all substances included in this system are listed. In some cases the level names in the human ATC system are not appropriate in veterinary medicine. As a consequence one change of ATCvet level name was implemented in the 2006 edition: QD05 is now named "*Drugs for keratoseborrheic disorders (human ATC: Antipsoriatics)"*.

Applications for ATCvet codes for new drugs not yet classified are received by the WHO Collaborating Centre for Drug Statistics Methodology continuously during the year. These applications are given ATCvet codes and the classifications are discussed by the ATCvet Working Group at the annual meeting in November. When the final decision has been taken, the new codes are included in the *ATCvet Index*.

Lists of the annual ATCvet alterations are distributed in January each year free of charge to the users of the ATCvet system according to a mailing list, together with an order form for the new Index.

QA ALIMENTARY TRACT AND METABOLISM

QA01 STOMATOLOGICAL PREPARATIONS

A Stomatological preparations

QA02 DRUGS FOR ACID RELATED DISORDERS

A Antacids
B Drugs for peptic ulcer and gastro-oesophagal reflux disease (GORD)
X Other drugs for acid related disorders

QA03 DRUGS FOR FUNCTIONAL GASTROINTESTINAL DISORDERS

A Drugs for functional gastrointestinal disorders
B Belladonna and derivatives, plain
C Antispasmodics in combination with psycholeptics
D Antispasmodics in combination with analgesics
E Antispasmodics and anticholinergics in combination with other drugs
F Propulsives

QA04 ANTIEMETICS AND ANTINAUSEANTS

A Antiemetics and antinauseants

QA05 BILE AND LIVER THERAPY

A Bile therapy
B Liver therapy, lipotropics
C Drugs for bile therapy and lipotropics in combination

QA06 DRUGS FOR CONSTIPATION

A Drugs for constipation

QA07 ANTIDIARRHEALS, INTESTINAL ANTIINFLAMMATORY/ ANTIINFECTIVE AGENTS

A Intestinal antiinfectives
B Intestinal adsorbents
C Electrolytes with carbohydrates
D Antipropulsives
E Intestinal antiinflammatory agents
F Antidiarrheal microorganisms
X Other antidiarrheals

QA08 ANTIOBESITY PREPARATIONS, EXCL. DIET PRODUCTS

A Antiobesity preparations, excl. diet products

QA09 DIGESTIVES, INCL. ENZYMES

A Digestives, incl. enzymes

QA10 DRUGS USED IN DIABETES

A Insulins and analogues
B Blood glucose lowering drugs, excl. insulins
X Other drugs used in diabetes

QA11 VITAMINS

A Multivitamins, combinations
B Multivitamins, plain
C Vitamin A and D, incl. combinations of the two
D Vitamin B_1, plain and in combination with vitamin B_6 and B_{12}
E Vitamin B-complex, incl. combinations
G Ascorbic acid (vitamin C), incl. combinations
H Other plain vitamin preparations
J Other vitamin products, combinations

QA12 MINERAL SUPPLEMENTS

A Calcium
B Potassium
C Other mineral supplements

QA13 TONICS

A Tonics

QA14 ANABOLIC AGENTS FOR SYSTEMIC USE

A Anabolic steroids
B Other anabolic agents

QA15 APPETITE STIMULANTS

QA16 OTHER ALIMENTARY TRACT AND METABOLISM PRODUCTS

A Other alimentary tract and metabolism products
Q Other alimentary tract and metabolism products for veterinary use

QA ALIMENTARY TRACT AND METABOLISM

This group comprises preparations used for the treatment of diseases affecting the alimentary tract or metabolism, e.g. antacids and antiemetics. It also includes e.g. antispasmodic and anticholinergic agents, vitamins and drugs used in diabetes.

QA01 STOMATOLOGICAL PREPARATIONS

QA01A STOMATOLOGICAL PREPARATIONS

Agents for the treatment of conditions of the mouth and teeth should be classified in this group, as should preparations mainly used in gingivitis, stomatitis etc.

See also:
QN01B - *Nervous system; Anesthetics, local*
QR02AD - *Throat preparations; Anesthetics, local*

QA01AA Caries prophylactic agents

All types of fluoride preparations should be classified in this group.

QA01AB Antiinfectives and antiseptics for local oral treatment

All antiinfective and antiseptic agents for the treatment of stomatitis, gingivitis etc. should be classified in this group. Other antibiotics for topical use, see QD - *Dermatologicals*.

QA01AC Corticosteroids for local oral treatment

Corticosteroid preparations for the treatment of gingivitis, stomatitis etc., i.e. corticosteroid preparations for use in the oral cavity, should be classified in this group. Other corticosteroids for topical use, see QD - *Dermatologicals*.

QA01AD Other agents for local oral treatment

Hemostatic agents used in dentistry should be classified in this group. Combinations with local anesthetics for oral treatment are classified at the *various* level QA01AD11.

See also:
QN01B - *Anesthetics, local*
QB02BC - *Local hemostatics*

QA02 DRUGS FOR ACID RELATED DISORDERS

QA02A ANTACIDS

Plain antacid drugs, antacids in combination with antiflatulents and antacids in combination with other drugs should be classified in this group.

See also QA03AX - *Other drugs for functional gastrointestinal disorders*.

QA02AA Magnesium compounds

Magnesium carbonate used for treatment of mineral deficiency is classified here.

Combinations of different magnesium compounds are classified in QA02AA10 - *combinations*.

QA02AB Aluminium compounds

Combinations of different aluminium compounds are classified in QA02AB10 - *combinations*.

QA02AC Calcium compounds

Combinations of different calcium compounds are classified in QA02AC10 - *combinations.*

QA02AD Combinations and complexes of aluminium, calcium and magnesium compounds

Antacids containing a combination of two or more of the substances: aluminium, calcium or magnesium compounds should be classified in this group.

Ordinary salt combinations are classified at the same 5th level QA02AD01 e.g. combinations of aluminium hydroxide, magnesium carbonate gel and attapulgite, while the various complexes with a layer structure are classified at separate 5th levels e.g. magaldrate and almagate.

QA02AF Antacids with antiflatulents

QA02AG Antacids with antispasmodics

Preparations containing a combination of antacids and antispasmodics are classified in this group if the main use is as an antacid. See also QA03 - *Drugs for functional gastrointestinal disorders*.

QA02AH Antacids with sodium bicarbonate

No ATCvet 5th levels are assigned in this group.

All oral formulations containing sodium bicarbonate are classified in this group.

Parenteral formulations, see QB05BB.

Combinations of sodium bicarbonate and proton pump inhibitors are classified in QA02BC.

QA02AX Antacids, other combinations

QA02B DRUGS FOR PEPTIC ULCER AND GASTRO-OESOPHAGEAL REFLUX DISEASE (GORD)

Peptic ulcer includes ulcers in the oesophagus, stomach or duodenum. Combinations with H_2-receptor antagonists are classified in QA02B. See also QA03 - *Drugs for functional gastrointestinal disorders*.

Combinations with NSAIDs are classified in QM01A.

QA02BA H_2-receptor antagonists

QA02BB Prostaglandins

QA02BC Proton pump inhibitors

Potassium-competitive acid blockers e.g. vonoprazan are classified in this group.

QA02BD Combinations for eradication of Helicobacter pylori

QA02BX Other drugs for peptic ulcer and gastro-oesophagal reflux disease (GORD)

Alginic acid in combination with antacids (e.g. aluminum hydroxide, calcium carbonate) is given the code QA02BX13.

QA02X OTHER DRUGS FOR ACID RELATED DISORDERS

Preparations which cannot be classified in the preceding groups should be assigned to this group.

QA03 DRUGS FOR FUNCTIONAL GASTROINTESTINAL DISORDERS

Preparations containing, for example, analgesics and antispasmodics could be classified either in this group or in QN02 - *Analgesics*. Combinations of psycholeptics and antispasmodics could be classified in QA03 or in QN05 - *Psycholeptics* etc. The main indication for the use of the drug, together with the relative effect of the active components, will decide the classification. In the treatment of pain caused by spasms, the spasmolytic component must be judged more important than the analgesic component. Accordingly, analgesic/antispasmodic combinations should be classified in QA03 if the main effect of the preparation is the antispasmodic action.

Combined preparations are classified in:
QA03D - *Antispasmodics in combination with analgesics*
QA03E - *Antispasmodics and anticholinergics in combination with other drugs*

Antispasmodics which are used specifically in the urogenital tractus, are classified in QG04BD - *Drugs for urinary frequency and incontinence*.

Lubiprostone is classified in QA06AX - *Other drugs for constipation*.

Peripheral opioid receptor antagonists are classified in QA06AH.

QA03A DRUGS FOR FUNCTIONAL GASTROINTESTINAL DISORDERS

QA03AA Synthetic anticholinergics, esters with tertiary amino group

QA03AB Synthetic anticholinergics, quaternary ammonium compounds

QA03AC Synthetic antispasmodics, amides with tertiary amines

QA03AD Papaverine and derivatives

QA03AE Serotonin receptor antagonists

QA03AX Other drugs for functional gastrointestinal disorders

Combinations of silicones and antispasmodics are classified in QA03AX13 if the main indication is flatulence.

Combinations of silicones and antacids are classified in QA02AF.

Combinations of silicones and antipropulsives are classified in QA07DA.

Trimethylphloroglucinol and combinations with trimethylphloroglucinol are allowed at the 5th level QA03AX12 - *phloroglucinol*.

Dimeticone is classified in QA03AX13 - *silicones.*

Products containing dried ruminal flora in combination with other subtances, i.e. aminoacids and/or minerals etc, are classified in QA03AX at the 4th level.

QA03B BELLADONNA AND DERIVATIVES, PLAIN

QA03BA Belladonna alkaloids, tertiary amines

QA03BB Belladonna alkaloids, semisynthetic, quaternary ammonium compounds

Combinations with codeine are classified in QN02AA.

QA03C ANTISPASMODICS IN COMBINATION WITH PSYCHOLEPTICS

QA03CA Synthetic anticholinergic agents in combination with psycholeptics

QA03CB Belladonna and derivatives in combination with psycholeptics

QA03CC Other antispasmodics in combination with psycholeptics

QA03D ANTISPASMODICS IN COMBINATION WITH ANALGESICS

QA03DA Synthetic anticholinergic agents in combination with analgesics

QA03DB Belladonna and derivatives in combination with analgesics

QA03DC Other antispasmodics in combination with analgesics

QA03E ANTISPASMODICS AND ANTICHOLINERGICS IN COMBINATION WITH OTHER DRUGS

QA03EA Antispasmodics, psycholeptics and analgesics in combination

QA03ED Antispasmodics in combination with other drugs

QA03F PROPULSIVES

QA03FA Propulsives

Agents stimulating gastrointestinal motility, e.g. substituted benzamides, are classified in this group.

Domperidone used for treatment of leishmaniosis is classified in QP51DX06.

QA04 ANTIEMETICS AND ANTINAUSEANTS

QA04A ANTIEMETICS AND ANTINAUSEANTS

Antihistamines which are often used as antiemetics are classified in QR06 - *Antihistamines for systemic use*. Metoclopramide is classified in QA03FA - *Propulsive*s. Cinnarizine is classified in QN07CA - *Antivertigo preparations*.

QA04AA Serotonin ($5HT_3$) antagonists

QA04AD Other antiemetics

Fosaprepitant, a prodrug of aprepitant, is classified together with the parent drug in QA04AD12.

Droperidol injection used for prevention of nausea and vomiting in post-surgery settings is classified in QN05AD.

QA05 BILE AND LIVER THERAPY

QA05A BILE THERAPY

QA05AA Bile acids and derivatives

Preparations classified in this group are primarily bile acid preparations, but various combinations, e.g. with spasmolytics, can also be included in each 5th level.

QA05AB Preparations for biliary tract therapy

QA05AX Other drugs for bile therapy

Other drugs for bile therapy which cannot be classified in the preceding groups should be assigned to this group. For example, menbutone is classified in this group.

QA05B LIVER THERAPY, LIPOTROPICS

QA05BA Liver therapy

QA05C DRUGS FOR BILE THERAPY AND LIPOTROPICS IN COMBINATION

QA06 DRUGS FOR CONSTIPATION

QA06A DRUGS FOR CONSTIPATION

All agents used for treatment of constipation (regardless of indication) are classified here.

This group is mainly subdivided according to mode of action. Enemas are classified in one group, QA06AG - *Enemas*, regardless of mode of action.

Certain combination products are classified at defined levels, these are:
QA06AB20 - *contact laxatives in combination*
QA06AB30 - *contact laxatives in combination with belladonna alkaloids*
QA06AD10 - *mineral salts in combination*

Otherwise combination preparations are classified in separate 5th level groups using the corresponding 50-series codes or, if not available, using the ATCvet 5th level code 99.

QA06AA Softeners, emollients

Preparations containing liquid paraffin, docusate sodium etc. are classified in this group. Ducosate potassium is classified at the same 5th level as docusate sodium. Combinations with contact laxatives are classified in QA06AB - *Contact laxatives*, except for all liquid paraffin combinations, which are assigned to QA06AA - *Softeners, emollients*.

QA06AB Contact laxatives

Agents which mainly inhibit the absorption of electrolytes and water through a specific pharmacological mechanism, e.g. bisacodyl and senna glycosides, should be classified in this group.

Combinations with osmotically acting laxatives are classified here.

Combinations with bulk producing laxatives are classified in QA06AC - *Bulk-forming laxatives*.

Combined packages comprising tablets and enemas are classified in QA06AG - *Enemas*.

Gas-producing rectal preparations and glycerol suppositories, see QA06AX - *Other drugs for constipation*.

Phenolphthalein in combination with liquid paraffin is classified in QA06AA - *Softeners, emollients*.

QA06AC Bulk-forming laxatives

Linseed and psylla seed preparations, methyl cellulose etc. are classified in this group. Lactulose is classified in QA06AD - *Osmotically active laxatives*.

QA06AD Osmotically acting laxatives

Various saline purgatives and e.g. lactulose, which is primarily considered an osmotically acting substance, are classified in this group. Magnesium hydroxide is classified as an antacid in QA02AA - *Magnesium compounds*.

Combinations with contact laxatives are classified in QA06AB - *Contact laxatives*.

Combinations of lactulose with liquid paraffin should be classified in QA06AD61.

Macrogol in combination with electrolytes is classified in QA06AD65.

QA06AG Enemas

All enemas and laxative rectal solutions are classified in this group, regardless of mode of action. Combined packages containing tablets and enemas are classified in this group.

Some 5th level codes for plain substances also include combinations, e.g.:
QA06AG10 - *docusate sodium and e.g. sorbitol or glycerol*
QA06AG11 - *sodium lauryl sulfoacetate and e.g. sodium citrate*

QA06AH Peripheral opioid receptor antagonists

QA06AX Other drugs for constipation

QA07 ANTIDIARRHEALS, INTESTINAL ANTIINFLAMMATORY/ANTIINFECTIVE AGENTS

QA07A INTESTINAL ANTIINFECTIVES

Oral antiinfectives which have no systemic effect, e.g. dihydrostreptomycin, are classified in this group.

See also:
QJ - *Antiinfectives for systemic use*
QG01- *Gynecological antiinfectives and antiseptics*
QG51- *Antiinfectives and antiseptics for intrauterine use*
QP51 - *Antiprotozoals*

QA07AA Antibiotics

Combinations of neomycin and sulfonamides are classified in QA07AA51 - *neomycin, combinations*. Combinations of neomycin and sulfadiazine indicated for treatment of diarrhoea in pre-ruminant calves are also classified here.

Combination of streptomycin and sulfonamides are classified in QA07AA54 - *streptomycin, combinations*.

Oral combinations of colistin and other antiinfectives, including substances with systemic effect are classified in QA07AA98.

Combinations of streptomycin and neomycin are classified in QA07AA99 - *antibiotics, combinations*.

QA07AB Sulfonamides

QA07AC Imidazole derivatives

QA07AX Other intestinal antiinfectives

QA07B INTESTINAL ADSORBENTS

Combinations with intestinal antiinfectives are assigned to QA07A - *Intestinal antiinfectives*.

QA07BA Charcoal preparations

Combinations with other agents are classified in QA07BA51 - *medicinal charcoal, combinations.*

QA07BB Bismuth preparations

Combinations with charcoal see QA07BA51 - *medicinal charcoal, combinations*.

QA07BC Other intestinal adsorbents

All other intestinal adsorbents should be classified in this group.

QA07C ELECTROLYTES WITH CARBOHYDRATES

QA07CQ Oral rehydration formulations for veterinary use

QA07D ANTIPROPULSIVES

QA07DA Antipropulsives

Agents which reduce gastrointestinal motility, e.g. diphenoxylate and loperamide, are classified in this group.

QA07DA01 - *diphenoxylate* - also includes combinations with atropine
QA07DA02 - *opium* - also includes combinations with belladonna and/or bismuth subgallate, albumin etc.
QA07DA52 - *morphine, combinations* includes combinations with e.g. aluminum hydroxide, belladonna alkaloids and kaolin used as antipropulsives. Morphine combinations used in the treatment of pain are classified in QN02AA51.

QA07E INTESTINAL ANTIINFLAMMATORY AGENTS

QA07EA Corticosteroids acting locally

Oral corticosteroids solely indicated for the treatment of intestinal inflammatory diseases are classified here.

QA07EB Antiallergic agents, excl. corticosteroids

QA07EC Aminosalicylic acid and similar agents

QA07F ANTIDIARRHEAL MICROORGANISMS

QA07FA Antidiarrheal microorganisms

QA07X OTHER ANTIDIARRHEALS

QA07XA Other antidiarrheals

QA08 ANTIOBESITY PREPARATIONS, EXCL. DIET PRODUCTS

QA08A ANTIOBESITY PREPARATIONS, EXCL. DIET PRODUCTS

Low-energy diets, see QV06AA.

QA08AA Centrally acting antiobesity products

Amfetamine, which is commonly used in psychiatry, is classified in QN06B - *Psychostimulants, agents used for ADHD and nootropics*.

QA08AB Peripherally acting antiobesity products

QA08AX Other antiobesity drugs

QA09 DIGESTIVES, INCL. ENZYMES

QA09A DIGESTIVES, INCL. ENZYMES

QA09AA Enzyme preparations

Only enzymes used in digestive disorders are classified in this group. Cholagogues are classified in QA05 - *Bile and liver therapy*.

See also:
QA16AB - Other alimentary tract and metabolism products; Enzymes

QB06AA - Other hematological agents; Enzymes
QD03BA - Proteolytic enzymes

QA09AB Acid preparations

QA09AC Enzyme and acid preparations, combinations

QA10 DRUGS USED IN DIABETES

QA10A INSULINS AND ANALOGUES

Insulin preparations are assigned to four different 4th level groups, according to onset and duration of action in humans, in the ATC system.

Preparations consisting of beef and pork insulin, for example, are classified as combinations (30-codes) in each 4th level group according to onset and duration of their action.

QA10AB Insulins and analogues for injection, fast-acting

QA10AC Insulins and analogues for injection, intermediate-acting

QA10AD Insulins and analogues for injection, intermediate- or long-acting combined with fast-acting

QA10AE Insulins and analogues for injection, long-acting

QA10AF Insulins and analogues for inhalation

QA10B BLOOD GLUCOSE LOWERING DRUGS, EXCL. INSULINS

QA10BA Biguanides
QA10BB Sulfonylureas
QA10BC Sulfonamides (heterocyclic)
QA10BD Combinations of oral blood glucose lowering drugs
QA10BF Alpha glucosidase inhibitors
QA10BG Thiazolidinediones
QA10BH Dipeptidyl peptidase 4 (DPP-4) inhibitors
QA10BJ Glucagon-like peptide-1 (GLP-1) analogues
QA10BK Sodium-glucose co-transporter 2 (SGLT2) inhibitors

Inhibitors of SGLT1 and SGLT2, e.g. sotagliflozin, are also classified here.

QA10BX Other blood glucose lowering drugs, excl. insulins

QA10X OTHER DRUGS USED IN DIABETES

QA10XA Aldose reductase inhibitors
QA10XX Other drugs used in diabetes

QA11 VITAMINS

Vitamin preparations whose main indication is therapeutic or prophylactic use for vitamin deficiency are classified in this group.

It may be necessary to consider whether the main indication of a preparations is as a vitamin preparation, an iron preparation, or a mineral preparation, or if the preparation should be regarded as a tonic etc. In veterinary medicine there are many combination preparations containing vitamins, minerals, trace elements and other substances. In order to avoid a complicated subdivision for combined preparations, they can be classified at the 3rd level of ATCvet.

QA11A MULTIVITAMINS, COMBINATIONS

All preparations containing vitamins in combination with minerals, trace elements or iron are classified in this group.

QA11AA Multivitamins with minerals

QA11AB Multivitamins, other combinations

QA11B MULTIVITAMINS, PLAIN

Only plain multivitamin preparations are classified in this group.

QA11BA Multivitamins, plain

QA11C VITAMIN A AND D, INCL. COMBINATIONS OF THE TWO

QA11CA Vitamin A, plain

QA11CB Vitamin A and D in combination

Cod-liver oil preparations are classified in this group.

QA11CC Vitamin D and analogues

Vitamin D and analogues may be regarded as hormones, but are classified in this group. Calcium homeostasis, see QH05.

Paricalcitol and doxercalciferol indicated for the prevention and treatment of secondary hyperparathyroidism are classified in QH05BX - *Other anti-parathyroid agents.*

Oral formulations of calcifediol, solely indicated for treatment of renal secondary hyperparathyroidism are classified in QH05BX - *Other anti-parathyroid agents*, while all other pharmaceutical formulations of calcifediol are classified in QA11CC06.

QA11D VITAMIN B_1, PLAIN AND IN COMBINATION WITH VITAMIN B_6 AND B_{12}

QA11DA Vitamin B_1, plain

QA11DB Vitamin B_1 in combination with vitamin B_6 and/or vitamin B_{12}

Combinations with vitamin B_2 are also allowed in this group.

QA11E VITAMIN B-COMPLEX, INCL. COMBINATIONS

All preparations containing B-complex in combination with minerals, trace elements or iron are classified in this group.

QA11EA Vitamin B-complex, plain

QA11EB Vitamin B-complex with vitamin C

QA11EC Vitamin B-complex with minerals

QA11ED Vitamin B-complex with anabolic steroids

QA11EX Vitamin B-complex, other combinations

QA11G ASCORBIC ACID (VITAMIN C), INCL. COMBINATIONS

All preparations containing vitamin C in combination with minerals, trace elements or iron are classified in this group.

QA11GA Ascorbic acid (vitamin C), plain

QA11GB Ascorbic acid (vitamin C), combinations

QA11H OTHER PLAIN VITAMIN PREPARATIONS

See also:
QB03B - *Vitamin B_{12} and folic acid*
QB02B - *Vitamin K and other hemostatics*

Preparations containing vitamin E in combination with selenium are classified in QA12C - *Other mineral supplements*.

QA11HA Other plain vitamin preparations

QA11J OTHER VITAMIN PRODUCTS, COMBINATIONS

All combined vitamin preparations not covered by the preceding groups are classified in this group.

Tonics are normally classified in QA13. The vitamin content of tonics should be fairly low. Some preparations that could also be considered to be tonics are classified in this group. No distinct line has been drawn between these two groups.

QA11JA Combinations of vitamins

All combinations of vitamins with no addition of other substances, not assigned to the preceding groups, should be classified in this group.

QA11JB Vitamins with minerals

QA11JC Vitamins, other combinations

Combinations containing folic acid are classified in QB03B - *Vitamin B_{12} and folic acid*, if folic acid deficiency is the main indication.

QA12 MINERAL SUPPLEMENTS

Mineral supplements used for the treatment of mineral deficiency should be classified in this group. All parenteral solutions of electrolytes are classified in QB05B or in QB05X. Iron preparations, see QB03A - *Iron preparations*.

QA12A CALCIUM

QA12AA Calcium

Plain calcium preparations, incl. bone extracts, for the treatment of hypocalcemia are classified in this group. Combinations of different calcium salts are classified using the ATCvet code QA12AA20 - *calcium* (different salts in combination).

Combinations of calcium and vitamin D are classified in QA12AX.

The combination of calcium acetate and magnesium carbonate is classified in QV03AE.

Antacids with calcium carbonate are classified in QA02AC.

See also:
QB05X - *IV solution additives*.

QA12AX Calcium, combinations with vitamin D and/or other drugs

All combined calcium preparations used in the treatment of calcium deficiency conditions and osteoporosis should be classified in this group. Many of these are combinations with magnesium and phosphorous compounds - vitamins, especially vitamin A and D.

QA12B POTASSIUM

QA12BA Potassium

Preparations used as potassium supplements and all combined potassium preparations used in the treatment of potassium deficiency conditions are classified in this group. Potassium citrate preparations indicated for e.g. treatment of renal tubular acidosis with calcium stones are classified here.

See also:
QC03 - *Diuretics*
QB05 - *Blood substitutes and perfusion solutions*

QA12C OTHER MINERAL SUPPLEMENTS

Other minerals, such as sodium, zinc, magnesium and fluoride should be classified in this group. See also QB05 - *Blood substitutes and perfusion solutions.*

QA12CA Sodium

QA12CB Zinc

QA12CC Magnesium

Preparations containing magnesium and calcium are classified in QA12AX - *Calcium, combinations with vitamin D and/or other drugs*.

Combinations with subtherapeutic amounts of vitamins are included in this group.

QA12CD Fluoride

QA12CE Selenium

Sodium selenate and vitamin E is classified in QA12CE99 - *selenium, combinations*.

See also:
QB03AE - *Iron in other combinations*

QA12CX Other mineral products

Cobalt, copper and iodine, for example, should be classified in this group.

QA13 TONICS

QA13A TONICS

Preparations used as tonics etc. should be classified in this group.

QA14 ANABOLIC AGENTS FOR SYSTEMIC USE

QA14A ANABOLIC STEROIDS

Anabolic steroids are classified on the 4th level according to their chemical structure.

Anabolic steroids used exclusively in cancer therapy, see QL - *Antineoplastic and immunomodulating agents*.

QA14AA Androstan derivatives

QA14AB Estren derivatives

QA14B OTHER ANABOLIC AGENTS

All other anabolic agents which cannot be classified in the preceding groups should be classified here.

QA15 APPETITE STIMULANTS

Preparations, plain and combinations, which are only used as appetite stimulants should be classified in this group. No subdivision is made in this group. A number of drugs with other main actions may also have appetite-stimulating properties.

Megestrol is classified in QL02AB.

QA16 OTHER ALIMENTARY TRACT AND METABOLISM PRODUCTS

QA16A OTHER ALIMENTARY TRACT AND METABOLISM PRODUCTS

All preparations acting on the alimentary tract and metabolism and which cannot be classified in the preceding groups should be classified in this group, except nutrients, which are assigned to QV06 - *General nutrients*.

QA16AA Amino acids and derivatives

Agents used in various metabolic deficiency states are classified in this group when this is considered to be the main indication.

Glutamine for treatment of sickle cell disease is classified here.

QA16AB Enzymes

QA16AX Various alimentary tract and metabolism products

QA16Q OTHER ALIMENTARY TRACT AND METABOLISM PRODUCTS FOR VETERINARY USE

QA16QA Drugs for prevention and/or treatment of acetonemia

See also:
QH02AB – *Glucocorticoids*

QB BLOOD AND BLOOD FORMING ORGANS

QB01 ANTITHROMBOTIC AGENTS

A Antithrombotic agents

QB02 ANTIHEMORRHAGICS

A Antifibrinolytics

B Vitamin K and other hemostatics

QB03 ANTIANEMIC PREPARATIONS

A Iron preparations

B Vitamin B_{12} and folic acid

X Other antianemic preparations

QB05 BLOOD SUBSTITUTES AND PERFUSION SOLUTIONS

A Blood and related products

B I.v. solutions

C Irrigating solutions

D Peritoneal dialytics

X I.v. solution additives

Z Hemodialytics and hemofiltrates

QB06 OTHER HEMATOLOGICAL AGENTS

A Other hematological agents

QB BLOOD AND BLOOD FORMING ORGANS

The group QB comprises preparations mainly affecting the blood or the blood forming organs. For example, it includes antithrombotic agents, antianemic preparations and plasma substitutes.

QB01 ANTITHROMBOTIC AGENTS
QB01A ANTITHROMBOTIC AGENTS
QB01AA Vitamin K antagonists

Vitamin K antagonists such as dicoumarol, warfarin etc. should be classified in this group.

QB01AB Heparin group

Heparin preparations should be classified in this group, including preparations for non-therapeutic use, e.g. for rinsing of indwelling vein cannulas. The different fractions of the low molecular weight heparins should be assigned separate 5th level codes.

Both human-derived and recombinant products of antithrombin III are classified in QB01AB02.

QB01AC Platelet aggregation inhibitors, excl. heparin

Beraprost for chronic kidney disease in veterinary medicine is classified in QC05XX.

QB01AD Enzymes

This group includes proenzymes and enzyme replacement therapies.

QB01AE Direct thrombin inhibitors

QB01AF Direct factor Xa inhibitors

QB01AX Other antithrombotic agents

QB02 ANTIHEMORRHAGICS
QB02A ANTIFIBRINOLYTICS
QB02AA Amino acids
QB02AB Proteinase inhibitors

QB02B VITAMIN K AND OTHER HEMOSTATICS
QB02BA Vitamin K
QB02BB Fibrinogen
QB02BC Local hemostatics

Gauze, tampons etc. impregnated with hemostatic agents should be classified in this group.

See also:
QA01AD - *Other agents for local oral treatment*
QC01CA24 - *epinephrine*

QB02BD Blood coagulation factors

QB02BX Other systemic hemostatics

Systemic hemostatics, which cannot be classified in the preceding groups, should be assigned to this group.

QB03 ANTIANEMIC PREPARATIONS

QB03A IRON PREPARATIONS

All plain iron preparations and all combination preparations for the treatment of iron deficiency should be classified in this group. Only plain preparations should be classified in the groups QB03AA, QB03AB and QB03AC.

Combinations with stabilizing agents (e.g. ascorbic acid) are allowed at each 5th level. Other combinations, see QB03AD - *Iron in combination with folic acid* and QB03AE - *Iron in other combinations*. Multivitamins and iron are classified in QA11A - *Multivitamines, combinations*.

QB03AA Iron bivalent, oral preparations

QB03AB Iron trivalent, oral preparations

QB03AC Iron, parenteral preparations

QB03AD Iron in combination with folic acid

Iron in combination with folic acid should be classified in this group.

Preparations containing additional substances are classified in QB03AE - *Iron in other combinations*.

QB03AE Iron in other combinations

QB03B VITAMIN B_{12} AND FOLIC ACID

QB03BA Vitamin B_{12} (cyanocobalamin and analogues)

QB03BB Folic acid and derivatives

Folic acid for diagnostic use is classified in QV04CX *Other diagnostic agents*.

QB03X OTHER ANTIANEMIC PREPARATIONS

QB03XA Other antianemic preparations

QB05 BLOOD SUBSTITUTES AND PERFUSION SOLUTIONS

See also:
QV07AB - *Solvents and diluting agents, incl. irrigating solutions*
QV07AC - *Blood transfusion, auxiliary products* QB05A BLOOD AND RELATED PRODUCTS

QB05AA Blood substitutes and plasma protein fractions

Polygeline is classified in QB05AA06 - *gelatin agents*.

ATCvet level QB05AA07 - *hydroxyethylstarch* includes starches that have been etherified to varying extent e.g. hepta-, hexa-, penta,- and tetrastarches.

QB05AX Other blood products

QB05B I.V. SOLUTIONS

I.v. solutions used in parenteral administration of fluids, electrolytes and nutrients should be classified in this group. For agents administered as i.v. solutions or additives, see the respective therapeutic groups, e.g. various antibiotics in QJ. I.v. solution additives (i.v. concentrates), see QB05X.

QB05BA Solutions for parenteral nutrition

QB05BB Solutions affecting the electrolyte balance

Electrolyte solutions, including combinations with e.g. carbohydrates should be classified in this group.

QB05BC Solutions producing osmotic diuresis

QB05C IRRIGATING SOLUTIONS

Preparations used for bladder irrigation and surgical irrigation, including instruments etc., are classified in this group. Combined preparations are classified using the ATCvet 5th level code 10.

QB05CA Antiinfectives

QB05CB Salt solutions

QB05CX Other irrigating solutions

QB05D PERITONEAL DIALYTICS

QB05DA Isotonic solutions

QB05DB Hypertonic solutions

QB05X I.V. SOLUTION ADDITIVES

I.v. solution additives (i.v. concentrates) are concentrated preparations containing substances used for correcting fluid and electrolyte balance and nutritional status. For drugs administered as i.v. solutions or additives, see the respective groups.

Preparations containing magnesium or calcium for the treatment of hypocalcemia or milk fever are classified in QA12AX - *Calcium, combinations with vitamin D and/or other drugs*.

QB05XA Electrolyte solutions

Plain electrolyte solutions, combinations of electrolytes, and combinations of electrolytes and other substances should be classified in this group. See also QA12 - *Mineral supplements*.

QB05XB Amino acids

QB05XC Vitamins

See also:
QA11 - *Vitamins*

QB05XX Other i.v. solution additives

All i.v. additives which cannot be classified in the preceding groups should be assigned to this group.

QB05Z HEMODIALYTICS AND HEMOFILTRATES
QB05ZA Hemodialytics, concentrates
QB05ZB Hemofiltrates

Hemofiltration solutions are classified in this group.

QB06 OTHER HEMATOLOGICAL AGENTS
QB06A OTHER HEMATOLOGICAL AGENTS

This group includes preparations for local and systemic use, and also some preparations used for dissolving clots in catheters, hemodialysis clots etc.

See also:
QV07A - *All other non-therapeutic products*
QB01AB - *Heparin group*

QB06AA Enzymes

Enzymes with fibrinolytic properties should be classified in this group. Enzymes with other well-defined therapeutic uses should be classified in the relevant groups, see e.g.:

QA09A - *Digestives, incl. enzymes*
QD03BA - *Proteolytic enzymes*

QB06AB Heme products

QB06AC Drugs used in hereditary angioedema

QB06AX Other hematological agents

QC CARDIOVASCULAR SYSTEM

QC01 CARDIAC THERAPY

- *A Cardiac glycosides*
- *B Antiarrhythmics, class I and III*
- *C Cardiac stimulants excl. cardiac glycosides*
- *D Vasodilators used in cardiac diseases*
- *E Other cardiac preparations*

QC02 ANTIHYPERTENSIVES

- *A Antiadrenergic agents, centrally acting*
- *B Antiadrenergic agents, ganglion-blocking*
- *C Antiadrenergic agents, peripherally acting*
- *D Arteriolar smooth muscle, agents acting on*
- *K Other antihypertensives*
- *L Antihypertensives and diuretics in combination*
- *N Combinations of antihypertensives in ATCvet gr. QC02*

QC03 DIURETICS

- *A Low-ceiling diuretics, thiazides*
- *B Low-ceiling diuretics, excl. thiazides*
- *C High-ceiling diuretics*
- *D Aldosterone antagonists and other potassium-sparing agents*
- *E Diuretics and potassium-sparing agents in combination*
- *X Other diuretics*

QC04 PERIPHERAL VASODILATORS

- *A Peripheral vasodilators*

QC05 VASOPROTECTIVES

- *A Agents for treatment of hemorrhoids and anal fissures for topical use*
- *B Antivaricose therapy*
- *C Capillary stabilizing agents*
- *X Other vasoprotectives*

QC07 BETA BLOCKING AGENTS

- *A Beta blocking agents*
- *B Beta blocking agents and thiazides*
- *C Beta blocking agents and other diuretics*
- *D Beta blocking agents, thiazides and other diuretics*
- *E Beta blocking agents and vasodilators*
- *F Beta blocking agents, other combinations*

QC08 CALCIUM CHANNEL BLOCKERS

C Selective calcium channel blockers with mainly vascular effects
D Selective calcium channel blockers with direct cardiac effects
E Non-selective calcium channel blockers
G Calcium channel blockers and diuretics

QC09 AGENTS ACTING ON THE RENIN-ANGIOTENSIN SYSTEM

A ACE inhibitors, plain
B ACE inhibitors, combinations
C Angiotensin II receptor blockers (ARBs), plain
D Angiotensin II receptor blockers (ARBs), combinations
X Other agents acting on the renin-angiotensin system

QC10 LIPID MODIFYING AGENTS

A Lipid modifying agents, plain
B Lipid modifying agents, combinations

QC CARDIOVASCULAR SYSTEM

This group comprises substances used for the treatment of cardiovascular conditions.

Drugs used for the treatment of hypertension are classified in QC02 - *Antihypertensives*, QC03 - *Diuretics*, QC07 - *Beta blocking agents*, QC08 - *Calcium channel blockers*, and QC09 - *Agents acting on the renin-angiotensin system*. For the classification of combination products of antihypertensives from different ATC groups, the following ranking should be used, from higher to lower precedence: QC09, QC07, QC08, and QC03.

QC01 CARDIAC THERAPY

QC01A CARDIAC GLYCOSIDES

Plain and combined preparations containing cardiac glycosides, including standardized herbal extracts, are classified in this group.

QC01AA Digitalis glycosides

Combinations with diuretics are classified here.

QC01AB Scilla glycosides

QC01AC Strophanthus glycosides

QC01AX Other cardiac glycosides

QC01B ANTIARRHYTHMICS, CLASS I AND III

Preparations used in the treatment of arrhythmias should be classified in this group. See also QC08 - *Calcium channel blockers*.

As in the ATC system, agents are listed according to the Vaughan Williams classification of antiarrhythmics. The division of class I antiarrhythmics may vary, depending on the literature used. The 3rd ed. of Avery's *Drug Treatment* (1987) and *Drugs* 31, 93 - 95, 1986 have been used as a basis for the ATC classification.

Class II antiarrhytmics are assigned to group QC07 - *Beta blocking agents*, and class IV antiarrhythmics to QC08 - *Calcium channel blockers*.

Combined preparations are classified at separate 5th levels using the corresponding 50-series codes or, if not available, using the 5th level code 99.

QC01BA Antiarrhythmics, class Ia

QC01BB Antiarrhythmics, class Ib

Lidocaine used as a local anesthetic is classified in QN01BB - *Amides*. Phenytoin, a class Ib antiarrhythmic, is classified as an antiepileptic in QN03 - *Antiepileptics*.

QC01BC Antiarrhythmics, class Ic

QC01BD Antiarrhythmics, class III

Sotalol, which has class III antiarrhythmic properties, is classified in QC07AA - *Beta blocking agents, non-selective*.

QC01BG Other antiarrhythmics, class I and III

QC01C CARDIAC STIMULANTS EXCL. CARDIAC GLYCOSIDES

Cardiac stimulants other than glycosides used for various indications, e.g. hypotension are classified in this group. Agents exerting inotropic or other cardiovascular stimulating effects for the treatment of hypotension should be classified in this group. Agents exerting both inotropic and antihypertensive effects, e.g. phosphodiesterase inhibitors, are also included in this group. Preparations containing these substances which are mainly indicated for bronchodilatation should be classified in QR03 - *Drugs for obstructive airway diseases*.

QC01CA Adrenergic and dopaminergic agents

Sympathomimetic preparations containing e.g. dobutamine, norepinephrine, epinephrine or isoprenaline, mainly intended for the treatment of hypotension, should be classified in this group. Preparations used mainly as bronchodilators, e.g. epinephrine preparations are assigned to QR03 - *Drugs for obstructive airway diseases.* Oral products of ephedrine are classified in QR03CA.

QC01CE Phosphodiesterase inhibitors

Cardiac stimulants exerting phosphodiesterase-inhibiting activity, e.g. amrinone, should be classified in this group.

Phosphodiesterase inhibitors such as theophylline, which are used in asthma therapy, are classified in QR03D - *Other systemic drugs for obstructive airway diseases.*

QC01CX Other cardiac stimulants

QC01D VASODILATORS USED IN CARDIAC DISEASES

Preparations used in ischemic heart diseases are classified in this group. See also QC02, QC03, QC04, QC07, QC08 and QC09.

Combinations with cardiac glycosides, see QC01A.

Combinations with rauwolfia alkaloids, see QC02AA.

Combinations with beta blocking agents, see QC07.

Combinations with calcium channel blockers, see QC08.

QC01DA Organic nitrates

Amyl nitrite is classified in QV03AB - *Antidotes*.

Combinations of isosorbide dinitrate and hydralazine are classified in QC01DA58.

QC01DB Quinolone vasodilators

QC01DX Other vasodilators used in cardiac diseases

Vasodilators used in cardiac diseases which cannot be classified in the preceding groups should be assigned to this group.

QC01E OTHER CARDIAC PREPARATIONS

Various preparations used in the treatment of ischemic heart diseases, which cannot be classified in any of the preceding groups should be assigned to this group.

QC01EA Prostaglandins

QC01EB Other cardiac preparations

Plain preparations used in the treatment of ischemic heart diseases, which cannot be classified in the preceding groups should be assigned to this group.

Other cardiovascular agents which cannot be classified in ATCvet group QC02-QC09 are also classified here.

Sirolimus for hypertrophic cardiomyopathy in veterinary medicine is classified in this group.

QC01EX Other cardiac combination products

Combined preparations, which cannot be classified in the preceding groups, should be assigned to this group.

QC02 ANTIHYPERTENSIVES

Preparations mainly used or intended to be used to lower blood pressure should be classified in this group.

Antihypertensives are mainly classified at 3rd levels according to the mechanism of action. See also:

QC03 - *Diuretics*
QC07 - *Beta blocking agents*
QC08 - *Calcium channel blockers*
QC09 - *Agents acting on the renin-angiotensin system*

QC02A ANTIADRENERGIC AGENTS, CENTRALLY ACTING
QC02AA Rauwolfia alkaloids
QC02AB Methyldopa
QC02AC Imidazoline receptor agonists

QC02B ANTIADRENERGIC AGENTS, GANGLION-BLOCKING
QC02BA Sulfonium derivatives
QC02BB Secondary and tertiary amines
QC02BC Bisquaternary ammonium compounds

QC02C ANTIADRENERGIC AGENTS, PERIPHERALLY ACTING

Alpha- and beta blocking agents are classified in QC07AG.

QC02CA Alpha-adrenoreceptor antagonists

QC02CC Guanidine derivatives

QC02D ARTERIOLAR SMOOTH MUSCLE, AGENTS ACTING ON

See also:
QC08 - *Calcium channel blockers*.

QC02DA Thiazide derivatives

QC02DB Hydrazinophthalazine derivatives

Combinations of isosorbide dinitrate and hydralazine are classified in QC01DA - *Organic nitrates*.

QC02DC Pyrimidine derivatives

QC02DD Nitroferricyanide derivatives

QC02DG Guanidine derivatives

QC02K OTHER ANTIHYPERTENSIVES

All antihypertensives which cannot be classified in groups QC02A-D, QC02L, QC02N, QC03 - *Diuretics*, QC07 - *Beta blocking agents*, QC08 - *Calcium channel blockers* or QC09 - *Agents acting on the renin-angiotensin system*, should be assigned to this group.

QC02KA Alkaloids, excl. rauwolfia

QC02KB Tyrosine hydroxylase inhibitors

QC02KC MAO inhibitors

QC02KD Serotonin antagonists

QC02KN Other antihypertensives

QC02KX Antihypertensives for pulmonary arterial hypertension

QC02L ANTIHYPERTENSIVES AND DIURETICS IN COMBINATION

QC02LA Rauwolfia alkaloids and diuretics in combination
QC02LB Methyldopa and diuretics in combination
QC02LC Imidazoline receptor agonists in combination with diuretics
QC02LE Alpha-adrenoreceptor antagonists and diuretics
QC02LF Guanidine derivatives and diuretics
QC02LG Hydrazinophthalazine derivatives and diuretics
QC02LK Alkaloids, excl. rauwolfia, in combination with diuretics
QC02LL MAO inhibitors and diuretics
QC02LN Serotonin antagonists and diuretics

QC02LX Other antihypertensives and diuretics

QC02N COMBINATIONS OF ANTIHYPERTENSIVES IN ATCvet gr. QC02

QC03 DIURETICS

Diuretics, plain and in combination with potassium or other agents, are classified in this group. Vasopressin antagonists are also included in this group. Potassium-sparing agents are classified in QC03D and QC03E. See also QB05BC - *Solutions producing osmotic diuresis*.

Combinations with digitalis glycosides, see QC01AA.

QC03A LOW-CEILING DIURETICS, THIAZIDES

Combination with potassium-sparing agents, see QC03EA.

QC03AA Thiazides, plain

QC03AB Thiazides and potassium in combination

The 5th levels correspond to those in QC03AA:
QC03AA01 - *bendroflumethiazide*
QC03AB01 - *bendroflumethiazide and potassium*

QC03AH Thiazides, combinations with psycholeptics and/or analgesics

QC03AX Thiazides, combinations with other drugs

QC03B LOW-CEILING DIURETICS, EXCL. THIAZIDES

All low-ceiling diuretics not classified in QC03A should be classified in this group. Combinations with potassium-sparing agents, see QC03EA.

QC03BA Sulfonamides, plain

QC03BB Sulfonamides and potassium in combination

The 5th levels correspond to those in QC03BA - *Sulfonamides, plain*, see example in QC03AB.

QC03BC Mercurial diuretics

QC03BD Xanthine derivatives

Includes e.g. theobromine. See also QR03DA - *Xanthines*.

QC03BK Sulfonamides, combinations with other drugs

QC03BX Other low-ceiling diuretics

All low-ceiling diuretics which cannot be classified in the preceding groups should be assigned to this group.

QC03C HIGH-CEILING DIURETICS

High-ceiling diuretics (loop-diuretics), e.g. furosemide, should be classified in this group.

Combinations with potassium-sparing agents, see QC03EB.

QC03CA Sulfonamides, plain

QC03CB Sulfonamides and potassium in combination

The 5th levels correspond to those in QC03CA - *Sulfonamides, plain*. See example in QC03AB.

QC03CC Aryloxyacetic acid derivatives

QC03CD Pyrazolone derivatives

QC03CX Other high-ceiling diuretics

All high-ceiling diuretics, which cannot be classified in the preceding groups, should be assigned to this group.

QC03D ALDOSTERONE ANTAGONISTS AND OTHER POTASSIUM-SPARING AGENTS
QC03DA Aldosterone antagonists
QC03DB Other potassium-sparing agents

QC03E DIURETICS AND POTASSIUM-SPARING AGENTS IN COMBINATION
QC03EA Low-ceiling diuretics and potassium-sparing agents
QC03EB High-ceiling diuretics and potassium-sparing agents

QC03X OTHER DIURETICS
QC03XA Vasopressin antagonists

QC04 PERIPHERAL VASODILATORS
QC04A PERIPHERAL VASODILATORS

Plain and combined preparations used in the treatment of cerebrovascular or peripheral circulatory disorders should be classified in this group.

Combinations with antihypertensives, see QC02 - *Antihypertensives*.

Combinations with vasodilators used in cardiac diseases, see QC01DA.

QC04AA 2-amino-1-phenylethanol derivatives

QC04AB Imidazoline derivatives

QC04AC Nicotinic acid and derivatives

QC04AD Purine derivatives

Propentofylline for veterinary use is classified in this group.

QC04AE Ergot alkaloids

QC04AF Enzymes

QC04AX Other peripheral vasodilators

Papaverine products, see QA03AD - *Papaverine and derivatives*.

QC05 VASOPROTECTIVES

Agents for antihemorrhoidal, antivaricose or capillary stabilizing use.

QC05A AGENTS FOR TREATMENT OF HEMORRHOIDS AND ANAL FISSURES FOR TOPICAL USE

QC05AA Corticosteroids

QC05AB Antibiotics

QC05AD Local anesthetics

QC05AE Muscle relaxants

Topical products containing glyceryl trinitrate or isosorbide dinitrate are classified in this group.

QC05AX Other agents for treatment of hemorrhoids and anal fissures for topical use

QC05B ANTIVARICOSE THERAPY
QC05BA Heparins or heparinoids for topical use
QC05BB Sclerosing agents for local injection
QC05BX Other sclerosing agents

QC05C CAPILLARY STABILIZING AGENTS
QC05CA Bioflavonoids
QC05CX Other capillary stabilizing agents

QC05X OTHER VASOPROTECTIVES
QC05XX Other vasoprotectives

Beraprost for chronic kidney disease in veterinary medicine is classified in this group.

QC07 BETA BLOCKING AGENTS

Agents blocking the beta receptors or with combined alpha- and beta blocking effect should be assigned to this group.

Combinations of beta blocking agents and other active ingredients are classified in the following groups:

QC07A - *Beta blocking agents*
QC07B - *Beta blocking agents and thiazides*
QC07C - *Beta blocking agents and other diuretics*
QC07D - *Beta blocking agents, thiazides and other diuretics*

QC07E - *Beta blocking agents and vasodilators*
QC07F - *Beta blocking agents, other combinations*

QC07A BETA BLOCKING AGENTS
All plain beta blocking agents are classfied in this group.

Labetalol, and carvedilol are classified in QC07AG - *Alpha- and beta blocking agents*.

Beta blocking agents in combination with ACE inhibitors are classified in QC09BX - *ACE inhibitors, other combinations*.

Beta blocking agents in combination with angiotensin II antagonists are classified in QC09DX - *Angiotensin II receptor blockers (ARBs), other combinations*.

QC07AA Beta blocking agents, non-selective

Non-selective beta blocking agents, e.g. carazolol, are classified in this group.

QC07AB Beta blocking agents, selective

Selective beta blocking agents are classified in this group. The S-enantiomer and the racemate of atenolol are assigned separate 5th level codes. Preparations containing beta blocking agents should be classified according to their main indication, e.g. clenbuterol, see QR03AC14 or QR03CC13.

QC07AG Alpha and beta blocking agents

QC07B BETA BLOCKING AGENTS AND THIAZIDES
QC07BA Beta blocking agents, non-selective, and thiazides
QC07BB Beta blocking agents, selective, and thiazides
QC07BG Alpha and beta blocking agents and thiazides

QC07C BETA BLOCKING AGENTS AND OTHER DIURETICS
QC07CA Beta blocking agents, non-selective, and other diuretics
QC07CB Beta blocking agents, selective, and other diuretics
QC07CG Alpha and beta blocking agents and other diuretics

QC07D BETA BLOCKING AGENTS, THIAZIDES AND OTHER DIURETICS
QC07DA Beta blocking agents, non-selective, thiazides and other diuretics
QC07DB Beta blocking agents, selective, thiazides and other diuretics

QC07E BETA BLOCKING AGENTS AND VASODILATORS
QC07EA Beta blocking agents, non-selective, and vasodilators
QC07EB Beta blocking agents, selective, and vasodilators

QC07F BETA BLOCKING AGENTS, OTHER COMBINATIONS
QC07FB Beta blocking agents and calcium channel blockers
QC07FX Beta blocking agents, other combinations

QC08 CALCIUM CHANNEL BLOCKERS

QC08C SELECTIVE CALCIUM CHANNEL BLOCKERS WITH MAINLY VASCULAR EFFECTS

QC08CA Dihydropyridine derivates

QC08CX Other selective calcium channel blockers with mainly vascular effects

QC08D SELECTIVE CALCIUM CHANNEL BLOCKERS WITH DIRECT CARDIAC EFFECTS

QC08DA Phenylalkylamine derivatives

QC08DB Benzothiazepine derivates

QC08E NON-SELECTIVE CALCIUM CHANNEL BLOCKERS

QC08EA Phenylalkylamine derivatives

QC08EX Other non-selective calcium channel blockers

QC08G CALCIUM CHANNEL BLOCKERS AND DIURETICS

QC08GA Calcium channel blockers and diuretics

QC09 AGENTS ACTING ON THE RENIN-ANGIOTENSIN SYSTEM

QC09A ACE INHIBITORS, PLAIN

All plain ACE inhibitors are classified in this group. No separate ATC codes are assigned for the active metabolites of the ACE inhibitors (e.g. enalaprilat, quinaprilat).

Combinations with diuretics, see QC09BA - *ACE inhibitors and diuretics*.

Combinations with calcium channel blockers, see QC09BB - *ACE inhibitors and calcium channel blockers*.

Combinations with beta blocking agents, see QC09BX - *ACE inhibitors, other combinations*.

QC09AA ACE inhibitors, plain

QC09B ACE INHIBITORS, COMBINATIONS

Combinations of ACE inhibitors, statins and acetylsalicylic acid are classified in QC10BX.

QC09BA ACE inhibitors and diuretics

QC09BB ACE inhibitors and calcium channel blockers

Combinations with statins are classified in QC10BX.

QC09BX ACE inhibitors, other combinations

Combinations with beta blocking agents are classified in this group.

Combinations of ACE inhibitors, diuretics and calcium channel blockers are also classified in this group.

QC09C ANGIOTENSIN II RECEPTOR BLOCKERS (ARBs), PLAIN

QC09CA Angiotensin II receptor blockers (ARBs), plain

QC09D ANGIOTENSIN II RECEPTOR BLOCKERS (ARBs), COMBINATIONS

Combinations with statins are classified in QC10BX.

QC09DA Angiotensin II receptor blockers (ARBs) and diuretics

QC09DB Angiotensin II receptor blockers (ARBs) and calcium channel blockers

QC09DX Angiotensin II receptor blockers (ARBs), other combinations

QC09X OTHER AGENTS ACTING ON THE RENIN-ANGIOTENSIN SYSTEM

QC09XA Renin-inhibitors

Fixed combinations of aliskiren and valsartan are classified in QC09DX.

QC10 LIPID MODIFYING AGENTS

Agents for the treatment of hyperlipidemia (or hyperlipoproteinemia) are classified in this group.

QC10A LIPID MODIFYING AGENTS, PLAIN

QC10AA HMG CoA reductase inhibitors

QC10AB Fibrates

QC10AC Bile acid sequestrants

QC10AD Nicotinic acid and derivatives

Combinations of nicotinic acid and laropiprant are classified in QC10AD52.

QC10AX Other lipid modifying agents

Icosapent ethyl is classified in QC10AX06 - *omega-3-triglycerides incl. other esters and acids**.***

QC10B LIPID MODIFYING AGENTS, COMBINATIONS

QC10BA Combinations of various lipid modifying agents

QC10BX Lipid modifying agents in combination with other drugs

This group comprises products which contain lipid modifying agents (including combinations of various lipid modifying agents) in combination with other substances.

Combinations with e.g. ACE inhibitors, angiotensin II antagonists, calcium channel blockers or diuretics are classified in this group.

QD DERMATOLOGICALS

QD01 ANTIFUNGALS FOR DERMATOLOGICAL USE

A Antifungals for topical use
B Antifungals for systemic use

QD02 EMOLLIENTS AND PROTECTIVES

A Emollients and protectives
B Protectives against UV-radiation

QD03 PREPARATIONS FOR TREATMENT OF WOUNDS AND ULCERS

A Cicatrizants
B Enzymes

QD04 ANTIPRURITICS, INCL. ANTIHISTAMINES, ANESTHETICS ETC.

A Antipruritics, incl. antihistamines, anesthetics etc.

***QD05* DRUGS FOR KERATOSEBORRHEIC DISORDERS (ATC HUMAN: ANTIPSORIATICS)**

A Drugs for keratoseborrheic disorders, topical use (ATC human: Antipsoriatics for topical use)
B Drugs for keratoseborrheic disorders, systemic use (ATC human: Antipsoriatics for systemic use)

QD06 ANTIBIOTICS AND CHEMOTHERAPEUTICS FOR DERMATOLOGICAL USE

A Antibiotics for topical use
B Chemotherapeutics for topical use
C Antibiotics and chemotherapeutics, combinations

QD07 CORTICOSTEROIDS, DERMATOLOGICAL PREPARATIONS

A Corticosteroids, plain
B Corticosteroids, combinations with antiseptics
C Corticosteroids, combinations with antibiotics
X Corticosteroids, other combinations

QD08 ANTISEPTICS AND DISINFECTANTS

A Antiseptics and disinfectants

QD09 MEDICATED DRESSINGS

A Medicated dressings

QD10 ANTI-ACNE PREPARATIONS

A Anti-acne preparations for topical use

B Anti-acne preparations for systemic use

QD11 OTHER DERMATOLOGICAL PREPARATIONS

A Other dermatological preparations

QD51 PRODUCTS FOR THE TREATMENT OF CLAWS AND HOOFS

QD DERMATOLOGICALS

This main group comprises dermatological preparations. Most of these preparations are intended for topical use, e.g. antifungals, antibiotics, corticosteroids and antiseptics for topical use.

Some dermatological preparations intended for systemic use, e.g. griseofulvin (antimycotic), are also classified in this group.

QD01 ANTIFUNGALS FOR DERMATOLOGICAL USE

Preparations for topical and systemic treatment of dermatological mycoses should be classified in this group. Preparations with a systemic antimycotic effect, see also QJ02A - *Antimycotics for systemic use*.

Preparations for local treatment of fungal infections in the mouth, see QA01AB - *Antiinfectives and antiseptics for local oral treatment*.

QD01A ANTIFUNGALS FOR TOPICAL USE

Combined preparations are assigned in this group if mycosis is the main indication.

QD01AA Antibiotics

Preparations used in the treatment of bacterial dermatological infections, see QD06A - *Antibiotics for topical use*.

QD01AC Imidazole and triazole derivatives

Shampoos containing imidazoles are classified in this group.

Combinations with corticosteroids are classified in QD01AC20. All other combinations are classified by using the 50-series e.g. miconazole and zinc.

Combinations of imidazole and triazole derivatives, gentamicin and corticosteroids are classified in QD07C - *Corticosteroids, combinations with antibiotics.*

QD01AE Other antifungals for topical use

Combined preparations containing salicylic acid used as antifungals (e.g. dusting powders) are classified in this group using the 5th level code QD01AE20 *combinations*. See also QD02AF - *Salicylic acid preparations* and QD08AH - *Quinoline derivatives* (chlorquinaldol, clioquinol etc.).

QD01B ANTIFUNGALS FOR SYSTEMIC USE

Preparations used in the systemic treatment of dermatological mycoses are classified in this group. See also QJ02A - *Antimycotics for systemic use*.

QD01BA Antifungals for systemic use

QD02 EMOLLIENTS AND PROTECTIVES

QD02A EMOLLIENTS AND PROTECTIVES

All types of emollients and protectives with no specific therapeutic effect or use, and also preparations for use in wounds which are not classified in QD09 - *Medicated dressings*, should be assigned to this group. Some similar preparations are classified in QD03A - *Cicatrizants, e.g.* cod-liver oil ointments.

QD02AA Silicone products

QD02AB Zinc products

QD02AC Soft paraffin and fat products

Some similar preparations with a higher water content (creams) are classified in QD02AX - *Other emollients and protectives*. Soft paraffin dressings, see QD09AX.

QD02AD Liquid plasters

Liquid plasters are classified in this group whereas non-medicated adhesive plasters, surgical tapes etc. are classified in QV07AA.

QD02AE Carbamide products

QD02AF Salicylic acid preparations

Products containing salicylic acid used for the treatment of mycosis are classified in QD01AE - *Other antifungals for topical use*.

Salicylic acid in combination with corticosteroids, see QD07X.

Topical products for joint and muscular pain containing combinations with salicylic acid are classified in QM02AC.

QD02AX Other emollients and protectives

Soft paraffin and fat products with a high water content (creams) are classified in this group. See also QD02AC - *Soft paraffin and fat products*.

QD02B PROTECTIVES AGAINST UV-RADIATION

QD02BA Protectives against UV-radiation for topical use

QD02BB Protectives against UV-radiation for systemic use

QD03 PREPARATIONS FOR TREATMENT OF WOUNDS AND ULCERS

Topical preparations used in the treatment of wounds and ulcers are classified in this group. When preparations in this group are to be classified, alternative groups should be considered, e.g.:

QD02A - *Emollients and protectives*
QD06 - *Antibiotics and chemotherapeutics for dermatological use*
QD08 - *Antiseptics and disinfectants*
QD09 - *Medicated dressings*

QD03A CICATRIZANTS

Topical vitamin preparations etc. are assigned to this group if they cannot be classified in other groups.

QD03AA Cod-liver oil ointments

Includes cod-liver (vitamin A) ointments in combination with chlorhexidine.

QD03AX Other cicatrizants

Includes e.g. dextranomer powders with or without antiseptics. See also QD08AG - *Iodine products* and QD09A - *Medicated dressings*.

Topical products containing glyceryl trinitrate or isosorbide dinitrate used for treatment of anal fissures are classified in QC05AE.

QD03B ENZYMES

Proteolytic enzymes for topical treatment of ulcers are classified in this group.

QD03BA Proteolytic enzymes

QD04 ANTIPRURITICS, INCL. ANTIHISTAMINES, ANESTHETICS ETC.

QD04A ANTIPRURITICS, INCL. ANTIHISTAMINES, ANESTHETICS ETC.

Antipruritics, anesthetics etc. for topical use in the treatment of pruritus, minor burns and insect stings are classified in this group.

See also:
QD06B - *Chemoterapeutics for topical use*
QD07 - *Corticosteroids, dermatological preparations*

QD04AA Antihistamines for topical use

At each 5th level, antiseptics, siccants etc. may occur in combination with the antihistamines. Combinations with corticosteroids, see QD07 - *Corticosteroids, dermatological preparations*.

Combinations with anesthetics are classified in QD04AB.

QD04AB Anesthetics for topical use

At each 5th plain level, antiseptics, siccants etc. may occur in combination with the anesthetics. Combinations with corticosteroids, see QD07 - *Corticosteroids, dermatological preparations*. See also QC05A - *Agents for treatment of hermorrhoids and anal fissures for topical use* and QN01B - *Anesthetics, local*.

QD04AX Other antipruritics

Ointments, creams, liniments etc. containing e.g. camphora, menthol and calamine are classified in this group. When preparations in this group are to be classified, alternative groups should be considered, e.g.:

QD02 - *Emollients and protectives*
QD08 - *Antiseptics and disinfectants*

QM02 - *Topical products for joint and muscular pain*

Nalfurafine and difelikefalin indicated for pruritus in chronic kidney disease are classified in QV03AX - *Other therapeutic products*.

QD05 DRUGS FOR KERATOSEBORRHEIC DISORDERS (ATC HUMAN: ANTIPSORIATICS)

QD05A DRUGS FOR KERATOSEBORRHEIC DISORDERS, TOPICAL USE (ATC HUMAN: ANTIPSORIATICS FOR TOPICAL USE)

All corticosteroids for topical use are classified in QD07 - *Corticosteroids, dermatological preparations*.

QD05AA Tars

All tar preparations for dermatological use are classified in this group, except for combinations with corticosteroids.

QD05AC Antracen derivatives

QD05AD Psoralens for topical use

QD05AX Other drugs for keratoseborrheic disorders for topical use (ATC human: Other antipsoriatics for topical use)

QD05B DRUGS FOR KERATOSEBORRHEIC DISORDERS, SYSTEMIC USE (ATC HUMAN: ANTIPSORIATICS FOR SYSTEMIC USE)

QD05BA Psoralens for systemic use

QD05BB Retinoids for treatment of psoriasis

QD05BX Other drugs for keratoseborrheic disorders for systemic use (ATC human: Other antipsoriatics for systemic use)

QD06 ANTIBIOTICS AND CHEMOTHERAPEUTICS FOR DERMATOLOGICAL USE

Preparations for topical treatment of skin infections etc. are classified in this group.

Antimicrobial chemotherapeutics are classified here, while *antineoplastic* chemotherapeutics are classified in QL01.

QD06A ANTIBIOTICS FOR TOPICAL USE

See also:
QD01A - *Antifungals for topical use*
QD06C - *Antibiotics and chemotherapeutics, combinations*
QD07C - *Corticosteroids, combinations with antibiotics*

QD06AA Tetracycline and derivatives

QD06AX Other antibiotics for topical use

Combined preparations which contain neomycin and other antibiotics (e.g. bacitracin) are classified in QD06AX04 - *neomycin*. Combinations with local anesthetics are also included in this code.

Combined preparations containing bacitracin and chlorhexidine or polymyxin B are classified in QD06AX05 - *bacitracin.*

Topical formulations of clindamycin for veterinary use are classified in QD10AF01.

QD06B CHEMOTHERAPEUTICS FOR TOPICAL USE

This group includes antimicrobial chemotherapeutics for dermatological use, except for:
QD06C - *Antibiotics and chemotherapeutics, combinations*
QD07C - *Corticosteroids, combinations with antibiotics*

Antineoplastic chemotherapeutics are classified in QL01 - *Antineoplastic agents*.

QD06BA Sulfonamides

Formosulfathiazole for topical use is classified in this group.

QD06BB Antivirals

Podophyllin preparations are classified in the 5th level group for podophyllotoxin.

QD06BX Other chemotherapeutics

Chemotherapeutics used in different skin disorders which cannot be classified in the preceding groups should be assigned to this group.

Some agents used in the treatment of actinic keratosis are also classified here. Other agents used in this indication are classified in QD06BB - *Antivirals*, QD11AX - *Other dermatologicals*, QL01BC - *Pyrimidine analogues* and QL01XD - *Sensitizers in photo-/radiotherapy*.

QD06C ANTIBIOTICS AND CHEMOTERAPEUTICS, COMBINATIONS

QD07 CORTICOSTEROIDS, DERMATOLOGICAL PREPARATIONS

As a main rule, all topical corticosteroid preparations should be classified in this group. There are, however, a few exceptions:

Corticosteroids for local oral treatment, see QA01AC.

Corticosteroids in combination with antifungals are classified in QD01A.

Corticosteroids for ophthalmological or otological use, see QS - *Sensory organs*.

QD07A CORTICOSTEROIDS, PLAIN

The group is subdivided according to the clinical potency of the steroids as such. Additional agents meant to enhance the penetration and increase the potency of the preparation do not influence the classification, nor does the strength of the preparations or the vehicle.

Combined preparations are classified in QD07B - *Corticosteroids, combination with antiseptics*, QD07C - *Corticosteroids, combinations with antibiotics* and QD07X - *Corticosteroids, other combinations*.

QD07AA Corticosteroids, weak (group I)

QD07AB Corticosteroids, moderately potent (group II)

QD07AC Corticosteroids, potent (group III)

QD07AD Corticosteroids, very potent (group IV)

QD07B CORTICOSTEROIDS, COMBINATIONS WITH ANTISEPTICS

Combined corticosteroid/antiseptic preparations for dermatological use are classified in this group. The group is subdivided according to clinical potency, see QD07A. Exceptions, see QD07. At each 5th level various antiseptics may occur.

Corticosteroids, antiseptics and salicylic acid in combination are classified in QD07X - *Corticosteroids, other combinations*.

QD07BA Corticosteroids, weak, combinations with antiseptics

QD07BB Corticosteroids, moderately potent, combinations with antiseptics

QD07BC Corticosteroids, potent, combinations with antiseptics

QD07BD Corticosteroids, very potent, combinations with antiseptics

QD07C CORTICOSTEROIDS, COMBINATIONS WITH ANTIBIOTICS

Combined corticosteroid/antibiotic preparations for dermatological use should be classified in this group.

The group is subdivided according to clinical potency, see QD07A. For exceptions, see QD07.

At each 5th level various antibiotics may occur.

Combinations of corticosteroids, gentamicin and imidazole and triazole derivatives are classified here. Combinations of corticosteroids and imidazole and triazole derivatives are classified in QD01AC - *Imidazole and triazole derivatives*.

QD07CA Corticosteroids, weak, combinations with antibiotics

QD07CB Corticosteroids, moderately potent, combinations with antibiotics

QD07CC Corticosteroids, potent, combinations with antibiotics

Combinations of beclomethasone, gentamicin and clotrimazole are classified here.

QD07CD Corticosteroids, very potent, combinations with antibiotics

QD07X CORTICOSTEROIDS, OTHER COMBINATIONS

Most other combined corticosteroid preparations for dermatological use, e.g. combinations with coal tar, carbamide and salicylic acid, should be classified in this group. Salicylic acid is regarded as a keratolytic agent. Preparations with salicylic acid and antiseptics are classified in this group, as salicylic acid is regarded as being more important in relation to the therapeutic use of these preparations (seborrhea).

The group is subdivided according to clinical potency, see QD07A. For exceptions, see QD07.

At each 5th level various combinations may occur.

Corticosteroids in combination with antifungals are classified in QD01A.

QD07XA Corticosteroids, weak, other combinations

QD07XB Corticosteroids, moderately potent, other combinations

QD07XC Corticosteroids, potent, other combinations

QD07XD Corticosteroids, very potent, other combinations

QD08 ANTISEPTICS AND DISINFECTANTS

QD08A ANTISEPTICS AND DISINFECTANTS

This group comprises all dermatological antiinfective preparations which are not classified in any of the following groups:

QD01 - *Antifungals for dermatological use*
QD03A - *Cicatrizants*
QD06 - *Antibiotics and chemotherapeutics for dermatological use*
QD07B - *Corticosteroids, combinations with antiseptics*
QD07X - *Corticosteroids, other combinations*
QD09A - *Medicated dressings*
QD11AC - *Medicated shampoos*
QP53A - *Ectoparasiticides for topical use, incl. insecticides*

Antiviral agents, see QD06BB.

Products for teats and udder are classified in QG52.

The group is subdivided according to chemical structure.

At each 5th plain level combinations with alcohols are allowed.

QD08AA Acridine derivatives

QD08AB Aluminium agents

Combinations with quartenary ammonium compounds are classified in QD08AJ - *Quaternary ammonium compounds*.

QD08AC Biguanides and amidines

QD08AD Boric acid products

Weak boric acid vaseline is classified in QD02AX - *Other emollients and protectives*.

QD08AE Phenol and derivatives

Each 5th level also allows combinations with alcohol.

QD08AF Nitrofuran derivatives

QD08AG Iodine products

See also QD03AX and QD09AA. Cadexomer iodine is classified in QD03AX.

Medicated dressings containing iodine are classified in QD09AA.

QD08AH Quinoline derivatives

Chloroquinaldol and clioquinol are classified in this group and not in QD01 - *Antifungals for dermatological use*.

QD08AJ Quaternary ammonium compounds

Combinations with aluminium agents are classified here.

QD08AK Mercurial products

Combined preparations which also contain silver compounds are classified in this group.

QD08AL Silver compounds

Combined preparations which also contain mercury compounds, see QD08AK - *Mercurial products*.

QD08AX Other antiseptics and disinfectants

Hydrogenperoxide ≥ 40% solutions used in the treatment of seborrheic keratosis or warts are classified in QD11AX.

QD09 MEDICATED DRESSINGS

QD09A MEDICATED DRESSINGS

Medicated dressings, ointment dressings etc. are classified in this group. Liquid wound protectives are classified in QD02AD - *Liquid plasters*. Local hemostatics, e.g. gauze, tampons etc. are classified in QB02BC - *Local hemostatics*.

QD09AA Medicated dressings with antiinfectives

See also QD03AX and QD08AG.

QD09AB Zinc bandages

Zinc bandages with or without supplements are classified in this group.

QD09AX Soft paraffin dressings

Dressings with antiinfectives, see QD09AA.

Dressings with scarlet red are classified in this group.

QD10 ANTI-ACNE PREPARATIONS

QD10A ANTI-ACNE PREPARATIONS FOR TOPICAL USE

QD10AA Corticosteroids, combinations for treatment of acne

QD10AB Preparations containing sulfur

QD10AD Retinoids for topical use in acne

All retinoids for topical use are classified in QD10AD, including combinations with antibacterials.

QD10AE Peroxides

QD10AF Antiinfectives for treatment of acne

QD10AX Other anti-acne preparations for topical use

QD10B ANTI-ACNE PREPARATIONS FOR SYSTEMIC USE

QD10BA Retinoids for treatment of acne

QD10BX Other anti-acne preparations for systemic use

QD11 OTHER DERMATOLOGICAL PREPARATIONS

QD11A OTHER DERMATOLOGICAL PREPARATIONS

Various dermatological preparations which cannot be classified in the preceding groups should be assigned to this group.

QD11AA Antihidrotics

QD11AC Medicated shampoos

QD11AE Androgens for topical use

QD11AF Wart and anti-corn preparations

Hydrogenperoxide ≥40% solutions used in the treatment of seborrheic keratosis or warts are classified in QD11AX.

QD11AH Agents for dermatitis, excluding corticosteroids

This group includes agents mainly used for atopic dermatitis or eczema.

Corticosteroides, see QD07.

QD11AX Other dermatologicals

Hydrogenperoxide ≥ 40% solutions used in the treatment of seborrheic keratosis or warts are classified here, while low strength solutions are classified in QD08AX.

QD51 PRODUCTS FOR THE TREATMENT OF CLAWS AND HOOFS

QG GENITO URINARY SYSTEM AND SEX HORMONES

QG01 GYNECOLOGICAL ANTIINFECTIVES AND ANTISEPTICS

A Antiinfectives and antiseptics, excl. combinations with corticosteroids
B Antiinfectives/antiseptics in combination with corticosteroids

QG02 OTHER GYNECOLOGICALS

A Uterotonics
B Contraceptives for topical use
C Other gynecologicals

QG03 SEX HORMONES AND MODULATORS OF THE GENITAL SYSTEM

A Hormonal contraceptives for systemic use
B Androgens
C Estrogens
D Progestogens
E Androgens and female sex hormones in combination
F Progestogens and estrogens in combination
G Gonadotrophins and other ovulation stimulants
H Antiandrogens
X Other sex hormones and modulators of the genital system

QG04 UROLOGICALS

B Urologicals
C Drugs used in benign prostatic hypertrophy

QG51 ANTIINFECTIVES AND ANTISEPTICS FOR INTRAUTERINE USE

A Antiinfectives and antiseptics for intrauterine use

QG52 PRODUCTS FOR TEATS AND UDDER

A Disinfectants
B Teat canal devices
C Emollients
X Various products for teats and udder

QG GENITO URINARY SYSTEM AND SEX HORMONES

The group QG comprises gynecological antiinfectives and antiseptics for local, intrauterine and intravaginal use. Urologicals for systemic use specifically used in urinary tract infections should be classified in QJ - *Antiinfectives for systemic use*.

Substances such as the ergot alkaloids, which are used to stimulate uterine contractions, are found in this group along with prostaglandins and analogues. However, plain preparations of oxytocin and derivatives should be classified in QH01B - *Posterior pituitary lobe hormones*. Other substances, e.g. the prolactine inhibitors bromocriptine and cabergoline, and antiinflammatory products for vaginal administration, are classified in QG.

Hormonal contraceptives for systemic and local use are found here, as are similar hormonal products used for estrus synchronization. Substances used to stimulate ovulation, e.g. gonadotrophin-releasing hormone (GnRH) and analogues, are classified in QG. However, GnRH and analogues are to be classified in QH01CA when the purpuse is not to stimulate ovulation.

Finally, QG also includes two groups specific to the ATCvet system, QG51 - *Antiinfectives and antiseptics for intrauterine use* and QG52 - *Products for teats and udder*.

QG01 GYNECOLOGICAL ANTIINFECTIVES AND ANTISEPTICS

Gynecological antiinfectives and antiseptics, mainly for local and intravaginal use, should be classified in this group.

See also:
QD06 - *Antibiotics and chemotherapeutics for dermatological use*
QG51 - *Antiinfectives and antiseptics for intrauterine use*
QG52A - *Disinfectants*
QJ - *Antiinfectives for systemic use*
QP51AA - *Nitroimidazole derivatives*

QG01A ANTIINFECTIVES AND ANTISEPTICS, EXCL. COMBINATIONS WITH CORTICOSTEROIDS

Preparations mainly for local use, including intravaginal use, are classified in this group. Antivirals for topical use, including gynecological use, such as podophyllotoxin, are classified in QD06 - *Antibiotics and chemotherapeutics for dermatological use.*

Combinations with corticosteroids should be classified in QG01B - *Antiinfectives/antiseptics in combination with corticosteroids*.

QG01AA Antibiotics

Combinations with sulfonamides are classified in QG01AE - *Sulfonamides*.

Nystatin in combination with nifuratel is classified in QG01AA51.

QG01AB Arsenic compounds

QG01AC Quinoline derivatives

QG01AD Organic acids

QG01AE Sulfonamides

Combinations of different sulfonamides are classified using the ATCvet 5th level code QG01AE10.

QG01AF Imidazole derivatives

Imidazole derivatives in formulations for vaginal administration are classified in this group.

Parenteral formulations are classified in QJ01XD - *Imidazole derivatives*, as they are mainly used in anaerobic infections. Imidazole derivatives in oral and rectal dosage forms are classified in QP51A - *Agents against protozoal diseases*.

Metronidazole for topical use in skin disorders is classified in QD06BX - *Other chemotherapeutics*. Other imidazole derivatives for topical use in skin disorders are classified in QD01A - *Antifungals for topical use*.

The combination of econazole and benzydamine is classified in QG01AF55.

QG01AG Triazole derivatives

QG01AX Other antiinfectives and antiseptics

Nifuratel in combination with nystatin is classified in QG01AA51.

QG01B ANTIINFECTIVES/ANTISEPTICS IN COMBINATION WITH CORTICOSTEROIDS

Antiinfectives/antiseptics for gynecological use which contain corticosteroids are classified in this group. See also QG51AG - *Antiinfectives and/or antiseptics, combinations for intrauterine use.*

QG01BA Antibiotics and corticosteroids

QG01BC Quinoline derivatives and corticosteroids

QG01BD Antiseptics and corticosteroids

QG01BE Sulfonamides and corticosteroids

QG01BF Imidazole derivatives and corticosteroids

QG02 OTHER GYNECOLOGICALS

QG02A UTEROTONICS

Plain preparations of oxytocin and analogues are classified in QH01B - *Posterior pituitary lobe hormones*.

QG02AB Ergot alkaloids

Ergot alkaloids, e.g. methylergometrine, used to stimulate uterine contractions should be classified in this group. Other ergot alkaloids are classified in QC04A - *Peripheral vasodilators*.

Combinations of ergometrine and estradiol are classified here.

QG02AC Ergot alkaloids and oxytocin incl. analogues, in combination

QG02AD Prostaglandins

QG02AX Other uterotonics

Uterotonics, which cannot be classified in the preceding groups, should be assigned to this group.

QG02B CONTRACEPTIVES FOR TOPICAL USE

QG02BA Intrauterine contraceptives

QG02BB Intravaginal contraceptives

QG02C OTHER GYNECOLOGICALS

QG02CA Sympathomimetics, labour repressants

Sympathomimetics used to repress labour, e.g. vetrabutine, are classified in this group. Adrenergic substances which are mainly used as peripheral vasodilators, e.g. isoxsuprine, are classified in QC04A - *Peripheral vasodilators*. Adrenergic drugs which are mainly used in the treatment of asthma are classified in QR03C - *Adrenergics for systemic use*.

Fenoterol and clenbuterol infusions only intended for repressing preterm labour are classified in this group, while other systemic formulas of these substances are classified in QR03C.

QG02CB Prolactine inhibitors

QG02CC Antiinflammatory products for vaginal administration

This group comprises e.g. non-steroidal antiinflammatory drugs for vaginal administration.

Combinations of econazole and benzydamine are classified in QG01AF55 *econazole, combinations*.

QG02CX Other gynecologicals

QG03 SEX HORMONES AND MODULATORS OF THE GENITAL SYSTEM

Other hormones, see QH - *Systemic hormonal preparations, excl. sex hormones and insulins*.

QG03A HORMONAL CONTRACEPTIVES FOR SYSTEMIC USE

Hormonal preparations, which are used as contraceptives, should be classified here.

Similar hormonal preparations which are used for estrus synchronization are classified in QG03F - *Progestogens and estrogens in combination*.

QG03AA Progestogens and estrogens, fixed combinations

QG03AB Progestogens and estrogens, sequential preparations

QG03AC Progestogens

Progestogens used as hormonal contraceptives are classified in this group.

Progestogens for other gynecological uses are classified in QG03D.

QG03AD Emergency contraceptives

QG03B ANDROGENS

Anabolic steroids are classified in QA14A - *Anabolic steroids*. Male sex hormones should be classified in this group. Combined preparations are included in this group, except for combinations with female sex hormones, which should be classified in QG03E - *Androgens and female sex hormones in combination*.

The group is subdivided according to chemical structure.

QG03BA 3-oxoandrosten (4) derivatives

QG03BB 5-androstanon (3) derivatives

QG03C ESTROGENS

Plain estrogens and combinations should be classified in this group, except for combinations with:

Androgens, which are classified in QG03E.
Progestogens, which are classified in QG03F.
Gonadotropins, which are classified in QG03G.
Hormonal contraceptives, which are classified in QG03A.
Estrogens used only in neoplastic diseases, see QL02AA.

QG03CA Natural and semisynthetic estrogens, plain

Preparations which contain one or more natural or semisynthetic estrogen should be classified in this group. Estradiol/polyestradiol are classified in the same 5th level group. The same applies to estriol/polyestriol. Combinations with other substances are classified in QG03CC.

Combinations of estradiol and ergometrine are classified in QG02AB53 - *ergometrine, combinations.*

Estropipate is classified in QG03CA07 - *estrone*.

QG03CB Synthetic estrogens, plain

Preparations, which contain synthetic estrogens only, should be classified in this group.

Combinations with other substances, see QG03CC.

QG03CC Estrogens, combinations with other drugs

Preparations, which contain combinations of natural, semisynthetic or synthetic estrogens and other substances, are classified in this group.

QG03CX Other estrogens

Tibolone is classified in this group even though the chemical structure is different from the other estrogens.

QG03D PROGESTOGENS

Progestogens and combinations are classified in this group, except for combinations with:

Androgens, which are classified in QG03E.
Estrogens, which are classified in QG03F.
Gonadotropins, which are classified in QG03G.
Hormonal contraceptives, which are classified in QG03A.
Progestogens used only in neoplastic diseases, see QL02AB.

The group is subdivided according to chemical structure.

QG03DA Pregnen (4) derivatives

QG03DB Pregnadien derivatives

QG03DC Estren derivatives

Tibolone is classified in QG03CX.

QG03DX Other progestogens

Delmadinone is classified in this group.

QG03E ANDROGENS AND FEMALE SEX HORMONES IN COMBINATION

Preparations containing androgen and estrogen and/or progestogen should be classified in this group. They are classified at the 5th level according to the androgen concerned.

QG03EA Androgens and estrogens

QG03EB Androgen, progestogen and estrogen in combination

QG03EK Androgens and female sex hormones in combination with other drugs

QG03F PROGESTOGENS AND ESTROGENS IN COMBINATION

Combined preparations used for the synchronization of estrus should be classified in this group. Hormonal contraceptives, see QG03A - *Hormonal contraceptives for systemic use.*

QG03FA Progestogens and estrogens, fixed combinations

Preparations which contain combinations of progestogens and estrogens should be classified in this group. They are classified at the 5th level according to the progestogen they contain. In each 5th level group various estrogens may occur.

QG03FB Progestogens and estrogens, sequential preparations

QG03G GONADOTROPINS AND OTHER OVULATION STIMULANTS

Gonadotropin releasing hormone (GnRH) and analogues, see QH01CA.

Gonadotropin releasing hormone (GnRH) analogues, used specifically in the treatment of neoplastic diseases, see QL02AE.

Gonadotropins, plain and in combination with estrogens and progestogens, should be classified in this group.

QG03GA Gonadotropins

This group comprises both naturally occurring gonad-stimulating hormones and synthetic ovulation stimulants.

G03GA02 comprises products of human origin (e.g. menotrophin) while G03GA30 comprises combinations of recombinant hormones (e.g. follitropin alfa and lutropin alfa).

Human gonadotrophin is classified in QG03GA01 *Chorionic gonadotrophin*, while equine gonadotrophin, formerly known as pregnant mare serum gonadotropin is classified in QG03GA03 *Serum gonadotrophin.*

QG03GB Ovulation stimulants, synthetic

QG03H ANTIANDROGENS

QG03HA Antiandrogens, plain

Finasteride used for treatment of benign prostatic hypertrophy is classified in QG04CB.

QG03HB Antiandrogens and estrogens

This group comprises all combinations of cyproterone and estrogen regardless of indication.

QG03X OTHER SEX HORMONES AND MODULATORS OF THE GENITAL SYSTEM

Substances modifying the genital functions, which cannot be assigned to any of the preceding groups, should be classified in this group.

QG03XA Antigonadotropins and similar agents

This group includes agents that exerts their effect either by pharmacological or by immunological action.

QG03XB Progesterone receptor modulators

QG03XC Selective estrogen receptor modulators

QG03XX Other sex hormones and modulators of the genital system

QG04 UROLOGICALS

Antiseptic and antiinfective preparations for systemic use specifically used in urinary tract infections, see group QJ. General antiinfectives for systemic use are classified in group QJ - *Antiinfectives for systemic use*. Gynecological antiinfectives and antiseptics, see QG01.

QG04B UROLOGICALS

Urological preparations other than antiseptics and antiinfectives should be classified in this group.

QG04BA Acidifiers

QG04BC Urinary concrement solvents

Plain potassium citrate preparations indicated for e.g. treatment of renal tubular acidosis with calcium stones are classified in QA12BA - *Potassium* (QA12 - *Mineral supplements*).

QG04BD Drugs for urinary frequency and incontinence

Antispasmodics specifically used in the urogenital tract are classified in this group. Butylscopolamine indicated for urological spasmodic disorders is classified in QA03BB. Gastrointestinal antispasmodics, see QA03 - *Drugs for functional gastrointestinal disorders.*

QG04BE Drugs used in erectile dysfunction

QG04BQ Urinary alkalizers

Urinary alkalizers specifically used in veterinary medicine are classified in this group.

QG04BX Other urologicals

Urologicals which cannot be classified in the preceding groups, should be assigned to this group.

QG04C DRUGS USED IN BENIGN PROSTATIC HYPERTROPHY

QG04CA Alpha-adrenoreceptor antagonists

QG04CB Testosterone-5-alpha reductase inhibitors

Combinations/combination packages with alpha-adrenoreceptor antagonists are classified in QG04CA.

QG04CX Other drugs used in benign prostatic hypertrophy

QG51 ANTIINFECTIVES AND ANTISEPTICS FOR INTRAUTERINE USE

Antiinfectives and antiseptics for intrauterine use should be classified in this group. Gynecological antiinfectives and antiseptics for intravaginal use are classified in QG01.

QG51A ANTIINFECTIVES AND ANTISEPTICS FOR INTRAUTERINE USE

Combined products should be classified in QG51AG. Antivirals for topical use, including gynecological use, such as podophyllotoxin, are classified in QD06 - *Antibiotics and chemotherapeutics for dermatological use*.

QG51AA Antibacterials

QG51AD Antiseptics

QG51AG Antiinfectives and/or antiseptics, combinations for intrauterine use

All combinations with antiinfectives and/or antiseptics for intrauterine use are classified in this group.

QG52 PRODUCTS FOR TEATS AND UDDER

Preparations, irrespective of whether they are medical preparations or not, are classified in QG52.

QG52A DISINFECTANTS

QG52B TEAT CANAL DEVICES

Mechanical devices are classified here.

QG52C EMOLLIENTS

QG52X VARIOUS PRODUCTS FOR TEATS AND UDDER

Bismuth subnitrate, intramammary suspension, is classified here.

QH SYSTEMIC HORMONAL PREPARATIONS, EXCL. SEX HORMONES AND INSULINS

QH01 PITUITARY AND HYPOTHALAMIC HORMONES AND ANALOGUES

- *A Anterior pituitary lobe hormones and analogues*
- *B Posterior pituitary lobe hormones*
- *C Hypothalamic hormones*

QH02 CORTICOSTEROIDS FOR SYSTEMIC USE

- *A Corticosteroids for systemic use, plain*
- *B Corticosteroids for systemic use, combinations*
- *C Antiadrenal preparations*

QH03 THYROID THERAPY

- *A Thyroid preparations*
- *B Antithyroid preparations*
- *C Iodine therapy*

QH04 PANCREATIC HORMONES

- *A Glycogenolytic hormones*

QH05 CALCIUM HOMEOSTASIS

- *A Parathyroid hormones and analoques*
- *B Anti-parathyroid agents*

QH SYSTEMIC HORMONAL PREPARATIONS, EXCL. SEX HORMONES AND INSULINS

The group QH comprises hormonal preparations for systemic use, excluding sex hormones and insulins. Sex hormones are classified in QG - *Genito urinary system and sex hormones*. Insulins are classified i QA10 - *Drugs used in diabetes*. Note that there are hormonal preparations for systemic use that should be classified in other groups. For example, plain preparations of oxytocin and derivatives are classified in this group, but when combined with ergot alkaloids they are assigned to QG - *Genito urinary system and sex hormones*.

Gonadotrophin-releasing hormone (GnRH) and analogues are classified in this group, but they are assigned to QG when the aim is to stimulate ovulation, or to the group QL - *Antineoplastic and immunomodulating agents* when the product is used for neoplastic diseases.

Corticosteroids for systemic use (including preparations for local injection) are classified in this group, with the exception of antiinflammatory agents in combination with corticosteroids, which should be classified in QM01BA. Preparations used in thyroid therapy, as well as iodine products for systemic use, are found in QH. Pancreatic hormones e.g. glucagon, are found here, but not the insulins, which are classified in QA10A - *Insulins and analogues*. Hormonal preparations acting on the calcium homeostasis are also classified here.

Hormonal preparations for systemic use should be classified in this group, except for:

QA10A - *Insulins and analogues*
QA14 - *Anabolic agents for systemic use*
QC01C - *Cardiac stimulants excl. cardiac glycosides*
QG03 - *Sex hormones and modulators of the genital system*
QL02 - *Endocrine therapy*
QR03C - *Adrenergics for systemic use*

QH01 PITUITARY AND HYPOTHALAMIC HORMONES AND ANALOGUES

QH01A ANTERIOR PITUITARY LOBE HORMONES AND ANALOGUES

Anterior pituitary lobe hormones, e.g. extracts, purified natural hormones and synthetic analogues, should be classified in this group.

Somatropin antagonists are classified in QH01AX.

QH01AA ACTH

ACTH and synthetic analogues should be classified in this group.

QH01AB Thyrotrophin

QH01AC Somatropin and somatropin agonists

QH01AX Other anterior pituitary lobe hormones and analogues

Somatropin antagonists are classified here.

Capromorelin indicated for body weight gain is classified in QH01AX.

QH01B POSTERIOR PITUITARY LOBE HORMONES

Posterior pituitary lobe hormones, e.g. extracts, purified natural hormones and synthetic analogues, should be classified in this group.

QH01BA Vasopressin and analogues

QH01BB Oxytocin and analogues

Oxytocin and derivatives in combination with ergot alkaloids are classified in QG02A - *Uterotonics*.

QH01C HYPOTHALAMIC HORMONES

Hypothalamic hormones, e.g. extracts, purified natural hormones and synthetic analogues, should be classified in this group. See also QV04CD - *Tests for pituitary function.*

QH01CA Gonadotropin-releasing hormones

Gonadorelin used as a diagnostic agent is classified in QV04CM - *Tests for fertility disturbances.*

In the ATCvet system, the proper classification of buserelin is here.

QH01CB Somatostatin and analogues

QH01CC Anti-gonadotropin-releasing hormones

QH02 CORTICOSTEROIDS FOR SYSTEMIC USE

As a main rule, systemic corticosteroids should be classified in this group. There is, however, one exception: QM01BA – *Antiinflammatory/antirheumatic agents in combination with corticosteroids.* Anticorticosteroids are also classified in this group, see QH02CA.

Corticosteroids for local oral treatment, see QA01AC.

Oral corticosteroids solely indicated for the treatment of intestinal inflammatory diseases are classified in QA07E - *Intestinal antiinflammatory agents*.

Corticosteroids for topical use, see QD07.

Corticosteroids in combination with antiinfectives/antiseptics for local treatment of gynecological infections, see QG01B and for intrauterine infections, see QG51AG.

Corticosteroids for inhalation, see QR03BA.

Corticosteroids, eye/ear products, see QS.

QH02A CORTICOSTEROIDS FOR SYSTEMIC USE, PLAIN

Only plain preparations are classified in this group. The group also includes corticosteroid preparations for local injection.

QH02AA Mineralocorticoids

QH02AB Glucocorticoids

QH02B CORTICOSTEROIDS FOR SYSTEMIC USE, COMBINATIONS

This group comprises all combined preparations, e.g. combinations with local anesthetics.

QH02BX Corticosteroids for systemic use, combinations

QH02C ANTIADRENAL PREPARATIONS

QH02CA Anticorticosteroids

Pharmaceutical formulations of ketoconazole solely indicated in Cushing's syndrome are classified in this group.

QH03 THYROID THERAPY

QH03A THYROID PREPARATIONS

Thyroid extracts and synthetic analogues used in the treatment of hypothyrosis should be classified in this group.

QH03AA Thyroid hormones

Natural and synthetic thyroid hormones should be classified in this group. Combinations of levothyroxine and liothyronine are classified using the ATCvet 5th level code QH03AA03.

Liothyronine hydrochloride is classified in QH03AA02.

QH03B ANTITHYROID PREPARATIONS

Preparations used in the treatment of hyperthyrosis should be classified in this group.

QH03BA Thiouracils

QH03BB Sulfur-containing imidazole derivatives

QH03BC Perchlorates

QH03BX Other antithyroid preparations

QH03C IODINE THERAPY

Iodine preparations for systemic use should be classified in this group.

QH03CA Iodine therapy

QH04 PANCREATIC HORMONES

QH04A GLYCOGENOLYTIC HORMONES

QH04AA Glycogenolytic hormones

The pancreas glycogenolytic hormone glucagon is classified in this group. Insulins are classified in QA10A - *Insulins and analogues.*

QH05 CALCIUM HOMEOSTASIS

Preparations acting on calcium homeostasis are classified in this group.

Vitamin-D products, see QA11C - *Vitamin A and D, incl. combinations of the two.*

QH05A PARATHYROID HORMONES AND ANALOGUES

QH05AA Parathyroid hormones and analogues

Extracts from parathyroid glands are classified in this group.

QH05B ANTI-PARATHYROID AGENTS

QH05BA Calcitonin preparations

Calcitonin, natural and synthetic, is classified in this group. Other substances for treatment of hypercalcemia, see QM05B - *Drugs affecting bone structure and mineralization*.

QH05BX Other anti-parathyroid agents

Paricalcitol and doxercalciferol indicated for the prevention and treatment of secondary hyperparathyroidism are classified here.

Oral formulations of calcifediol, solely approved for treatment of renal secondary hyperparathyroidism are classified here, while all other pharmaceutical formulations of calcifediol are classified in QA11CC06.

QI IMMUNOLOGICALS

QI01 IMMUNOLOGICALS FOR AVES

A Domestic fowl
B Duck
C Turkey
D Goose
E Pigeon
F Pheasant
G Quail
H Partridge
I Ostrich
K Pet birds
X Aves, others

QI02 IMMUNOLOGICALS FOR BOVIDAE

A Cattle
B Buffalo
X Bovidae, others

QI03 IMMUNOLOGICALS FOR CAPRIDAE

A Goat
X Capridae, others

QI04 IMMUNOLOGICALS FOR OVIDAE

A Sheep
X Ovidae, others

QI05 IMMUNOLOGICALS FOR EQUIDAE

A Horse
B Asinine/Donkey
C Hybride
X Equidae, others

QI06 IMMUNOLOGICALS FOR FELIDAE

A Cat
X Felidae, others

QI07 IMMUNOLOGICALS FOR CANIDAE

A Dog
B Fox
X Canidae, others

QI08 IMMUNOLOGICALS FOR LEPORIDAE

A Rabbit
B Hare
X Leporidae, others

QI09 IMMUNOLOGICALS FOR SUIDAE

A Pig
X Suidae, others

QI10 IMMUNOLOGICALS FOR PISCES

A Atlantic salmon
B Rainbow trout
C Carp
D Turbot
E Ornamental fish
F Atlantic cod
X Pisces, others

QI11 IMMUNOLOGICALS FOR RODENTS

A Rat
B Mouse
C Guinea-pig
X Rodents, others

QI20 IMMUNOLOGICALS FOR OTHER SPECIES

A Red deer
B Reindeer
C Mink
D Ferret
E Snake
F Bee
X Others

QI IMMUNOLOGICALS

In the ATCvet classification system the main group QI comprises immunologicals for veterinary use, including, vaccines, immune sera and immunoglobulins. The ATCvet group QI has been created to accomodate killed or attenuated microorganisms (bacteria, virus etc.), antigenic proteins derived from them, or synthetic constructs. Vaccines are used for the prevention, amelioration, or treatment of infectious diseases. In addition, the classification in group QI enables products to be classified according to species. The main group QI has been in use since January 2000. Earlier, vaccines were classified in QJ57, and immune sera and immunoglobulins in QJ56.

Immunologicals indicated for use in several species are classified according to the species regarded as the main one for prophylaxis. For example, monovalent vaccines against rabies are assigned to QI07 - *Canidae*. However, rabies antigens combined with other components might be classified under other main-group species.

If it is not possible to decide the main species for the vaccine a ranking of main species should be performed according to the sequence of species in the ATCvet QI 2nd levels. A species with a low number in the sequence of ATCvet code should then have precedence over a species with a higher number (e.g. sheep (QI04) has precedence over horse (QI05)).

Non-specific immunostimulating agents are classified in the 4th level group X - *Other immunologicals*, under whichever main group is considered most relevant. Other immunologicals, e.g. interferons and cytokines, are assigned to QL03 - *Immunostimulants*.

As far as possible, products are classified consistently on the basis of the agents involved, but to make the system easy to use, sometimes both the agent and the name of the disease are given. The ATCvet 5th level does not reflect the manufacturing process, e.g. recombinant is usually not included in the level names.

Both for individual antigens and for combinations of antigens, any number from 1-99 may be used as a 5th level code. Unlike combinations of substances other than immunologicals, specific 5th level code series (i.e. 20, 30, 50 or 99) are not reserved for combinations of antigens in group QI.

At the 4th level, all immunologicals are classified according to a specific structure.

QI01 IMMUNOLOGICALS FOR AVES
QI01A DOMESTIC FOWL
QI01AA Inactivated viral vaccines
QI01AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI01AC Inactivated bacterial vaccines and antisera
QI01AD Live viral vaccines
QI01AE Live bacterial vaccines
QI01AF Live bacterial and viral vaccines

QI01AG Live and inactivated bacterial vaccines
QI01AH Live and inactivated viral vaccines
QI01AI Live viral and inactivated bacterial vaccines
QI01AJ Live and inactivated viral and bacterial vaccines
QI01AK Inactivated viral and live bacterial vaccines
QI01AL Inactivated viral and inactivated bacterial vaccines
QI01AM Antisera, immunoglobulin preparations, and antitoxins
QI01AN Live parasitic vaccines
QI01AO Inactivated parasitic vaccines
QI01AP Live fungal vaccines
QI01AQ Inactivated fungal vaccines
QI01AR In vivo diagnostic preparations
QI01AS Allergens
QI01AU Other live vaccines
QI01AV Other inactivated vaccines
QI01AX Other immunologicals

QI01B DUCK
QI01BA Inactivated viral vaccines

Parvovirus vaccines indicated for use in duck and goose are classified here.

QI01BB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI01BC Inactivated bacterial vaccines and antisera
QI01BD Live viral vaccines
QI01BE Live bacterial vaccines
QI01BF Live bacterial and viral vaccines
QI01BG Live and inactivated bacterial vaccines
QI01BH Live and inactivated viral vaccines
QI01BI Live viral and inactivated bacterial vaccines
QI01BJ Live and inactivated viral and bacterial vaccines
QI01BK Inactivated viral and live bacterial vaccines
QI01BL Inactivated viral and inactivated bacterial vaccines
QI01BM Antisera, immunoglobulin preparations, and antitoxins
QI01BN Live parasitic vaccines
QI01BO Inactivated parasitic vaccines
QI01BP Live fungal vaccines
QI01BQ Inactivated fungal vaccines
QI01BR In vivo diagnostic preparations
QI01BS Allergens
QI01BU Other live vaccines
QI01BV Other inactivated vaccines
QI01BX Other immunologicals

QI01C TURKEY

QI01CA Inactivated viral vaccines

QI01CB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

QI01CC Inactivated bacterial vaccines and antisera

QI01CD Live viral vaccines

QI01CE Live bacterial vaccines

QI01CF Live bacterial and viral vaccines

QI01CG Live and inactivated bacterial vaccines

QI01CH Live and inactivated viral vaccines

QI01CI Live viral and inactivated bacterial vaccines

QI01CJ Live and inactivated viral and bacterial vaccines

QI01CK Inactivated viral and live bacterial vaccines

QI01CL Inactivated viral and inactivated bacterial vaccines

QI01CM Antisera, immunoglobulin preparations, and antitoxins

QI01CN Live parasitic vaccines

QI01CO Inactivated parasitic vaccines

QI01CP Live fungal vaccines

QI01CQ Inactivated fungal vaccines

QI01CR In vivo diagnostic preparations

QI01CS Allergens

QI01CU Other live vaccines

QI01CV Other inactivated vaccines

QI01CX Other immunologicals

QI01D GOOSE

QI01DA Inactivated viral vaccines

Parvovirus vaccines indicated for use in duck and goose are classified in QI01BA01.

QI01DB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

QI01DC Inactivated bacterial vaccines and antisera

QI01DD Live viral vaccines

QI01DE Live bacterial vaccines

QI01DF Live bacterial and viral vaccines

QI01DG Live and inactivated bacterial vaccines

QI01DH Live and inactivated viral vaccines

QI01DI Live viral and inactivated bacterial vaccines

QI01DJ Live and inactivated viral and bacterial vaccines

QI01DK Inactivated viral and live bacterial vaccines

QI01DL Inactivated viral and inactivated bacterial vaccines

QI01DM Antisera, immunoglobulin preparations, and antitoxins

QI01DN Live parasitic vaccines

QI01DO Inactivated parasitic vaccines

QI01DP Live fungal vaccines

QI01DQ Inactivated fungal vaccines

QI01DR In vivo diagnostic preparations

QI01DS Allergens

QI01DU Other live vaccines

QI01DV Other inactivated vaccines
QI01DX Other immunologicals

QI01E PIGEON
QI01EA Inactivated viral vaccines
QI01EB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI01EC Inactivated bacterial vaccines and antisera
QI01ED Live viral vaccines
QI01EE Live bacterial vaccines
QI01EF Live bacterial and viral vaccines
QI01EG Live and inactivated bacterial vaccines
QI01EH Live and inactivated viral vaccines
QI01EI Live viral and inactivated bacterial vaccines
QI01EJ Live and inactivated viral and bacterial vaccines
QI01EK Inactivated viral and live bacterial vaccines
QI01EL Inactivated viral and inactivated bacterial vaccines
QI01EM Antisera, immunoglobulin preparations, and antitoxins
QI01EN Live parasitic vaccines
QI01EO Inactivated parasitic vaccines
QI01EP Live fungal vaccines
QI01EQ Inactivated fungal vaccines
QI01ER In vivo diagnostic preparations
QI01ES Allergens
QI01EU Other live vaccines
QI01EV Other inactivated vaccines
QI01EX Other immunologicals

QI01F PHEASANT

QI01G QUAIL

QI01H PARTRIDGE

QI01I OSTRICH

QI01K PET BIRDS
QI01KA Inactivated viral vaccines
QI01KB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI01KC Inactivated bacterial vaccines and antisera
QI01KD Live viral vaccines
QI01KE Live bacterial vaccines
QI01KF Live bacterial and viral vaccines
QI01KG Live and inactivated bacterial vaccines
QI01KH Live and inactivated viral vaccines
QI01KI Live viral and inactivated bacterial vaccines
QI01KJ Live and inactivated viral and bacterial vaccines
QI01KK Inactivated viral and live bacterial vaccines

QI01KL Inactivated viral and inactivated bacterial vaccines
QI01KM Antisera, immunoglobulin preparations, and antitoxins
QI01KN Live parasitic vaccines
QI01KO Inactivated parasitic vaccines
QI01KP Live fungal vaccines
QI01KQ Inactivated fungal vaccines
QI01KR In vivo diagnostic preparations
QI01KS Allergens
QI01KU Other live vaccines
QI01KV Other inactivated vaccines
QI01KX Other immunologicals

QI01X AVES, OTHERS

QI02 IMMUNOLOGICALS FOR BOVIDAE
QI02A CATTLE
QI02AA Inactivated viral vaccines
QI02AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI02AC Inactivated bacterial vaccines and antisera
QI02AD Live viral vaccines
QI02AE Live bacterial vaccines
QI02AF Live bacterial and viral vaccines
QI02AG Live and inactivated bacterial vaccines
QI02AH Live and inactivated viral vaccines
QI02AI Live viral and inactivated bacterial vaccines
QI02AJ Live and inactivated viral and bacterial vaccines
QI02AK Inactivated viral and live bacterial vaccines
QI02AL Inactivated viral and inactivated bacterial vaccines
QI02AM Antisera, immunoglobulin preparations, and antitoxins
QI02AN Live parasitic vaccines
QI02AO Inactivated parasitic vaccines

Vaccines consisting of antigens are classified in QI02AO02.

QI02AP Live fungal vaccines
QI02AQ Inactivated fungal vaccines
QI02AR In vivo diagnostic preparations
QI02AS Allergens
QI02AT Colostrum preparations and substitutes
QI02AU Other live vaccines
QI02AV Other inactivated vaccines

Papilloma vaccines are classified in this group.

QI02AX Other immunologicals

QI02B BUFFALO

QI02X BOVIDAE, OTHERS

QI03 IMMUNOLOGICALS FOR CAPRIDAE

QI03A GOAT

Clostridium vaccines are classified in QI03AB - *Inactivated bacterial vaccines*, or QI03AE - *Live bacterial vaccines*.

QI03AA Inactivated viral vaccines

QI03AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

Mycobacterium vaccines indicated for use in sheep and goats are classified in QI04AB09. Staphylococcus vaccines indicated for use in sheep and goats are classified in QI04AB10.

QI03AC Inactivated bacterial vaccines and antisera
QI03AD Live viral vaccines
QI03AE Live bacterial vaccines
QI03AF Live bacterial and viral vaccines
QI03AG Live and inactivated bacterial vaccines
QI03AH Live and inactivated viral vaccines
QI03AI Live viral and inactivated bacterial vaccines
QI03AJ Live and inactivated viral and bacterial vaccines
QI03AK Inactivated viral and live bacterial vaccines
QI03AL Inactivated viral and inactivated bacterial vaccines
QI03AM Antisera, immunoglobulin preparations, and antitoxins
QI03AN Live parasitic vaccines
QI03AO Inactivated parasitic vaccines
QI03AP Live fungal vaccines
QI03AQ Inactivated fungal vaccines
QI03AR In vivo diagnostic preparations
QI03AS Allergens
QI03AT Colostrum preparations and substitutes
QI03AU Other live vaccines
QI03AV Other inactivated vaccines
QI03AX Other immunologicals

QI03X CAPRIDAE, OTHERS

QI04 IMMUNOLOGICALS FOR OVIDAE

QI04A SHEEP

QI04AA Inactivated viral vaccines
QI04AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

Mycobacterium vaccines and Staphylococcus vaccines indicated for use in sheep and goats are classified here.

QI04AC Inactivated bacterial vaccines and antisera
QI04AD Live viral vaccines
QI04AE Live bacterial vaccines
QI04AF Live bacterial and viral vaccines
QI04AG Live and inactivated bacterial vaccines

QI04AH Live and inactivated viral vaccines
QI04AI Live viral and inactivated bacterial vaccines
QI04AJ Live and inactivated viral and bacterial vaccines
QI04AK Inactivated viral and live bacterial vaccines
QI04AL Inactivated viral and inactivated bacterial vaccines
QI04AM Antisera, immunoglobulin preparations and antitoxins
QI04AN Live parasitic vaccines
QI04AO Inactivated parasitic vaccines
QI04AP Live fungal vaccines
QI04AQ Inactivated fungal vaccines
QI04AR In vivo diagnostic preparations
QI04AS Allergens
QI04AT Colostrum preparations and substitutes
QI04AU Other live vaccines
QI04AV Other inactivated vaccines
QI04AX Other immunologicals

QI04X OVIDAE, OTHERS

QI05 IMMUNOLOGICALS FOR EQUIDAE
QI05A HORSE
QI05AA Inactivated viral vaccines
QI05AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI05AC Inactivated bacterial vaccines and antisera
QI05AD Live viral vaccines
QI05AE Live bacterial vaccines
QI05AF Live bacterial and viral vaccines
QI05AG Live and inactivated bacterial vaccines
QI05AH Live and inactivated viral vaccines
QI05AI Live viral and inactivated bacterial vaccines
QI05AJ Live and inactivated viral and bacterial vaccines
QI05AK Inactivated viral and live bacterial vaccines
QI05AL Inactivated viral and inactivated bacterial vaccines
QI05AM Antisera, immunoglobulin preparations, and antitoxins
QI05AN Live parasitic vaccines
QI05AO Inactivated parasitic vaccines
QI05AP Live fungal vaccines
QI05AQ Inactivated fungal vaccines
QI05AR In vivo diagnostic preparations
QI05AS Allergens
QI05AT Colostrum preparations and substitutes
QI05AU Other live vaccines
QI05AV Other inactivated vaccines
QI05AX Other immunologicals

QI05B ASININE/DONKEY

QI05C HYBRIDE

QI05X EQUIDAE, OTHERS

QI06 IMMUNOLOGICALS FOR FELIDAE

QI06A CAT

QI06AA Inactivated viral vaccines

QI06AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

QI06AC Inactivated bacterial vaccines and antisera

QI06AD Live viral vaccines

QI06AE Live bacterial vaccines

QI06AF Live bacterial and viral vaccines

QI06AG Live and inactivated bacterial vaccines

QI06AH Live and inactivated viral vaccines

QI06AI Live viral and inactivated bacterial vaccines

QI06AJ Live and inactivated viral and bacterial vaccines

QI06AK Inactivated viral and live bacterial vaccines

QI06AL Inactivated viral and inactivated bacterial vaccines

QI06AM Antisera, immunoglobulin preparations, and antitoxins

QI06AN Live parasitic vaccines

QI06AO Inactivated parasitic vaccines

QI06AP Live fungal vaccines

QI06AQ Inactivated fungal vaccines

Microsporum vaccines indicated for use in both cats and dogs are classified here.

QI06AR In vivo diagnostic preparations

QI06AS Allergens

QI06AT Colostrum preparations and substitutes

QI06AU Other live vaccines

QI06AV Other inactivated vaccines

QI06AX Other immunologicals

QI06X FELIDAE, OTHERS

QI07 IMMUNOLOGICALS FOR CANIDAE

QI07A DOG

QI07AA Inactivated viral vaccines

QI07AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

QI07AC Inactivated bacterial vaccines and antisera

QI07AD Live viral vaccines

QI07AE Live bacterial vaccines

QI07AF Live bacterial and viral vaccines

QI07AG Live and inactivated bacterial vaccines

QI07AH Live and inactivated viral vaccines

QI07AI Live viral and inactivated bacterial vaccines

QI07AJ Live and inactivated viral and bacterial vaccines

QI07AK Inactivated viral and live bacterial vaccines

QI07AL Inactivated viral and inactivated bacterial vaccines
QI07AM Antisera, immunoglobulin preparations, and antitoxins
QI07AN Live parasitic vaccines
QI07AO Inactivated parasitic vaccines

Also recombinant vaccines are classified here.

QI07AP Live fungal vaccines
QI07AQ Inactivated fungal vaccines

Microsporum vaccines indicated for use in both cats and dogs are classified in QI06AQ02.

QI07AR In vivo diagnostic preparations
QI07AS Allergens
QI07AT Colostrum preparations and substitutes
QI07AU Other live vaccines
QI07AV Other inactivated vaccines
QI07AX Other immunologicals

QI07B FOX
QI07BA Inactivated viral vaccines
QI07BB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI07BC Inactivated bacterial vaccines and antisera
QI07BD Live viral vaccines
QI07BE Live bacterial vaccines
QI07BF Live bacterial and viral vaccines
QI07BG Live and inactivated bacterial vaccines
QI07BH Live and inactivated viral vaccines
QI07BI Live viral and inactivated bacterial vaccines
QI07BJ Live and inactivated viral and bacterial vaccines
QI07BK Inactivated viral and live bacterial vaccines
QI07BL Inactivated viral and inactivated bacterial vaccines
QI07BM Antisera, immunoglobulin preparations, and antitoxins
QI07BN Live parasitic vaccines
QI07BO Inactivated parasitic vaccines
QI07BP Live fungal vaccines
QI07BQ Inactivated fungal vaccines
QI07BR In vivo diagnostic preparations
QI07BS Allergens
QI07BT Colostrum preparations and substitutes
QI07BU Other live vaccines
QI07BV Other inactivated vaccines
QI07BX Other immunologicals

QI07X CANIDAE, OTHERS
QI07XA Inactivated viral vaccines
QI07XB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI07XC Inactivated bacterial vaccines and antisera
QI07XD Live viral vaccines

QI07XE Live bacterial vaccines
QI07XF Live bacterial and viral vaccines
QI07XG Live and inactivated bacterial vaccines
QI07XH Live and inactivated viral vaccines
QI07XI Live viral and inactivated bacterial vaccines
QI07XJ Live and inactivated viral and bacterial vaccines
QI07XK Inactivated viral and live bacterial vaccines
QI07XL Inactivated viral and inactivated bacterial vaccines
QI07XM Antisera, immunoglobulin preparations, and antitoxins
QI07XN Live parasitic vaccines
QI07XO Inactivated parasitic vaccines
QI07XP Live fungal vaccines
QI07XQ Inactivated fungal vaccines
QI07XR In vivo diagnostic preparations
QI07XS Allergens
QI07XT Colostrum preparations and substitutes
QI07XU Other live vaccines
QI07XV Other inactivated vaccines
QI07XX Other immunologicals

QI08 IMMUNOLOGICALS FOR LEPORIDAE
QI08A RABBIT
QI08AA Inactivated viral vaccines
QI08AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI08AC Inactivated bacterial vaccines and antisera
QI08AD Live viral vaccines
QI08AE Live bacterial vaccines
QI08AF Live bacterial and viral vaccines
QI08AG Live and inactivated bacterial vaccines
QI08AH Live and inactivated viral vaccines
QI08AI Live viral and inactivated bacterial vaccines
QI08AJ Live and inactivated viral and bacterial vaccines
QI08AK Inactivated viral and live bacterial vaccines
QI08AL Inactivated viral and inactivated bacterial vaccines
QI08AM Antisera, immunoglobulin preparations, and antitoxins
QI08AN Live parasitic vaccines
QI08AO Inactivated parasitic vaccines
QI08AP Live fungal vaccines
QI08AQ Inactivated fungal vaccines
QI08AR In vivo diagnostic preparations
QI08AS Allergens
QI08AT Colostrum preparations and substitutes
QI08AU Other live vaccines
QI08AV Other inactivated vaccines
QI08AX Other immunologicals

QI08B HARE

QI08X LEPORIDAE, OTHERS

QI09 IMMUNOLOGICALS FOR SUIDAE

QI09A PIG

QI09AA Inactivated viral vaccines

QI09AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

QI09AC Inactivated bacterial vaccines and antisera

QI09AD Live viral vaccines

QI09AE Live bacterial vaccines

QI09AF Live bacterial and viral vaccines

QI09AG Live and inactivated bacterial vaccines

QI09AH Live and inactivated viral vaccines

QI09AI Live viral and inactivated bacterial vaccines

QI09AJ Live and inactivated viral and bacterial vaccines

QI09AK Inactivated viral and live bacterial vaccines

QI09AL Inactivated viral and inactivated bacterial vaccines

QI09AM Antisera, immunoglobulin preparations and antitoxins

QI09AN Live parasitic vaccines

QI09AO Inactivated parasitic vaccines

QI09AP Live fungal vaccines

QI09AQ Inactivated fungal vaccines

QI09AR In vivo diagnostic preparations

QI09AS Allergens

QI09AT Colostrum preparations and substitutes

QI09AU Other live vaccines

QI09AV Other inactivated vaccines

QI09AX Other immunologicals

QI09X SUIDAE, OTHERS

QI10 IMMUNOLOGICALS FOR PISCES

QI10A ATLANTIC SALMON

QI10AA Inactivated viral vaccines

QI10AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

Vibrio vaccines indicated for use in Atlantic salmon and rainbow trout are classified in QI10BB01.

QI10AC Inactivated bacterial vaccines and antisera

QI10AD Live viral vaccines

QI10AE Live bacterial vaccines

QI10AF Live bacterial and viral vaccines

QI10AG Live and inactivated bacterial vaccines

QI10AH Live and inactivated viral vaccines

QI10AI Live viral and inactivated bacterial vaccines

QI10AJ Live and inactivated viral and bacterial vaccines

QI10AK Inactivated viral and live bacterial vaccines

QI10AL Inactivated viral and inactivated bacterial vaccines

QI10AM Antisera, immunoglobulin preparations, and antitoxins

QI10AN Live parasitic vaccines
QI10AO Inactivated parasitic vaccines
QI10AP Live fungal vaccines
QI10AQ Inactivated fungal vaccines
QI10AR In vivo diagnostic preparations
QI10AS Allergens
QI10AU Other live vaccines
QI10AV Other inactivated vaccines
QI10AX Other immunologicals

QI10B RAINBOW TROUT
QI10BA Inactivated viral vaccines
QI10BB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

Vibrio vaccines indicated for use in Atlantic salmon and rainbow trout are classified here.

QI10BC Inactivated bacterial vaccines and antisera
QI10BD Live viral vaccines
QI10BE Live bacterial vaccines
QI10BF Live bacterial and viral vaccines
QI10BG Live and inactivated bacterial vaccines
QI10BH Live and inactivated viral vaccines
QI10BI Live viral and inactivated bacterial vaccines
QI10BJ Live and inactivated viral and bacterial vaccines
QI10BK Inactivated viral and live bacterial vaccines
QI10BL Inactivated viral and inactivated bacterial vaccines
QI10BM Antisera, immunoglobulin preparations, and antitoxins
QI10BN Live parasitic vaccines
QI10BO Inactivated parasitic vaccines
QI10BP Live fungal vaccines
QI10BQ Inactivated fungal vaccines
QI10BR In vivo diagnostic preparations
QI10BS Allergens
QI10BU Other live vaccines
QI10BV Other inactivated vaccines
QI10BX Other immunologicals

QI10C CARP

QI10D TURBOT

QI10E ORNAMENTAL FISH

QI10F ATLANTIC COD
QI10FB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)

QI10X PISCES, OTHERS

QI11 IMMUNOLOGICALS FOR RODENTS

QI11A RAT

QI11B MOUSE

QI11C GUINEA-PIG

QI11X RODENTS, OTHERS

QI20 IMMUNOLOGICALS FOR OTHER SPECIES

QI20A RED DEER

QI20AA Inactivated viral vaccines
QI20AB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI20AC Inactivated bacterial vaccines and antisera
QI20AD Live viral vaccines
QI20AE Live bacterial vaccines
QI20AF Live bacterial and viral vaccines
QI20AG Live and inactivated bacterial vaccines
QI20AH Live and inactivated viral vaccines
QI20AI Live viral and inactivated bacterial vaccines
QI20AJ Live and inactivated viral and bacterial vaccines
QI20AK Inactivated viral and live bacterial vaccines
QI20AL Inactivated viral and inactivated bacterial vaccines
QI20AM Antisera, immunoglobulin preparations, and antitoxins
QI20AN Live parasitic vaccines
QI20AO Inactivated parasitic vaccines
QI20AP Live fungal vaccines
QI20AQ Inactivated fungal vaccines
QI20AR In vivo diagnostic preparations
QI20AS Allergens
QI20AT Colostrum preparations and substitutes
QI20AU Other live vaccines
QI20AV Other inactivated vaccines
QI20AX Other immunologicals

QI20B REINDEER

QI20C MINK

QI20CA Inactivated viral vaccines
QI20CB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI20CC Inactivated bacterial vaccines and antisera
QI20CD Live viral vaccines
QI20CE Live bacterial vaccines
QI20CF Live bacterial and viral vaccines
QI20CG Live and inactivated bacterial vaccines
QI20CH Live and inactivated viral vaccines
QI20CI Live viral and inactivated bacterial vaccines

QI20CJ Live and inactivated viral and bacterial vaccines
QI20CK Inactivated viral and live bacterial vaccines
QI20CL Inactivated viral and inactivated bacterial vaccines
QI20CM Antisera, immunoglobulin preparations, and antitoxins
QI20CN Live parasitic vaccines
QI20CO Inactivated parasitic vaccines
QI20CP Live fungal vaccines
QI20CQ Inactivated fungal vaccines
QI20CR In vivo diagnostic preparations
QI20CS Allergens
QI20CT Colostrum preparations and substitutes
QI20CU Other live vaccines
QI20CV Other inactivated vaccines
QI20CX Other immunologicals

QI20D FERRET
QI20DA Inactivated viral vaccines
QI20DB Inactivated bacterial vaccines (including mycoplasma, toxoid and chlamydia)
QI20DC Inactivated bacterial vaccines and antisera
QI20DD Live viral vaccines
QI20DE Live bacterial vaccines
QI20DF Live bacterial and viral vaccines
QI20DG Live and inactivated bacterial vaccines
QI20DH Live and inactivated viral vaccines
QI20DI Live viral and inactivated bacterial vaccines
QI20DJ Live and inactivated viral and bacterial vaccines
QI20DK Inactivated viral and live bacterial vaccines
QI20DL Inactivated viral and inactivated bacterial vaccines
QI20DM Antisera, immunoglobulin preparations, and antitoxins
QI20DN Live parasitic vaccines
QI20DO Inactivated parasitic vaccines
QI20DP Live fungal vaccines
QI20DQ Inactivated fungal vaccines
QI20DR In vivo diagnostic preparations
QI20DS Allergens
QI20DT Colostrum preparations and substitutes
QI20DU Other live vaccines
QI20DV Other inactivated vaccines
QI20DX Other immunologicals

QI20E SNAKE

QI20F BEE

QI20X OTHERS
QI20XE Live bacterial vaccines

QJ ANTIINFECTIVES FOR SYSTEMIC USE

QJ01 ANTIBACTERIALS FOR SYSTEMIC USE

A Tetracyclines
B Amphenicols
C Beta-lactam antibacterials, penicillins
D Other beta-lactam antibacterials
E Sulfonamides and trimethoprim
F Macrolides, lincosamides and streptogramins
G Aminoglycoside antibacterials
M Quinolone and quinoxaline antibacterials
R Combinations of antibacterials
X Other antibacterials

QJ02 ANTIMYCOTICS FOR SYSTEMIC USE

A Antimycotics for systemic use

QJ04 ANTIMYCOBACTERIALS

A Drugs for treatment of tuberculosis
B Drugs for treatment of lepra

QJ05 ANTIVIRALS FOR SYSTEMIC USE

A Direct acting antivirals

QJ51 ANTIBACTERIALS FOR INTRAMAMMARY USE

A Tetracyclines for intramammary use
B Amphenicols for intramammary use
C Beta-lactam antibacterials, penicillins, for intramammary use
D Other beta-lactam antibacterials for intramammary use
E Sulfonamides and trimethoprim for intramammary use
F Macrolides and lincosamides for intramammary use
G Aminoglycoside antibacterials for intramammary use
R Combinations of antibacterials for intramammary use
X Other antibacterials for intramammary use

QJ54 ANTIMYCOBACTERIALS FOR INTRAMAMMARY USE

A Drugs for mycobacterial infections

QJ ANTIINFECTIVES FOR SYSTEMIC USE

Group QJ comprises antiinfectives for systemic use, although antiinfectives for local use are classified in other groups as well. Gynecological antiinfectives, for example, are classified in QG - *Genito urinary system and sex hormones*, and intestinal antiinfectives are classified in QA - *Alimentary tract and metabolism*. One active substance might have several ATCvet codes, depending on the formulation considered.

In the ATC system for human medicines, immune sera and immunoglobulins are classified in J06 and vaccines are classified in J07. In the ATCvet system, however, vaccines, immune sera and immunoglobulins are classified in QI - *Immunologicals*.

The group QJ comprises two 2nd level groups specific to the ATCvet system, QJ51 - *Antibacterials for intramammary use* and QJ54 - *Antimycobacterials for intramammary use*.

Systemically administered antibacterials and antimycotics may also be classified in other groups if their target is exclusively local, e.g:

QA01AB - *Antiinfectives and antiseptics for local oral treatment*
QA07A - *Intestinal antiinfectives*
QD01 - *Antifungals for dermatological use*
QD06 - *Antibiotics and chemotherapeutics for dermatological use*
QD07C - *Corticosteroids, combinations with antibiotics*
QD09AA - *Ointment dressings with antiinfectives*
QG01 - *Gynecological antiinfectives and antiseptics*
QG51 - *Antiinfectives and antiseptics for intrauterine use*
QP - *Antiparasitic products, insecticides and repellents*
QR02AB - *Throat preparations, Antibiotics*
QR05X - *Other cold preparations*
QS - *Sensory organs*

QJ01 ANTIBACTERIALS FOR SYSTEMIC USE

Antibacterials for systemic use, apart from antimycobacterials which are classified in QJ04 and QJ54, should be classified in this group. They are classified according to their mode of action and their chemistry.

Combinations of two or more systemic antibacterials from different 3rd level groups are classified in QJ01R, with the exception of combinations of sulfonamides and trimethoprim, including derivatives, which are classified in a separate 4th level group, QJ01EW. Combinations of antibacterials with other substances are classified in QJ01RV.

Inhaled antiinfectives are classified here.

Combinations of antibacterials and tuberculostatics are classified in QJ04AM.

QJ01A TETRACYCLINES

QJ01AA Tetracyclines

Tetracycline antibacterials, which inhibit the bacterial protein synthesis through binding to the 30-S part of ribosomes, are classified in this group.

At the plain ATC 5th levels in this group combination with e.g. mucolytics are allowed.

QJ01B AMPHENICOLS

QJ01BA Amphenicols

Amphenicol antibacterials, which inhibit the bacterial protein synthesis, are classified in this group.

QJ01C BETA-LACTAM ANTIBACTERIALS, PENICILLINS

Penicillin beta-lactam antibacterials, which inhibit the bacterial cell wall synthesis, are classified in this group. Combinations of penicillins from different 4th level groups, including beta-lactamase inhibitors, are classified in QJ01CR.

QJ01CA Penicillins with extended spectrum

Penicillins with enhanced activity against Gram-negative rods, e.g. ampicillin and similar antibiotics, are classified in this group.

QJ01CE Beta-lactamase sensitive penicillins

QJ01CF Beta-lactamase resistant penicillins

QJ01CG Beta-lactamase inhibitors

QJ01CR Combinations of penicillins, incl. beta-lactamase inhibitors

Combinations of penicillins and/or beta-lactamase inhibitors are classified in this group. Combinations containing one penicillin and an enzyme inhibitor are assigned to different 5th level groups according to the penicillin involved. Combinations of two or more penicillins with or without an enzyme inhibitor, are classified in a separate 5th level group, QJ01CR50 - *combinations of penicillins.*

QJ01D OTHER BETA-LACTAM ANTIBACTERIALS

Beta-lactam antibacterials other than penicillins are classified in this group.

The cephalosporins are classified into subgroups according to generations. The reference applied when defining generations is “Principles and Practice of Infectious Diseases” by Mandell, Douglas and Benett, sixth edition, 2005. For the definitions used in this textbook, see under QJ01DB, QJ01DC, QJ01DD and QJ01DE.

Combinations with beta-lactamase inhibitors are classified by using the 50-series.

QJ01DB First-generation cephalosporins

The first-generation compounds have relatively narrow spectrum of activity focused primarily on the gram-positive cocci.

QJ01DC Second-generation cephalosporins

The second-generation cephalosporins have a variable activity against gram-positive cocci but have increased activity against gram-negative bacteria. The cephamycin group is included here.

QJ01DD Third-generation cephalosporins

The third-generation cephalosporins have a marked activity against gram-negative bacteria. Limited activity against gram-positive cocci, particularly methicillin susceptible S. aureus, might occur.

Combinations with NSAIDs are classified in QJ01DD99.

QJ01DE Fourth-generation cephalosporins

The fourth-generation cephalosporins have activity against gram-positive cocci and a broad array of gram-negative bacteria, including P. aeruginosa and many of the Enterobacteriaceae with inducible chromosomal b-lactamases.

QJ01DF Monobactams

Arginin and lysine salts of aztreonam are classified in QJ01DF01; thus aztreonam for inhalation is classified together with systemic formulations.

QJ01DH Carbapenems

QJ01DI Other cephalosporins and penems

QJ01E SULFONAMIDES AND TRIMETHOPRIM

Sulfonamides and trimethoprim are classified differently in the ATCvet system, compared with the ATC system, owing to differences in their pharmacokinetics and metabolism in animals, compared with humans.

Systemic sulfonamides and trimethoprim and/or derivatives are classified in this group.

Combinations of sulfonamide and trimethoprim, and/or derivatives, are classified in QJ01EW. Preparations containing two or more sulfonamides are classified using the 5th level code 30. Sulfonamides combined with other antibacterials (excluding trimethoprim and analogues) are classified in QJ01R - *Combinations of antibacterials*. See also QA07A - *Intestinal antiinfectives*.

QJ01EA Trimethoprim and derivatives

QJ01EQ Sulfonamides

Sulfonamides indicated in treatment of parasitic infections are classified in QP51AG - *Sulfonamides, plain and in combinations*.

Combination products should be classified in separate 5th level groups using the corresponding 50-series except for combinations with trimethoprim and derivatives which are classified in QJ01EW. Combinations of two or more sulfonamides should be classified using the 5th level code 30.

Oral antiinfectives, which have no systemic effect, are classified in QA07A.

QJ01EW Combinations of sulfonamides and trimethoprim, incl. derivatives

Combinations with trimethoprim, including derivatives, are classified in the same 5th level group according to the sulfonamide. Combinations of two or more sulfonamides and trimethoprime, incl. derivatives, should be classified using the 5th level code 30.

QJ01F MACROLIDES, LINCOSAMIDES AND STREPTOGRAMINS

Macrolide, lincosamide and streptogramin antibacterials inhibiting bacterial protein synthesis through binding to the 50-S part of the ribosomes are classified in this group.

QJ01FA Macrolides

Macrolides in combination with NSAIDs are also classified here.

QJ01FF Lincosamides

QJ01FG Streptogramins

The streptogramin components dalfopristin/quinupristin are semisynthetic derivates of pristinamycin. The two components have synergistic antibacterial effect and are always used together. Quinupristin/dalfopristin are therefore classified at the ATCvet plain level QJ01FG02.

QJ01G AMINOGLYCOSIDE ANTIBACTERIALS

Aminoglycoside antibacterials which disturb the bacterial protein synthesis through binding to the 30-S part of the ribosomes, are classified in this group.

QJ01GA Streptomycins

QJ01GB Other aminoglycosides

QJ01M QUINOLONE AND QUINOXALINE ANTIBACTERIALS

Quinolone antibacterials, which inhibit the bacterial DNA-gyrase, should be classified in this group.

QJ01MA Fluoroquinolones

Flumequine is classified in QJ01MB.

QJ01MB Other quinolones

QJ01MQ Quinoxalines

This group does not appear in the ATC human system.

QJ01R COMBINATIONS OF ANTIBACTERIALS

The detailed classification of some of the antibacterial combinations in QJ01RA is based on the general concern with the use of antibacterials worldwide and the need for drug monitoring, incl. mapping of the use with resistance patterns.

QJ01RA Combinations of antibacterials

Combinations of two or more antibacterials for systemic use from different ATCvet 3rd level groups are classified in this group.

Combinations of urinary antiseptics and antiinfectives are classified here.

Fixed combination of two or more antibacterials should be classified in the specific veterinary 90-codes according to the following ranking:

1. quinolones
2. cephalosporins
3. macrolides
4. polymyxines
5. penicillins
6. aminoglycosides
7. tetracyclines
8. amphenicols
9. lincosamides
10. sulfonamides

QJ01RV Combinations of antibacterials and other substances

This group does not appear in the ATC human system.

Combinations of two or more antibacterials for systemic use and other substances are classified in this group, e.g. antibacterials and corticosteroids.

QJ01X OTHER ANTIBACTERIALS

Antibacterials with various modes of action not classified in the preceding groups are assigned to this group.

QJ01XA Glycopeptide antibacterials

Glycopeptide antibacterials, which inhibit the cell wall synthesis of Gram-positive bacteria, are classified in this group. Lipoglycopeptide antibacterials are also included in this group.

Intravenous preparations of vancomycin are classified in this group. Oral formulations containing vancomycin are classified in QA07A - *Intestinal antiinfectives*.

QJ01XB Polymyxins

Polymyxin antibacterials acting on the bacterial cytoplasm membrane are classified in this group.

Oral products containing colistin are classified in QA07 - *Antidiarrheals, intestinal antiinflammatory/antiinfective agents.*

QJ01XC Steroid antibacterials

Steroid antibacterials, which inhibit the binding of bacterial transfer-RNA and the 50-S part of the ribosomes, are classified in this group.

QJ01XD Imidazole derivatives

Imidazole antibacterials acting through active metabolites in anaerobic bacteria should be classified in this group.

Only formulations for parenteral use of e.g. metronidazole are classified in this group.

Oral formulations of imidazole derivatives are classified in QP51 - *Antiprotozoals*, and formulations for gynecological/urinary use are classified in QG01 - *Gynecological antiinfectives and antiseptics* and QG51 - *Antiinfectives and antiseptics for intrauterine use.*

QJ01XE Nitrofuran derivatives

Nitrofurantoin in combination with phenazopyridine is classified in QJ01XE51.

QJ01XQ Pleuromutilins

This group does not appear in the ATC human system.

QJ01XX Other antibacterials

Fumagillin is classified in QP51AX.

Combinations of procaine benzylpenicillin and novobiocin are classified in QJ51RC23.

QJ02 ANTIMYCOTICS FOR SYSTEMIC USE

QJ02A ANTIMYCOTICS FOR SYSTEMIC USE

This group does not include antimycotics specifically for dermatological use, even if they are administered systemically. Griseofulvin, for example, see QD01 - *Antifungals for dermatological use*.

Antimycotics can also be classified in the following groups:
QA01AB - *Antiinfectives and antiseptics for local oral treatment*
QA07A - *Intestinal antiinfectives*
QD01 - *Antifungals for dermatological use*
QG01 - *Gynecological antiinfectives and antiseptics*

QJ02AA Antibiotics

QJ02AB Imidazole derivatives

Pharmaceutical formulations of ketoconazole solely indicated for the treatment of Cushing's syndrome are classified in QH02CA - *Anticorticosteroids*.

QJ02AC Triazole and tetrazole derivatives

QJ02AX Other antimycotics for systemic use

QJ04 ANTIMYCOBACTERIALS

In the human ATC system, J04 is a group in which products used to treat tuberculosis and leprosy in humans are classified.

In veterinary medicine, however, the products classified in QJ04 are used for the treatment of diseases caused by other mycobacteria.

Drugs for mycobacterial infections are classified in QJ04A - *Drugs for treatment of tuberculosis*. However, streptomycins are classified in QJ01G - *Aminoglycoside antibacterials*. Antimycobacterials for intramammary use should be assigned to QJ54.

QJ04A DRUGS FOR TREATMENT OF TUBERCULOSIS
QJ04AA Aminosalicylic acid and derivatives
QJ04AB Antibiotics
QJ04AC Hydrazides
QJ04AD Thiocarbamide derivatives
QJ04AK Other drugs for treatment of tuberculosis
QJ04AM Combinations of drugs for treatment of tuberculosis

QJ04B DRUGS FOR TREATMENT OF LEPRA
QJ04BA Drugs for treatment of lepra

QJ05 ANTIVIRALS FOR SYSTEMIC USE

This group comprises specific antiviral agents, excl. vaccines.

Antivirals for dermatological use, see QD06BB.

Antivirals for ophtalmological use, see QS01A - *Antiinfectives*.

Combinations with vitamins are allowed.

QJ05A DIRECT ACTING ANTIVIRALS

This group comprises agents acting directly on the virus.

QJ05AA Thiosemicarbazones

QJ05AB Nucleosides and nucleotides excl. reverse transcriptase inhibitors

Ribavirin is classified in QJ05AP.

The combinations of ribavirin and peginterferon alfa-2a or peginterferon alfa-2b are classified in QL03AB.

QJ05AC Cyclic amines

Amantadine is classified in QN04 - *Anti-Parkinson drugs*.

QJ05AD Phosphonic acid derivatives

QJ05AE Protease inhibitors

QJ05AF Nucleoside and nucleotide reverse transcriptase inhibitors

QJ05AG Non-nucleoside reverse transcriptase inhibitors

QJ05AH Neuraminidase inhibitors

All neuraminidase inhibitors are classified here, regardless of formulation.

QJ05AJ Integrase inhibitors

QJ05AP Antivirals for treatment of HCV infections

This group includes both single substances and combinations.

QJ05AR Antivirals for treatment of HIV infections, combinations

Combinations with pharmacokinetic enhancers are classified in this group, regardless of their antiviral effect. Plain products with cobicistat are classified in QV03AX.

QJ05AX Other antivirals

QJ51 ANTIBACTERIALS FOR INTRAMAMMARY USE

Antibacterials for intramammary use should be classified in this group using the same 3rd level codes as the corresponding antibacterials in group QJ01. Antimycobacterials for intramammary use are classified in QJ54.

Combinations of two or more antibacterials from different 3rd level groups for intramammary use are classified in QJ51R.

Combinations of antibacterials and other substances for intramammary use should be classified in QJ51RV.

QJ51A TETRACYCLINES FOR INTRAMAMMARY USE

QJ51AA Tetracyclines

QJ51B AMPHENICOLS FOR INTRAMAMMARY USE

QJ51BA Amphenicols

QJ51C BETA-LACTAM ANTIBACTERIALS, PENICILLINS, FOR INTRAMAMMARY USE

QJ51CA Penicillins with extended spectrum

Penicillins with enhanced activity against Gram-negative rods e.g. ampicillin and similar antibiotics, are classified in this group.

QJ51CE Beta-lactamase sensitive penicillins

Penethamate, for example, is classified in this group.

QJ51CF Beta-lactamase resistant penicillins

Cloxacillin, for example, is classified in this group.

QJ51CR Combinations of penicillins and/or beta-lactamase inhibitors

Combinations of two or more penicillins with or without an enzyme inhibitor, are classified in a separate 5th level group, QJ51CR50.

QJ51D OTHER BETA-LACTAM ANTIBACTERIALS FOR INTRAMAMMARY USE

QJ51DB First-generation cephalosporins

QJ51DC Second-generation cephalosporins

QJ51DD Third-generation cephalosporins

QJ51DE Fourth-generation cephalosporins

QJ51E SULFONAMIDES AND TRIMETHOPRIM FOR INTRAMAMMARY USE

QJ51EA Trimethoprim and derivatives

QJ51F MACROLIDES AND LINCOSAMIDES FOR INTRAMAMMARY USE

QJ51FA Macrolides

Erythromycin and spiramycin are classified in this group.

QJ51FF Lincosamides

Pirlimycin is classified in this group.

QJ51G AMINOGLYCOSIDE ANTIBACTERIALS FOR INTRAMAMMARY USE

QJ51GA Streptomycins

QJ51GB Other aminoglycosides

Gentamicin, for example, is classified in this group.

QJ51R COMBINATIONS OF ANTIBACTERIALS FOR INTRAMAMMARY USE

Combinations of antibacterials for intramammary use are classified in this group. The 4th level group corresponds to the 3rd level group in QJ01 and QJ51, which is also used for a ranking of the combinations. A combination of amphenicols and penicillins, for example, is classified in QJ51RB.

QJ51RA Tetracyclines, combinations with other antibacterials

QJ51RB Amphenicols, combinations with other antibacterials

QJ51RC Beta-lactam antibacterials, penicillins, combinations with other antibacterials

Combinations of procaine benzylpenicillin and novobiocin are classified in QJ51RC23.

QJ51RD ***Other beta-lactam antibacterials, combinations with other antibacterials***

Cephalosporins and related substances, for example, are classified in this group.

QJ51RE ***Sulfonamides and trimethoprim incl. derivatives***

QJ51RF ***Macrolides and lincosamides, combinations with other antibacterials***

QJ51RG ***Aminoglycoside antibacterials, combinations***

QJ51RV ***Combinations of antibacterials and other substances***

This group does not appear in the ATC human system.

Antibacterials and corticosteroids are classified in this group.

QJ51X OTHER ANTIBACTERIALS FOR INTRAMAMMARY USE

Antibacterials with various modes of action not classified in the preceding groups are assigned to this group.

The ATCvet 5th level numbers follows the numbering of the substances in QJ01D.

QJ51XB ***Polymyxins***

Polymyxin antibacterials acting on the bacterial cytoplasma membrane are classified in this group.

QJ51XX ***Other antibacterials for intramammary use***

QJ54 ANTIMYCOBACTERIALS FOR INTRAMAMMARY USE

Antimycobacterials for intramammary use should be classified in this group.

QJ54A DRUGS FOR MYCOBACTERIAL INFECTIONS

QJ54AB ***Antibiotics***

QL ANTINEOPLASTIC AND IMMUNOMODULATING AGENTS

QL01 ANTINEOPLASTIC AGENTS

A Alkylating agents
B Antimetabolites
C Plant alkaloids and other natural products
D Cytotoxic antibiotics and related substances
E Protein kinase inhibitors
F Monoclonal antibodies and antibody drug conjugates
X Other antineoplastic agents

QL02 ENDOCRINE THERAPY

A Hormones and related agents
B Hormone antagonists and related agents

QL03 IMMUNOSTIMULANTS

A Immunostimulants

QL04 IMMUNOSUPPRESSANTS

A Immunosuppressants

QL ANTINEOPLASTIC AND IMMUNOMODULATING AGENTS

The group QL comprises preparations, e.g. alkylating agents, antimetabolites, plant alkaloids and cytotoxic antibiotics, used in the treatment of neoplastic diseases. Immunomodulating agents, both stimulating and suppressive agents, are also classified here.

Hormonal preparations specifically used in the treatment of neoplastic diseases should be classified in this group. Note that group QG03 - *Sex hormones and modulators of the genital system* might include the same hormone, but of a different strength. Gonadotropin-releasing hormone (GnRH) and analogues not used for endocrine therapy related to neoplastic diseases are classified in QH01CA - *Gonadotropin-releasing hormones*.

QL01 ANTINEOPLASTIC AGENTS

Combination preparations are classified in QL01XY, except for combinations of monoclonal antibodies or antibody drug conjugates which are classified in QL01FY. Detoxifying agents used in connection with high-dose treatment with antineoplastic agents are classified in QV03AF - *Detoxifying agents for antineoplastic treatment*.

QL01A ALKYLATING AGENTS
QL01AA Nitrogen mustard analogues
QL01AB Alkyl sulfonates
QL01AC Ethylene imines
QL01AD Nitrosoureas
QL01AG Epoxides
QL01AX Other alkylating agents

QL01B ANTIMETABOLITES
QL01BA Folic acid analogues

Pre-filled syringes/pens of methotrexate for use in non-cancer indications and all oral formulations are classified in QL04AX03.

QL01BB Purine analogues

Parenteral formulations of cladribine used in cancer are classified in this group, while oral formulations for multiple sclerosis are classified in QL04AA.

QL01BC Pyrimidine analogues

QL01C PLANT ALKALOIDS AND OTHER NATURAL PRODUCTS
QL01CA Vinca alkaloids and analogues

Synthetic analogues are also classified in this group.

QL01CB Podophyllotoxin derivatives

Antivirals for topical use, e.g. aciclovir and podophyllotoxin, see QD06 - *Antibiotics and chemotherapeutics for dermatological use*.

QL01CC Colchicine derivatives

QL01CD Taxanes

QL01CE Topoisomerase 1 (TOP1) inhibitors

All formulations of irinotecan (e.g. liposomal) are classified in QL01CE02.

QL01CX Other plant alkaloids and natural products

QL01D CYTOTOXIC ANTIBIOTICS AND RELATED SUBSTANCES

QL01DA Actinomycines

QL01DB Anthracyclines and related substances

QL01DC Other cytotoxic antibiotics

QL01E PROTEIN KINASE INHIBITORS

This group comprises protein kinase inhibitors used for neoplastic diseases. Substances are classified according to their main target.

Substances which are multi-targeted without a clear main target are classified in QL01EX.

Lipid kinase inhibitors (phosphatidylinositol-3-kinase (Pi3K) inhibitors) are classified in QL01EM.

QL01EA BCR-ABL tyrosine kinase inhibitors

QL01EB Epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors

Substances inhibiting both HER2 and EGFR indicated for breast cancer are classified in QL01EH.

QL01EC B-Raf serine-threonine kinase (BRAF) inhibitors

QL01ED Anaplastic lymphoma kinase (ALK) inhibitors

Substances which are multi-targeted, but where ALK is considered the main target, are classified in this group.

QL01EE Mitogen-activated protein kinase (MEK) inhibitors

QL01EF Cyclin-dependent kinase (CDK) inhibitors

QL01EG Mammalian target of rapamycin (mTOR) kinase inhibitors

Parenteral and topical dermatological formulations of sirolimus used for neoplastic diseases are classified in this group. Oral formulations of sirolimus used for organ transplantation are classified in QL04AH. Sirolimus for hypertrophic cardiomyopathy in veterinary medicine is classified in QC01EB.

QL01EH Human epidermal growth factor receptor 2 (HER2) tyrosine kinase inhibitors

Substances inhibiting both HER2 and EGFR indicated for breast cancer are classified in this group.

QL01EJ Janus-associated kinase (JAK) inhibitors

QL01EK Vascular endothelial growth factor receptor (VEGFR) tyrosine kinase inhibitors

QL01EL Bruton's tyrosine kinase (BTK) inhibitors

QL01EM Phosphatidylinositol-3-kinase (Pi3K) inhibitors

QL01EN Fibroblast growth factor receptor (FGFR) tyrosine kinase inhibitors

QL01EX Other protein kinase inhibitors

This group comprises other protein kinase inhibitors which cannot be classified in the preceding groups. Substances which are multi-targeted without a clear main target are also classified in this group.

QL01F MONOCLONAL ANTIBODIES AND ANTIBODY DRUG CONJUGATES

Monoclonal antibodies mainly indicated for the treatment of cancer are classified in this group.

Monoclonal antibodies combined with hyaluronidase are classified at the same 5th level as the plain monoclonal antibody.

QL01FA CD20 (Clusters of Differentiation 20) inhibitors

QL01FB CD22 (Clusters of Differentiation 22) inhibitors

QL01FC CD38 (Clusters of Differentiation 38) inhibitors

QL01FD HER2 (Human Epidermal Growth Factor Receptor 2) inhibitors

QL01FE EGFR (Epidermal Growth Factor Receptor) inhibitors

QL01FF PD-1/PD-L1 (Programmed cell death protein 1/death ligand 1) inhibitors

QL01FG VEGF/VEGFR (Vascular Endothelial Growth Factor) inhibitors

QL01FX Other monoclonal antibodies and antibody drug conjugates

QL01FY Combinations of monoclonal antibodies and antibody drug conjugates

Combinations of monoclonal antibodies with hyaluronidase are classified at the same 5th level as the combinations of monoclonal antibodies without hyaluronidase.

QL01X OTHER ANTINEOPLASTIC AGENTS

Antineoplastic agents which cannot be classified in the preceding groups should be assigned to this group.

QL01XA Platinum compounds

QL01XB Methylhydrazines

QL01XD Sensitizers used in photodynamic/radiation therapy

QL01XF Retinoids for cancer treatment

QL01XG Proteasome inhibitors

QL01XH Histone deacetylase (HDAC) inhibitors

QL01XJ Hedgehog pathway inhibitors

QL01XK Poly (ADP-ribose) polymerase (PARP) inhibitors

QL01XL Antineoplastic cell and gene therapy

This group includes both genetically modified and unmodified cell therapies.

QL01XX Other antineoplastic agents

The 50-series codes are used for single substances due to lack of numbers.

Phosphatidylinositol-3-kinase (Pi3K) inhibitors are classified in QL01EM.

QL01XY Combinations of antineoplastic agents

Combinations of antineoplastic agents in QL01 - *Antineoplastic agents* are classified in this group, except for combinations of monoclonal antibodies or antibody drug conjugates which are classified in QL01FY.

QL02 ENDOCRINE THERAPY

Estrogens and progestogens used specifically in the treatment of neoplastic diseases should be classified in this group. This means that some strengths might be assigned to this group, while other strengths would be classified in QG03 - *Sex hormones and modulators of the genital system*.

QL02A HORMONES AND RELATED AGENTS

QL02AA Estrogens

QL02AB Progestogens

Megestrol also used as an appetite stimulant is classified here.

QL02AE Gonadotropin releasing hormone analogues

Buserelin is classified here in the ATC system. ATCvet products are classified in QH01CA.

QL02AX Other hormones

QL02B HORMONE ANTAGONISTS AND RELATED AGENTS

QL02BA Anti-estrogens

QL02BB Anti-androgens

QL02BG Aromatase inhibitors

QL02BX Other hormone antagonists and related agents

QL03 IMMUNOMOSTIMULANTS

QL03A IMMUNOSTIMULANTS

Levamisole, which also affects the immune response, is classified in QP52 - *Anthelmintics*.

QL03AA Colony stimulating factors

QL03AB Interferons

Peginterferon alfa-2b in combination with ribavirin and peginterferon alfa-2a in combination with ribavirin are classified in QL03AB60 and QL03AB61, respectively.

QL03AC Interleukins

QL03AX Other immunostimulants

Immunostimulating agents used exclusively in veterinary medicine are classified in QI - *Immunologicals*.

QL04 IMMUNOSUPPRESSANTS

Immunosuppressive agents are defined as agents that completely or partly suppress one or more factors in the immunosystem.

QL04A IMMUNOSUPPRESSANTS

Immunosuppressive agents should be classified in this group, with the exception of corticosteroids, which are classified in QH02.

Immunosuppressive agents indicated for treatment of dermatitis and pruritus should be classified in QD11AX.

QL04AA Selective immunosuppressants

Oral formulations of cladribine used in multiple sclerosis are classified in this group, while parenteral formulations for cancer are classified in QL01BB.

QL04AB Tumor necrosis factor alpha (TNF-α) inhibitors

QL04AC Interleukin inhibitors

Interleukin inhibitors used in asthma are classified in QR03DX.

Dupilumab is classified in QD11AH.

QL04AD Calcineurin inhibitors

Ciclosporin used topically in keratoconjunctivitis sicca is classified in QS01 - *Ophthalmologicals*.

QL04AE Sphingosine 1-phosphate (S1P) receptor modulators

QL04AF Janus-associated kinase (JAK) inhibitors

Tyrosine kinase 2 (TYK2) inhibitors are classified in this group.

QL04AG Monoclonal antibodies

Monoclonal antibodies with a mechanism of action described and matching another ATC group in QL04A are classified in the corresponding group e.g. QL04AB - *Tumor necrosis factor alpha (TNF-α) inhibitors*, QL04AC - *Interleukin inhibitors* or QL04AJ - *Complement inhibitors*. All other immunosuppressant monoclonal antibodies are classified here.

QL04AH Mammalian target of rapamycin (mTOR) kinase inhibitors

Oral formulations of sirolimus used in organ transplantation are classified in this group, while parenteral and topical dermatological formulations used for neoplastic diseases are classified in QL01EG. Sirolimus for hypertrophic cardiomyopathy in veterinary medicine is classified in QC01EB.

QL04AJ Complement inhibitors

QL04AK Dihydroorotate dehydrogenase (DHODH) inhibitors

QL04AX Other immunosuppressants

Immunosuppressive agents which cannot be placed in the preceding groups should be classified in this group.

Oral formulations and prefilled syringe/pen of methotrexate are classified in this group. Parenteral formulations used for neoplastic diseases are classified in QL01BA01.

QM MUSCULO-SKELETAL SYSTEM

QM01 ANTIINFLAMMATORY AND ANTIRHEUMATIC PRODUCTS

A Antiinflammatory and antirheumatic products, non-steroids
B Antiinflammatory/antirheumatic agents in combination
C Specific antirheumatic agents

QM02 TOPICAL PRODUCTS FOR JOINT AND MUSCULAR PAIN

A Topical products for joint and muscular pain

QM03 MUSCLE RELAXANTS

A Muscle relaxants, peripherally acting agents
B Muscle relaxants, centrally acting agents
C Muscle relaxants, directly acting agents

QM04 ANTIGOUT PREPARATIONS

A Antigout preparations

QM05 DRUGS FOR TREATMENT OF BONE DISEASES

B Drugs affecting bone structure and mineralization

QM09 OTHER DRUGS FOR DISORDERS OF THE MUSCULO-SKELETAL SYSTEM

A Other drugs for disorders of the musculo-skeletal system

QM MUSCULO-SKELETAL SYSTEM

Preparations used for treatment of disease in or symptoms of the musculo-skeletal system can be classified in this group. Exceptions to this rule are listed under each subgroup and cross-references to common agents and their classification group are stated where appropriate. Many drugs classified in this group, such as the antiinflammatory agents, commonly affect other organs as well. Included are both topical products and products for systemic use. Corticosteroids for systemic use are, with the exception of combinations with some antiinflammatory drugs, classified in QH02 - *Corticosteroids for systemic use.*

QM01 ANTIINFLAMMATORY AND ANTIRHEUMATIC PRODUCTS

QM01A ANTIINFLAMMATORY AND ANTIRHEUMATIC PRODUCTS, NON-STEROIDS

Antiinflammatory and antirheumatic preparations for systemic use should be classified in this group.

Corticosteroids, see QH02 - *Corticosteroids for systemic use*. All products containing salicylic acid and derivatives are classified in QN02BA - *Salicylic acid derivatives*, with the exception of salicylates in combination with corticosteroids, which are classified in QM01B - *Antiinflammatory/antirheumatic agents in combination*.

Combinations with muscle relaxants are classified in QM03B.

Combinations with antibacterials are classified in QJ01.

NSAIDs in combination with paracetamol are classified in QN02BE.

Combinations of antiinflammatory agents (e.g. corticosteroids) are classified in QM01B - *Antiinflammatory/antirheumatic agents in combination*.

Antiinflammatory or antirheumatic agents in combination with opioids are classified in QN02AJ - *Opioids in combination with non-opioid analgesics*. Other combinations are classified at separate 5th levels using the corresponding 50-series.

NSAIDs in combination with macrolides are classified in QJ01FA.

QM01AA Butylpyrazolidines

QM01AB Acetic acid derivatives and related substances

QM01AC Oxicams

QM01AE Propionic acid derivatives

All plain propionic acid derivatives are classified in this group, even if they are only intended for use as pain relief.

Combination of ibuprofen and paracetamol are classified in QN02BE51.

Ketoprofen lysine is classified at the same 5th level as ketoprofen.

Ibuprofen lysine is classified at the same 5th level as ibuprofen.

QM01AG Fenamates

QM01AH Coxibs

QM01AX Other antiinflammatory and antirheumatic agents, non-steroids

Antiinflammatory drugs which cannot be classified in the preceding groups should be assigned to this group. Glucuronoxylan sulfate is classified in the same ATCvet 5th level as pentosan polysulfate sodium.

QM01B ANTIINFLAMMATORY/ANTIRHEUMATIC AGENTS IN COMBINATION

QM01BA Antiinflammatory/antirheumatic agents in combination with corticosteroids

Antiinflammatory drugs in combination with corticosteroids should be classified in this group.

Combinations with salicylic acid derivatives are classified in this group.

The preparations are classified at the 5th level according to the antiinflammatory component. At each 5th level, different corticosteroids may occur.

QM01BX Other antiinflammatory/antirheumatic agents in combination with other drugs

All combinations of different antiinflammatory agents (excluding corticosteroids) are classified in this group.

QM01C SPECIFIC ANTIRHEUMATIC AGENTS

QM01CA Quinolines

QM01CB Gold preparations

QM01CC Penicillamine and similar agents

QM01CX Other specific antirheumatic agents

QM02 TOPICAL PRODUCTS FOR JOINT AND MUSCULAR PAIN

QM02A TOPICAL PRODUCTS FOR JOINT AND MUSCULAR PAIN

Ointments, liniments, plasters etc. which may produce symptomatic relief in joint and muscular pain should be classified in this group.

QM02AA Antiinflammatory preparations, non-steroids for topical use

All non-steroidal antiinflammatory derivatives for topical use are classified here, regardless of indication.

Combinations of non-steroidal antiinflammatory derivatives and other products for topical use are classified together with plain products in different 5th levels.

QM02AB Capsaicin and similar agents

QM02AC Preparations with salicylic acid derivatives

Combinations of salicylic acid derivatives and other products are classified in this group.

QM02AQ Blistering agents

No separate 5th level codes have been established in this group.

QM02AX Other topical products for joint and muscular pain

Topical preparations, which cannot be classified in the preceding groups, should be assigned to this group. Combinations of prednisolone, lidocaine and dimethyl sulfoxide are classified in QM02AX99 - *combinations*.

QM03 MUSCLE RELAXANTS

Peripherally, centrally and directly acting muscle relaxants should be classified in this group. Urinary antispasmodics are classified in QG04BD - *Drugs for urinary frequency and incontinence*.

QM03A MUSCLE RELAXANTS, PERIPHERALLY ACTING AGENTS

Peripherally acting muscle relaxants such as curare alkaloids and suxamethonium should be classified in this group. The drugs in this group are mainly used together with anesthetics.

QM03AA Curare alkaloids

QM03AB Choline derivatives

QM03AC Other quaternary ammonium compounds

Sugammadex indicated for reversal of neuromuscular blockade induced by rocuronium or vecuronium is classified in QV03AB - *Antidotes*.

QM03AX Other muscle relaxants, peripherally acting agents

QM03B MUSCLE RELAXANTS, CENTRALLY ACTING AGENTS

Centrally acting muscle relaxants should be classified in this group. The group is subdivided according to chemical structure.

Combinations with NSAIDs (QM01A), analgesics (QN02B) or corticosteroids (QH02A) are classified here.

QM03BA Carbamic acid esters

QM03BB Oxazol, thiazine, and triazine derivatives

QM03BC Ethers, chemically close to antihistamines

Orphenadrine citrate is classified here. Preparations containing orphenadrine chloride are classified in QN04AB - *Ethers, chemically close to antihistamines*. Combinations with e.g. paracetamol are classified in this group at separate 5th levels by using the 50-series.

QM03BX Other centrally acting agents

QM03C MUSCLE RELAXANTS, DIRECTLY ACTING AGENTS
QM03CA Dantrolene and derivatives

QM04 ANTIGOUT PREPARATIONS
QM04A ANTIGOUT PREPARATIONS
QM04AA Preparations inhibiting uric acid production
QM04AB Preparations increasing uric acid excretion
QM04AC Preparations with no effect on uric acid metabolism
QM04AX Other antigout preparations

QM05 DRUGS FOR TREATMENT OF BONE DISEASES

See also:
QA11CC - *Vitamin D and analogues*
QA12A - *Calcium*
QA12AX - *Calcium, combinations with vitamin D and/or other drugs*
QH05BA - *Calcitonins*

QM05B DRUGS AFFECTING BONE STRUCTURE AND MINERALIZATION
QM05BA Bisphosphonates
QM05BB Bisphosphonates, combinations
QM05BC Bone morphogenetic proteins
QM05BX Other drugs affecting bone structure and mineralization

QM09 OTHER DRUGS FOR DISORDERS OF THE MUSCULO-SKELETAL SYSTEM
QM09A OTHER DRUGS FOR DISORDERS OF THE MUSCULO-SKELETAL SYSTEM

Preparations used in disorders of the musculo-skeletal system, which cannot be classified in the preceding groups, should be assigned to this group.

QM09AA Quinine and derivatives

QM09AB Enzymes

QM09AX Other drugs for disorders of the musculo-skeletal system

Hyaluronic acid injection for intraarticular administration is classified in this group.

QN NERVOUS SYSTEM

QN01 ANESTHETICS

A Anesthetics, general
B Anesthetics, local

QN02 ANALGESICS

A Opioids
B Other analgesics and antipyretics
C Antimigraine preparations

QN03 ANTIEPILEPTICS

A Antiepileptics

QN04 ANTI-PARKINSON DRUGS

A Anticholinergic agents
B Dopaminergic agents

QN05 PSYCHOLEPTICS

A Antipsychotics
B Anxiolytics
C Hypnotics and sedatives

QN06 PSYCHOANALEPTICS

A Antidepressants
B Psychostimulants, agents used in ADHD and nootropics
C Psycholeptics and psychoanaleptics in combination
D Anti-dementia drugs

QN07 OTHER NERVOUS SYSTEM DRUGS

A Parasympathomimetics
B Drugs used in addictive disorders
C Antivertigo preparations
X Other nervous system drugs

QN51 PRODUCTS FOR ANIMAL EUTHANASIA

A Products for animal euthanasia

QN NERVOUS SYSTEM

Preparations affecting the nervous system, both centrally and peripherally, are classified in this group. Group headings are kept consistent with the ATC system. Owing to interspecies differences between animals and humans, the grouping of agents and the corresponding names of the groups may not always appear appropriate. For example, agents in QN05A - *Antipsychotics*, may more commonly be used as sedatives, tranquillizers or even antiemetics in veterinary medicine. Nevertheless, to minimize confusion between ATC and ATCvet, the group headings used in the ATC system will be preserved. Exceptions and further information will be found under each subgroup heading.

QN01 ANESTHETICS

QN01A ANESTHETICS, GENERAL

Agents which produce general anesthesia, surgical analgesia or neuroleptanalgesia should be classified in this group. Benzodiazepine derivatives are classified in QN05BA or QN05CD.

See also QM03A - *Muscle relaxants, peripherally acting agents*.

QN01AA Ethers

QN01AB Halogenated hydrocarbons

QN01AF Barbiturates, plain

Barbiturates used as anesthetics should be classified in this group.

Barbiturates used as hypnotics/sedatives and as premedication, see

QN05CA - *Barbiturates, plain*. Phenobarbital is classified in QN03AA - *Barbiturates and derivatives*.

QN01AG Barbiturates in combination with other drugs

Only preparations used as anesthetics are classified in this group. See also QN05CB - *Barbiturates, combinations*.

QN01AH Opioid anesthetics

Opioid anesthetics in combination with other anesthetics are classified in this group.

QN01AX Other general anesthetics

Various plain and combined drugs used to produce anesthesia/analgesia, which cannot be classified in the preceding groups are classified in this group.

QN01B ANESTHETICS, LOCAL

Local anesthetics in this context means anesthetics which only affect a local area, as opposed to general anesthetics affecting the entire body. For example, creams, plasters and sprays containing lidocaine and prilocaine used as anesthetics in the skin are classified in this group.

Combinations with e.g. epinephrine are classified in separate 5th levels using the 50-series codes or, if not available, using the ATCvet 5th level code 99.

Local anesthetics for dermatological use, such as treatment of pruritus, minor burns or insect stings, are classified in QD04AB - *Anesthetics for topical use*.

Stomatologicals with anesthetics, see QA01AD.

Throat products with anesthetics, see QR02AD - *Anesthetics, local*.

Ophthalmological anesthetics, see QS01HA.

QN01BA Esters of aminobenzoic acid

QN01BB Amides

Lidocaine and prilocaine, for example, are classified in this group. Lidocaine injections used as antiarrhythmics are classified in QC01BB - *Antiarrhythmics, class Ib*.

The combination of lidocaine and bupivacaine, with cetrimide and epinephrine is classified in QN01BB20 *combinations*.

QN01BC Esters of benzoic acid

QN01BX Other local anesthetics

QN02 ANALGESICS

General analgesics and antipyretics should be classified in this group.

All salicylic acid derivatives except combinations with corticosteroids (QM01B) or opioids (QN02AJ) are classified in QN02BA - *Salicylic acid and derivatives*, as it is difficult to differentiate between the use of salicylates in rheumatic conditions and other therapeutic uses of salicylates.

All plain propionic acid derivatives (e.g. ibuprofen) are classified in QM01A - *Antiinflammatory and antirheumatic products, non-steroids*, even if they are only intended for use as pain relief.

There are a number of combined products which contain analgesics and psycholeptics. These are classified in QN02 - *Analgesics*, since pain relief must be regarded as the main indication. Analgesics used for specific indications are classified in the relevant ATCvet groups.

E.g.:
QM01 - *Antiinflammatory and antirheumatic products*
QM02A - *Topical products for joint and muscular pain*
QM03 - *Muscle relaxants*

Lidocaine indicated for postherpetic pain is classified in QN01BB.

QN02A OPIOIDS

Strong analgesics of the opiate type and analgesics with a similar structure or action are classified in this group.

Combinations with antispasmodics are classified in QN02AG - *Opioids in combination with antispasmodics*.

QN02AA Natural opium alkaloids

This group includes natural and semi-synthetic opiates.

All plain morphine preparations are classified in this group.

Opium, see also QA07DA - *Antipropulsives*.

Plain codeine preparations are classified in QR05D - *Cough suppressants, excl. combinations with expectorants*, while dihydrocodeine is classified in QN02AA. Codeine or dihydrocodeine in combination with other analgesics or NSAIDs are classified in QN02AJ - *Opioids in combination with non-opioid analgesics*.

Other combinations with e.g. caffeine, antihistamines and anticholinergic agents are classified in QN02AA. Combinations of codeine with psycholeptics are classified in QN02AA79.

QN02AB Phenylpiperidine derivatives

Fentanyl formulations for parenteral use are classified in QN01AH - *Opioid anesthetics*.

QN02AC Diphenylpropylamine derivatives

Dextropropoxyphene, for example, should be classified in this group. Dextropropoxyphen in combination with a muscle relaxant is classified in QM03B - *Muscle relaxants, centrally acting agents*.

In the ATCvet system methadone should be classified in QN02AC90.

QN02AD Benzomorphan derivatives

QN02AE Oripavine derivatives

Buprenorphine, for example, is classified in this group.

QN02AF Morphinan derivatives

QN02AG Opioids in combination with antispasmodics

Preparations are classified at 5th levels according to the analgesic. At each level different antispasmodics may occur.

QN02AJ Opioids in combination with non-opioid analgesics

Includes combinations with opioids and other non-opioid analgesics (e.g. paracetamol, acetylsalicylic acid or NSAIDs). At each 5th level other active ingredients such as e.g. caffeine, vitamins and antihistamines are allowed.

Various combinations of codeine with other analgesics are included in QN02AJ09 - *codeine and other non-opioid analgesics*. For example, combinations containing three analgesic components (codeine, paracetamol and ibuprofen) are classified in QN02AJ09.

Various combinations of tramadol with other analgesics are included in QN02AJ15 - *tramadol and other non-opioid analgesics*. For example, combinations containing tramadol and ibuprofen (or ketorolac or diclofenac) are classified in QN02AJ15.

Combinations of codeine, non-opioid analgesics and psycholeptics are classified in QN02AA79 - *codeine, combinations with psycholeptics*. Other analgesics may be included in the 70-series codes.

All plain and combination products containing dextropropoxyphen are classified in QN02AC.

QN02AX Other opioids

Opioids, which cannot be classified in the preceding groups, should be assigned to this group.

QN02B OTHER ANALGESICS AND ANTIPYRETICS

See general considerations under QN02.

Combinations with opioids should be classified in QN02AJ - *Opioids in combination with non-opioid analgesics*. Combinations with codeine, non-opioid analgesics and psycholeptics are classified in QN02AA79.

Combinations with opioids and antispasmodics are classified in QN02AG - *Opioids in combination with antispasmodics*.

Combinations with muscle relaxants are classified in QM03B.

Combined preparations which contain more than one analgesic should be classified using the following ranking:

1. Phenacetin
2. Bucetin
3. Dipyrocetyl
4. Paracetamol
5. Acetylsalicylic acid
6. Phenazone
7. Salicylamide
8. Propyphenazone

This means that a product containing paracetamol and phenazone should be classified in QN02BE51 - *paracetamol, combinations excluding psycholeptics* and not in QN02BB51 - *phenazone, combinations excluding psycholeptics*.

Dextropropoxyphene, plain and in combination with other analgesics, is classified in QN02AC - *Diphenylpropylamine derivatives*.

Preparations are subdivided on the 4th level according to their chemical structure.

QN02BA Salicylic acid and derivatives

All salicylic acid derivatives, including some commonly regarded as non-steroidal antiinflammatory drugs, e.g. diflunisal, are classified in this group. See comment under QN02. Salicylic acid derivatives in combination with corticosteroids are assigned to QM01B – *Antiinflammatory/antirheumatic agents in combination.*

QN02BB Pyrazolones

QN02BE Anilides

Combinations of paracetamol and e.g. ibuprofen are classified in QN02BE51.

QN02BF Gabapentinoids

QN02BG Other analgesics and antipyretics

Analgesics, which cannot be classified in the preceding groups, should be assigned to this group.

QN02C ANTIMIGRAINE PREPARATIONS
QN02CA Ergot alkaloids
QN02CB Corticosteroid derivatives
QN02CC Selective serotonin ($5HT_1$) agonists
QN02CD Calcitonin gene-related peptide (CGRP) antagonists
QN02CX Other antimigraine preparations

QN03 ANTIEPILEPTICS
QN03A ANTIEPILEPTICS

Preparations used in the treatment of epilepsy should be classified in this group. The group is subdivided on the 4th level according to chemical structure.

Combined preparations are classified in separate 5th level groups using the corresponding 50-series codes or, if not available, using the 5th level code 99.

QN03AA Barbiturates and derivatives

Primidone and phenobarbital, which are used as antiepileptics and as sedatives, are among the drugs classified in this group. Barbiturates used mainly as hypnotics/sedatives are classified in QN05C - *Hypnotics and sedatives*. Combinations with phenytoin are classified in QN03AB - *Hydantoin derivatives*.

QN03AB Hydantoin derivatives

Combinations with phenytoin are classified in this group.

QN03AC Oxazolidine derivatives

QN03AD Succinimide derivatives

QN03AE Benzodiazepine derivatives

Clonazepam is classified in this group. All other benzodiazepines are classified as anxiolytics in QN05B (e.g. diazepam) or hypnotics/sedatives in QN05C (e.g. midazolam).

QN03AF Carboxamide derivatives

QN03AG Fatty acid derivatives

QN03AX Other antiepileptics

Antiepileptics which cannot be classified in the preceding groups should be assigned to this group.

Gabapentin and pregabalin are classified in QN02BF - *Gabapentionoids.*

QN04 ANTI-PARKINSON DRUGS

This group comprises preparations used in the treatment of Parkinson's disease and related conditions, including drug-induced parkinsonism.

Selegiline for veterinary use is given the 5th level code QN06AX90.

QN04A ANTICHOLINERGIC AGENTS
QN04AA Tertiary amines
QN04AB Ethers chemically close to antihistamines
QN04AC Ethers of tropine or tropine derivatives

QN04B DOPAMINERGIC AGENTS
QN04BA Dopa and dopa derivatives
QN04BB Adamantane derivatives
QN04BC Dopamine agonists

In the ATCvet system apomorphine and ropinirole for induction of emesis in dogs are classified in QV03AB - *Antidotes*.

QN04BD Monoamine oxidase B inhibitors

QN04BX Other dopaminergic agents

QN04C OTHER ANTIPARKINSON DRUGS
QN04CX Other antiparkinson drugs

QN05 PSYCHOLEPTICS

The group is divided into therapeutic subgroups:
QN05A - *Antipsychotics*
QN05B - *Anxiolytics*
QN05C - *Hypnotics and sedatives*

QN05A ANTIPSYCHOTICS

Preparations with antipsychotic actions (i.e. neuroleptics) should be classified in this group. In veterinary medicine, agents in this group may be used, for example, as sedatives, anxiolytics, as pre-anesthetics and even anti-emetics, depending on the animal and the dose. Azaperone used as an anesthetic should be classified in QN01AX - *Other general anesthetics*. Selegiline for veterinary use is classfied in QN06AX90.

The group is subdivided mainly on the basis of chemical structure.

QN05AA Phenothiazines with aliphatic side-chain

Acepromazine and chlorpromazine, for example, are classified in this group.

QN05AB Phenothiazines with piperazine structure

QN05AC Phenothiazines with piperidine structure

QN05AD Butyrophenone derivatives

QN05AE Indole derivatives

QN05AF Thioxanthene derivatives

QN05AG Diphenylbutylpiperidine derivatives

QN05AH Diazepines, oxazepines, thiazepines and oxepines

QN05AL Benzamides

QN05AN Lithium

QN05AX Other antipsychotics

Antipsychotics, which cannot be classified in the preceding groups, should be assigned to this group.

QN05B ANXIOLYTICS

Preparations used in the treatment of anxiety and tension, e.g. benzodiazepines, should be classified in this group.

The group is subdivided on the basis of chemical structure.

QN05BA Benzodiazepine derivatives

Benzodiazepines should be classified in this group, despite the fact that in veterinary medicine these agents are often used for specific indications, e.g. as premedication for anesthesia combined with other sedatives or anesthetics, or

for indications like apetite stimulation. Benzodiazepines used mainly in the treatment of sleep disturbances in human medicine are classified in QN05C - *Hypnotics and sedatives*.

Clonazepam used in the treatment of epilepsy is classified in QN03 - *Antiepileptics*.

Benzodiazepines in combination with general anesthetics are classified in QN01A.

QN05BB Diphenylmethane derivatives

QN05BC Carbamates

QN05BD Dibenzo-bicyclo-octadiene derivatives

QN05BE Azaspirodecanedione derivatives

QN05BX Other anxiolytics

QN05C HYPNOTICS AND SEDATIVES

Preparations with mainly sedative or hypnotic actions should be classified in this group.

Melatonin receptor agonists are also classified in this group.

See also:
QN05A - *Antipsychotics*
QN05B - *Anxiolytics*
QR06A - *Antihistamines for systemic use*

Combined preparations are classified at separate 4th levels, QN05CB - *Barbiturates, combinations* and QN05CX - *Hypnotics and sedatives in combination, excl. barbiturates*.

The group is subdivided on the basis of chemical structure.

QN05CA Barbiturates, plain

Preparations used as premedication are classified in this group.

Barbiturates used in general anesthesia are classified in QN01A - *General anesthetics*.

Barbiturates used mainly in the treatment of epilepsy, e.g. phenobarbital, are classified in QN03 - *Antiepileptics*.

Combined preparations are classified in QN05CB - *Barbiturates, combinations*, see comment under QN05C.

QN05CB Barbiturates, combinations

Combined products with mainly sedative action are classified in this group.

QN05CC Aldehydes and derivatives

QN05CD Benzodiazepine derivatives

Benzodiazepines used mainly in the treatment of sleep disturbances in human medicine are classified in this group. See also
QN05BA - *Benzodiazepine derivatives*.

All midazolam medicinal products are classified here.

QN05CE Piperidinedione derivatives

QN05CF Benzodiazepine related drugs

QN05CH Melatonin receptor agonists

QN05CJ Orexin receptor antagonists

QN05CM Other hypnotics and sedatives

Drugs not classified in the preceding groups, should be assigned to this group.

QN05CX Hypnotics and sedatives in combination, excl. barbiturates

QN06 PSYCHOANALEPTICS

This group comprises antidepressants, psychostimulants, nootropics, anti-dementia drugs and combinations with psycholeptics.

QN06A ANTIDEPRESSANTS

This group comprises preparations used in the treatment of endogenous and exogenous depressions.

The group is subdivided mainly according to mode of action. The various antidepressants have different modes of action, and the classification will not reflect the exact modes of action of the various agents.

Lithium, see QN05AN - *Lithium*.

Combination with psycholeptics, see QN06C.

QN06AA Non-selective monoamine reuptake inhibitors

QN06AB Selective serotonin reuptake inhibitors

QN06AF Monoamine oxidase inhibitors, non-selective

QN06AG Monoamine oxidase A inhibitors

QN06AX Other antidepressants

This group includes antidepressants, which cannot be classified in the preceding groups.

Selegiline for veterinary use is classified here.

QN06B PSYCHOSTIMULANTS, AGENTS USED FOR ADHD AND NOOTROPICS

Some drugs used in the treatment of narcolepsy are classified here.

Nootropics are classified in QN06BX.

QN06BA Centrally acting sympathomimetics

Amfetamine is classified in this group, see comment under QA08AA - *Centrally acting antiobesity products.*

Combinations of amfetamine and dexamfetamine are classified in QN06BA01.

QN06BC Xanthine derivatives

Caffeine in combination with respiratory stimulants is classified in QR07AB.

Systemic veterinary products containing propentofylline are classified in QC04AD.

QN06BX Other psychostimulants and nootropics

This group comprises substances regarded as nootropics.

Psychostimulants, which cannot be classified in the preceding groups, are also classified here.

Cyprodenate (deanol cyclohexylpropionate) is classified in QN06BX04.

QN06C PSYCHOLEPTICS AND PSYCHOANALEPTICS IN COMBINATION

Combinations of e.g. antidepressants and anxiolytics are classified in this group.

QN06CA Antidepressants in combination with psycholeptics

Preparations are classified at 5th levels according to the antidepressant. At each level various psycholeptics may occur.

QN06CB Psychostimulants in combination with psycholeptics

QN06D ANTI-DEMENTIA DRUGS

QN06DA Anticholinesterases

QN06DX Other anti-dementia drugs

QN07 OTHER NERVOUS SYSTEM DRUGS

Other nervous system drugs which cannot be classified under the preceding 2nd level codes in ATCvet group QN should be classified in this group.

QN07A PARASYMPATHOMIMETICS

QN07AA Anticholinesterases

Cholinergics in glaucoma, QS01EB - *Parasympathomimethics*.

QN07AB Choline esters

QN07AX Other parasympathomimetics

Pilocarpine is classified in this group. For ophtalmological use, see QS01EB - *Parasympathomimetics*.

QN07B DRUGS USED IN ADDICTIVE DISORDERS
Substances normally used exclusively in human medicine.

QN07BA Drugs used in nicotine dependence

QN07BB Drugs used in alcohol dependence

QN07BC Drugs used in opioid dependence

Methadone is classified here in the human ATC system. ATCvet products are classified in QN02AC90.

QN07C ANTIVERTIGO PREPARATIONS

QN07CA Antivertigo preparations

Cinnarizine in combination with diphenhydramine teoclate or dihydroergocristine are classified in QN07CA52.

QN07X OTHER NERVOUS SYSTEM DRUGS

QN07XA Gangliosides and ganglioside derivatives

QN07XX Other nervous system drugs

This group contains substances, which cannot be classified in the preceding groups.

Calcium, magnesium and potassium salts of oxybate are classified in QN07XX04 - *sodium oxybate*.

QN51 PRODUCTS FOR ANIMAL EUTHANASIA

Preparations intended for animal euthanasia should be classified in this group.

QN51A PRODUCTS FOR ANIMAL EUTHANASIA

QN51AA Barbiturates

Combinations of barbiturates are classified using the 5th level 30-series. Barbiturates in combination with other agents are classified in separate 5th level groups using the corresponding 50-series codes according to the barbiturate included.

QN51AX Other products for animal euthanasia

QP ANTIPARASITIC PRODUCTS, INSECTICIDES AND REPELLENTS

QP51 ANTIPROTOZOALS

A Agents against protozoal diseases
B Agents against coccidiosis
C Agents against amoebosis and histomonosis
D Agents against leishmaniosis and trypanosomosis
E Agents against babesiosis and theileriosis
X Other antiprotozoal agents

QP52 ANTHELMINTICS

A Anthelmintics

Optional classification, see comment on QP52
B Agents against trematodosis
C Agents against nematodosis
D Agents against cestodosis
X Other anthelmintic agents

QP53 ECTOPARASITICIDES, INSECTICIDES AND REPELLENTS

A Ectoparasiticides for topical use, incl. insecticides
B Ectoparasiticides for systemic use
G Repellents

QP54 ENDECTOCIDES

A Macrocyclic lactones

QP ANTIPARASITIC PRODUCTS, INSECTICIDES AND REPELLENTS

Group QP comprises antiparasitic preparations, including antiprotozoals, insecticides and repellents for local and systemic use. Substances are classified according to a chemical subdivision and may be used for several indications.

A special ATCvet classification has been established for the group QP. The ATCvet classification for group QP does not correspond to the classification for group P in the ATC system.

Optional subgroups in QP52 should be used on a national basis for special purposes, for example if some indication is very important nationally. For further information, see QP52.

Combinations of endectocides and other parasiticides are classified in QP54 - *Endectocides*.

QP51 ANTIPROTOZOALS

Antiprotozal agents are classified according to main indication in the ATCvet 3rd levels:

QP51B - *Agents against coccidiosis*
QP51C - *Agents against amoebosis and histomonosis*
QP51D - *Agents against leishmaniosis and trypanosomosis*
QP51E - *Agents against babesiosis and theileriosis*

Antiprotozoal agents which cannot be classified according to main indication are classified in QP51A.

QP51A AGENTS AGAINST PROTOZOAL DISEASES

Antiprotozal agents are classified according to main indication in the specific ATCvet 3rd levels QP51B, QP51C, QP51D, or QP51E.

Substances which cannot be classified according to main indication in QP51B-E are classified in this group. The group is subdivided at the 4th level according to chemical structure.

QP51AA Nitroimidazole derivatives

Combinations with antibacterials are classified in QJ01RA.

Combinations with sulfonamides are classified in QP51AG.

QP51AB Antimony compounds

QP51AC Nitrofuran derivatives

QP51AD Arsenic compounds

Arsenic compounds used against ectoparasites are classified in QP53AX.

QP51AE Carbanilides

Nicarbazine used as a pesticide/avicide to reduce egg-hatchability in birds are classified here.

QP51AF Aromatic diamidines

QP51AG Sulfonamides, plain and in combinations

Combinations with nitroimidazole derivatives (QP51AA) are classified here.

Combinations of pyrimethamine and sulfonamides are classified in QP51BX56.

QP51AX Other antiprotozoal agents

Antiprotozoal agents which cannot be classified in the preceding groups should be assigned to this group.

QP51B AGENTS AGAINST COCCIDIOSIS

Antiprotozals with main indication against coccidiosis are classified here.

QP51BA Sulfonamides, plain and in combinations against coccidiosis

QP51BB Ionophores against coccidiosis

QP51BC Triazines against coccidiosis

Toltrazuril and clazuril are classified in this group.

Combinations of toltrazuril and emodepside are classified in QP52AX60.

Both symmetrical and asymmetrical triazines are assigned to this group.

QP51BX Other agents against coccidiosis

Combinations of pyrimethamine and sulfonamides are classified here.

QP51C AGENTS AGAINST AMOEBIOSIS AND HISTOMONOSIS

Antiprotozals with main indication against amoebiosis and histomonosis are classified here.

QP51CA Nitroimidazole derivatives against amoebiosis and histomonosis

QP51CX Other agents against amoebiosis and histomonosis

QP51D AGENTS AGAINST LEISHMANIOSIS AND TRYPANOSOMOSIS

Antiprotozals with main indication against leishmaniosis and trypanosomosis are classified here.

QP51DF Aromatic diamidines against leishmaniosis and trypanosomosis

Different salts of pentamidine and diminazen are classified in this group.

QP51DX Other agents against leishmaniosis and trypanosomosis

Domperidone only indicated in treatment of leishmaniosis is classified here.

QP51E AGENTS AGAINST BABESIOSIS AND THEILERIOSIS

Antiprotozals with main indication against babesiosis and theileriosis are classified here.

QP51EX Other agents against babesiosis and theileriosis

QP51X OTHER ANTIPROTOZOAL AGENTS

No ATCvet 4th or 5th levels are assigned in this group.

QP52 ANTHELMINTICS

In the ATCvet system all anthelmintics are classified in ATCvet group QP52A.

If a therapeutic subdivision of anthelmintics is desired, it can be achieved using *optional 3rd level subgroups* QP52B, QP52C, QP52D and using the same chemical subdivision at the 4th and 5th levels as is used in QP52A.

Optional classification to QP52A:

QP52B - *Agents against trematodosis*
QP52C - *Agents against nematodosis*
QP52D - *Agents against cestodosis*
QP52X - *Other anthelmintic agents*

Optional subgroups should be used on a national basis for special purposes, for example if a particular indication is very important nationally, an optional level could be used.

When the ATCvet system is used for sales statistics purposes, it has to be remembered that one product must have only one ATCvet code. For such purposes, the ATCvet code for the main indication should be chosen.

QP52A ANTHELMINTICS

Anthelmintics are subdivided at the 4th level according to chemical structure.

See also: QP53B - *Ectoparasiticides for systemic use*.

Combinations with minerals are allowed at the plain 5th levels.

QP52AA Quinoline derivatives and related substances

Praziquantel in combination with emodepside, and in combination with emodepside and tigolaner are classified in QP52AA51.

QP52AB Organophosphorous compounds

QP52AC Benzimidazoles and related substances

Prodrugs to benzimidazoles, e.g. febantel, are classified in separate 5th levels.

QP52AE Imidazothiazoles

QP52AF Tetrahydropyrimidines

Combinations with tetrahydropyrimidines and moxidectin are classified in QP54AB.

QP52AG Phenol derivatives, incl. salicylanilides

QP52AH Piperazine and derivatives

QP52AX Other anthelmintic agents

Combinations of emodepside and toltrazuril are classified here, while combinations of toltrazuril and praziquantel are classified in QP52AA51.

QP53 ECTOPARASITICIDES, INSECTICIDES AND REPELLENTS

QP53A ECTOPARASITICIDES FOR TOPICAL USE, INCL. INSECTICIDES

Ectoparasitic products intended for topical application are classified in this group.

Formulations intended for topical application which are absorbed and have a systemic effect are also assigned to this group.

The combination of praziquantel, emodepside and tigolaner indicated against both endo-and ectoparasites is classified in QP52AA51 *praziquantel, combinations.*

QP53AA Sulfur-containing products

Various sulfur compounds, e.g. dixanthogen, mesulfen and disulfiram, are classified in this group.

Combinations with for example benzyl benzoate are classified in this group.

Combinations with chlorine compounds, see QP53AB.

QP53AB Chlorine-containing products

Clofenotane and lindane, for example, are classified in this group as are combinations with sulfur compounds.

QP53AC Pyrethrins and pyrethroids

Various pyrethrum products, including synthetic pyrethroids and combinations with e.g. piperonyl butoxide are classified in this group.

The combination of permethrin and imidacloprid is classified here.

The combination of permethrin and pyriproxyfen is classified here.

The combination of permethrin and fipronil is classified here.

QP53AD Amidines

The combination of amitraz and metaflumizone is classified here.

QP53AE Carbamates

QP53AF Organophosphorous compounds

QP53AG Organic acids

QP53AX Other ectoparasiticides for topical use

The combination of imidacloprid and permethrin is classified in QP53AC.

The combination of pyriproxyfen and permethrin is classified in QP53AC.

The combination of amitraz and metaflumizone is classified in QP53AD.

The combination of fipronil and permethrin is classified in QP53AC.

Combinations with eucalyptus oil, camphora and levomentol is allowed at the plain level for thymol (QP53AX22).

QP53B ECTOPARASITICIDES FOR SYSTEMIC USE

The classification is made according to the main therapeutic use.

Products for systemic use against ectoparasites are classified in this group.

Products also used as anthelmintics are classified in QP52.

QP53BB Organophosphorous compounds

QP53BC Chitin synthesis inhibitors

QP53BE Isoxazolines

Combination with isoxazolines and moxidectin are classified in QP54AB.

QP53BX Other ectoparasiticides for systemic use

QP53G REPELLENTS

Products put on the animal to repel insects are classified in this group.

QP53GX Various repellents

QP54 ENDECTOCIDES

Endectocides, both for systemic and topical use, are classified in this group.

Combinations of endectocides and other parasiticides are classified here.

QP54A MACROCYCLIC LACTONES

QP54AA Avermectines

QP54AB Milbemycins

QP54AX Other macrocyclic lactones

QR RESPIRATORY SYSTEM

QR01 NASAL PREPARATIONS

A Decongestants and other nasal preparations for topical use
B Nasal decongestants for systemic use

QR02 THROAT PREPARATIONS

A Throat preparations

QR03 DRUGS FOR OBSTRUCTIVE AIRWAY DISEASES

A Adrenergics, inhalants
B Other drugs for obstructive airway diseases, inhalants
C Adrenergics for systemic use
D Other systemic drugs for obstructive airway diseases

QR05 COUGH AND COLD PREPARATIONS

C Expectorants, excl. combinations with cough suppressants
D Cough suppressants, excl. combinations with expectorants
F Cough suppressants and expectorants, combinations
X Other cold preparations

QR06 ANTIHISTAMINES FOR SYSTEMIC USE

A Antihistamines for systemic use

QR07 OTHER RESPIRATORY SYSTEM PRODUCTS

A Other respiratory system products

QR RESPIRATORY SYSTEM

Preparations for the treatment of diseases in the respiratory system, i.e. the nose, throat and lungs, are classified in this group. Their therapeutic use and hence their classification are based either on the active substance or on the route of administration and formulation.

Corticosteroids and cromoglicate preparations formulated as nasal sprays, nasal drops or nasal inhalants for topical treatment or prevention of allergic rhinitis are classified in QR01A - *Decongestants and other nasal preparations for topical use*. Corticosteroids for systemic use, however, would be classified in QH02 - *Corticosteroids for systemic use*. Cromoglicate, formulated as a nebulizer and used as an antiasthmatic, would be classified in QR03BC01.

Preparations for nasal administration for systemic use, e.g. oxytocin, are classified in QH - *Systemic hormonal preparations, excl. sex hormones and insulins.*

The group QR includes, for example, opium alkaloids and derivates used as cough suppressants (noscapine), acetylcysteine used a mucolytic, adrenergics for systemic use indicated for bronchial asthma (clenbuterol) and antihistamines (piperazine derivates) for systemic use, used in motion sickness.

The use of above-mentioned preparations in veterinary medicine is well established, but for many of the remaining preparations within this group the classification is based on the ATC classification for human medicine.

QR01 NASAL PREPARATIONS

QR01A DECONGESTANTS AND OTHER NASAL PREPARATIONS FOR TOPICAL USE

QR01AA Sympathomimetics, plain

QR01AB Sympathomimetics, combinations excl. corticosteroids

QR01AC Antiallergic agents, excl. corticosteroids

QR01AD Corticosteroids

QR01AX Other nasal preparations

ATCvet level QR01AX10 is an old level where rather obsolete nasal preparations and sodium chloride nasal products are classified. The level QR01AX30 is for nasal combination products which cannot be classified in the preceding groups.

QR01B NASAL DECONGESTANTS FOR SYSTEMIC USE

QR01BA Sympathomimetics

QR02 THROAT PREPARATIONS

Throat preparations and mouth preparations are classified in the groups QR02 and QA01 according to assumed main therapeutic use. Preparations used in common minor infections of mouth and throat are classified in QR02, while preparations used in gingivitis, stomatitis etc. are classified in QA01 - *Stomatological preparations*.

Expectorants administered as tablets are classified in QR05 - *Cough and cold preparations.*

QR02A THROAT PREPARATIONS

QR02AA Antiseptics

See also QA01AB - *Antiinfectives and antiseptics for local oral treatment*.

At each 5th level combinations with anesthetics are allowed.

QR02AB Antibiotics

See also QA01AB - *Antiinfectives and antiseptics for local oral treatment*.

Combinations of antibiotics and antiseptics are classified in this group.

Antibiotics for systemic use, see QJ01.

QR02AD Anesthetics, local

This group comprises e.g. throat lozenges containing local anesthetics. Dental anesthetics for local application are classified in QN01B - *Anesthetics, local*.

Combinations of anesthetics and antiseptics/antibiotics are classified in QR02AA/QR02AB respectively.

QR02AX Other throat preparations

Combinations of benzydamine and cetylpyridinium are classified at the same 5th level as benzydamine.

QR03 DRUGS FOR OBSTRUCTIVE AIRWAY DISEASES

QR03A ADRENERGICS, INHALANTS

Adrenergics used to repress labour are classified in QG02CA - *Sympathomimetics, labour repressants*.

QR03AA Alpha- and beta-adrenoreceptor agonists

QR03AB Non-selective beta-adrenoreceptor agonists

QR03AC Selective beta-2-adrenoreceptor agonists

QR03AH Combinations of adrenergics

QR03AK Adrenergics in combination with corticosteroids or other drugs, excl. anticholinergics

QR03AL Adrenergics in combinations with anticholinergics incl. triple combinations with corticosteroids

QR03B OTHER DRUGS FOR OBSTRUCTIVE AIRWAY DISEASES, INHALANTS

All drugs for obstructive airway diseases for inhalation, excluding adrenergics (QR03A), should be classified in this group.

QR03BA Glucocorticoids

Combinations with adrenergics are classified in QR03AK.

Combinations with anticholinergics are classified in QR03BB.

The combination of ciclosonide and tiotropium bromide is classified in QR03BB54.

Fluticasone propionate is classified in QR03BA05.

QR03BB Anticholinergics

Combinations with adrenergics are classified in QR03AL.

The combination of tiotropium bromide and ciclosonide is classified in QR03BB54.

QR03BC Antiallergic agents, excl. corticosteroids

QR03BX Other drugs for obstructive airway diseases, inhalants

QR03C ADRENERGICS FOR SYSTEMIC USE

Adrenergics for systemic use indicated for e.g. bronchial asthma should be classified in this group.

Fenoterol and clenbuterol infusions only intended for repressing preterm labour are classified in QG02CA.

Combinations with xanthines are classified in QR03DB. Combinations with other drugs for obstructive airway diseases belonging to QR03D excl. xanthines are classified in QR03CK.

QR03CA Alpha- and beta-adrenoreceptor agonists

Ephedrine injections are classified in QC01CA.

QR03CB Non-selective beta-adrenoreceptor agonists

QR03CC Selective beta-2-adrenoreceptor agonists

The combination of clenbuterol and dembrexine is classified in QR03CC90.

QR03CK Adrenergics and other drugs for obstructive airway diseases

Combinations of adrenergics with other drugs for obstructive airway diseases belonging to QR03D (excl. xanthines, see QR03DB) are classified in this group.

QR03D OTHER SYSTEMIC DRUGS FOR OBSTRUCTIVE AIRWAY DISEASES

Theophyllines are classified in this group. Other respiratory stimulants are classified in QR07AB - *Respiratory stimulants*.

See also:
QH02 - *Corticosteroids for systemic use*

QR03DA Xanthines

A number of preparations containing theophylline, for example, are classified in this group, even if they do not have asthma as an indication.

Combinations of xanthines and other agents are classified in separate 5th level groups using the corresponding 50-series codes (e.g. mucolytics), except combinations with adrenergics, see QR03DB - *Xanthines and adrenergics*.

Combinations of two or more substances within the 4th level group are classified using the ATCvet 5th level code 20.

QR03DB Xanthines and adrenergics

QR03DC Leukotriene receptor antagonists

QR03DX Other systemic drugs for obstructive airway diseases

Preparations, which cannot be classified in the preceding groups, should be assigned to this group.

QR05 COUGH AND COLD PREPARATIONS

A large number of preparations, most of which are combined preparations, are classified in this group. See also QR01 - *Nasal preparations*, QR02 - *Throat preparations* and QR03D - *Other systemic drugs for obstructive airway diseases*.

Cold preparations containing therapeutic levels of antiinfectives should be classified in ATCvet group QJ - *Antiinfectives for systemic use*.

QR05C EXPECTORANTS, EXCL. COMBINATIONS WITH COUGH SUPPRESSANTS

Preparations containing expectorants and mucolytics should be classified in this group.

Combined preparations are classified at separate 5th levels using the ATCvet 5th level code 10. These may also contain e.g. antihistamines. Combinations with adrenergics, e.g. ambroxol and clenbuterol, used in e.g. bronchial asthma are classified in QR03C - *Adrenergics for systemic use*.

Preparations which contain small amounts of herbal extracts, menthol etc., are classified as plain preparations.

QR05CA Expectorants

All combined products comprising expectorants should be assigned to QR05CA10 - *combinations of expectorants*.

QR05CB Mucolytics

Mesna for i.v. administration, used for the prophylaxis of urothelial toxicity, is classified in QV03AF. Mesna used as a mucolytic agent is classified here.

Acetylcystein used as a mucolytic agent (e.g. administered by a nebulizer) is classified here.

All combined products comprising mucolytics should be assigned to QR05CB10. Combinations with xanthines should be classified in QR03DA - *Xanthines*.

QR05D COUGH SUPPRESSANTS, EXCL. COMBINATIONS WITH EXPECTORANTS

Combined products are classified at separate 5th levels using the 5th level code 20 (QR05DA20 or QR05DB20). These may contain bronchodilating agents, antihistamines etc. Combinations with expectorants are classified in QR05F. Preparations which contain small amounts of herbal extracts, menthol etc. are classified as plain preparations.

QR05DA Opium alkaloids and derivatives

Plain codeine, also when used as an analgesic, is classified in this group.

Plain dihydrocodeine products, also used as cough suppressants, are classified in QN02AA.

All combined preparations containing opium alkaloids and derivatives are assigned to QR05DA20 - *combinations of opium alkaloids and derivatives*.

QR05DB Other cough suppressants

Levocloperastine is classified together with cloperastine in QR05DB21.

All combined preparations comprising antitussives chemically close to local anesthetics are assigned to QR05DB20 - *combinations*.

QR05F COUGH SUPPRESSANTS AND EXPECTORANTS, COMBINATIONS

In addition to cough suppressants and expectorants, the preparations may contain bronchodilating agents, antihistamines etc.

Combinations which contain respiratory stimulants, e.g. theophylline, should be classified in QR03DA - *Xanthines*.

QR05FA Opium derivatives and expectorants

QR05FB Other cough suppressants and expectorants

QR05X OTHER COLD PREPARATIONS

Cold preparations with various ingredients, which cannot be classified in the preceding groups, should be assigned to this group.

QR06 ANTIHISTAMINES FOR SYSTEMIC USE

QR06A ANTIHISTAMINES FOR SYSTEMIC USE

Antihistamines could be classified in QD - *Dermatologicals*, QR - *Respiratory system* or QS - *Sensory organs*.

Plain and combined antihistamine preparations for systemic use should be classified in this group. Antihistamines used in motion sickness are also classified in this group. Other preparations used in motion sickness, see QA04 - *Antiemetics and antinauseants*.

Combined preparations (including combinations with hydroxyzine) are classified in separate 5th levels using the corresponding 50-series codes.

Combinations of antihistamines are classified at a separate 4th level, QR06AK - *Combinations of antihistamines*.

Antihistamines are also included in combined products classified in other groups:
Combinations with xanthines are classified in QR03DA.
Combinations with nasal decongestants for systemic use are classified in QR01B.
Combinations with expectorants are classified in QR05C.
Combinations with cough suppressants are classified in QR05D.

The group is subdivided according to chemical structure.

QR06AA Aminoalkyl ethers

Combinations of diphenhydramine and dimenhydrinate are classified in QR06AA52 - *diphenhydramine, combinations*.

Combinations of cinnarizine and dimenhydrinate (diphenhydramine teoclate) are classified in QN07CA - *Antivertigo preparations*.

QR06AB Substituted alkylamines

QR06AC Substituted ethylene diamines

QR06AD Phenothiazine derivatives

QR06AE Piperazine derivatives

Cinnarizine and flunarizine are classified in QN07C - *Antivertigo preparations*.

QR06AK Combinations of antihistamines

QR06AX Other antihistamines for systemic use

QR07 OTHER RESPIRATORY SYSTEM PRODUCTS

QR07A OTHER RESPIRATORY SYSTEM PRODUCTS

Lung surfactants and respiratory stimulants should be classified in this group.

QR07AA Lung surfactants

Surface-tension lowering agents used in respiratory distress syndrome should be classified in this group. Combinations of different lung surfactants are assigned to QR07AA30 - *combinations*.

QR07AB Respiratory stimulants

Centrally acting respiratory stimulants mainly used for asthma and similar respiratory diseases (e.g. theophylline) are classified in QR03D - *Other systemic drugs for obstructive airway diseases*. Other respiratory stimulants are classified here. This group includes plain and combined preparations.

QR07AX Other respiratory system products

QS SENSORY ORGANS

QS01 OPHTHALMOLOGICALS

- *A Antiinfectives*
- *B Antiinflammatory agents*
- *C Antiinflammatory agents and antiinfectives in combination*
- *E Antiglaucoma preparations and miotics*
- *F Mydriatics and cycloplegics*
- *G Decongestants and antiallergics*
- *H Local anesthetics*
- *J Diagnostic agents*
- *K Surgical aids*
- *X Other ophthalmologicals*

QS02 OTOLOGICALS

- *A Antiinfectives*
- *B Corticosteroids*
- *C Corticosteroids and antiinfectives in combination*
- *D Other otologicals*
- *Q Antiparasitics*

QS03 OPHTHALMOLOGICAL AND OTOLOGICAL PREPARATIONS

- *A Antiinfectives*
- *B Corticosteroids*
- *C Corticosteroids and antiinfectives in combination*
- *D Other ophthalmological and otological preparations*

QS SENSORY ORGANS

Preparations for topical treatment of diseases in the sensory organs, i.e. the eyes and the ears, are classified in this group. The therapeutic main groups are classified as ophthalmologicals, group QS01, and otologicals, group QS02. Preparations used to treat both eye and ear diseases are classified in group QS03.

A formulation approved both for use in the eye/ear is classified in QS03, while formulations only licensed for use in the eye or the ear are classified in QS01 and QS02, respectively. Formulations approved for eye, ear and nose are also classified in QS03.

The therapeutic subgroups include, for example, antiinfectives, antiinflammatory agents, miotics, mydriatics, antiglaucoma preparations, surgical aids (for eyes) and local anesthetics. Some of the preparations classified as surgical aids, e.g. QS01KA - *Viscoelastic substances*, might also be classified as medical devices.

Systemic preparations for treatment of glaucoma are classified in QS01E.

QS01 OPHTHALMOLOGICALS

Most of the drugs in this group are topical preparations. Systemic preparations with clear ophthalmological indications are also classified in this group.

Small amounts of antiseptics in eye products do not influence the classification. See also QS03 - *Ophthalmological and otological preparations*.

QS01A ANTIINFECTIVES

Plain and combined antiinfective preparations for ophthalmological use should be classified in this group.

Combinations with corticosteroids are classified in QS01CA - *Corticosteroids and antiinfectives in combination*.

QS01AA Antibiotics

Combinations of different antibiotics (including sulfonamides) are classified at a separate 5th level: QS01AA30.

Combinations with other drugs (e.g. sympathomimetics) are classified at a separate 5th level: QS01AA20.

Combinations with antiinflammatory agents are classified in group QS01C - *Antiinflammatory agents and antiinfectives in combination*.

QS01AB Sulfonamides

Combinations with antibiotics are classified in QS01AA - *Antibiotics*.

QS01AD Antivirals

QS01AE Fluoroquinolones

QS01AX Other antiinfectives

Preparations for ophthalmological use, which cannot be classified in the preceding groups, should be assigned to this group. Preparations containing boric acid, even at low strengths, are classified in this group.

QS01B ANTIINFLAMMATORY AGENTS

All eye preparations with non-steroidal antiinflammatory agents and corticosteroids, plain and combinations, should be classified in this group.

Combinations with antiinfectives are classified in QS01C - *Antiinflammatory agents and antiinfectives in combination.*

QS01BA Corticosteroids, plain

QS01BB Corticosteroids and mydriatics in combination

Combinations, which in addition contain anticholinergics, are classified here.

Combinations, which in addition contain antiinfectives, are classified in QS01CB - *Corticosteroids/antiinfectives/mydriatics in combination*.

QS01BC Antiinflammatory agents, non-steroids

QS01C ANTIINFLAMMATORY AGENTS AND ANTIINFECTIVES IN COMBINATION

All eye preparations which contain corticosteroids or non-steroidal antiinflammatory agents and antiinfectives should be classified in this group. Preparations may also contain additional drugs.

QS01CA Corticosteroids and antiinfectives in combination

Preparations are classified according to the corticosteroid. Different antiinfectives may occur at each 5th level.

QS01CB Corticosteroids/antiinfectives/mydriatics in combination

Preparations are classified according to the corticosteroid. Different antiinfectives may occur at each 5th level.

QS01CC Antiinflammatory agents, non-steroids and antiinfectives in combination

QS01E ANTIGLAUCOMA PREPARATIONS AND MIOTICS

Preparations for local and systemic treatment of glaucoma should be classified in this group. Drugs used for producing miosis are classified in this group, even if the main indication is not glaucoma.

QS01EA Sympathomimetics in glaucoma therapy

Preparations containing epinephrine and pilocarpine in combination are classified in QS01EB - *Parasympathomimetics*.

QS01EB Parasympathomimetics

QS01EC Carbonic anhydrase inhibitors

Carbonic anhydrase inhibitors used for different indications are classified in this group.

QS01ED Beta blocking agents

Combinations of beta blocking agents and other substances, e.g. pilocarpine, are classified in this group, at separate 5th levels using the corresponding 50-series codes or, if not available, using the ATCvet 5th level code 99.

QS01EE Prostaglandin analogues

QS01EX Other antiglaucoma preparations

QS01F MYDRIATICS AND CYCLOPLEGICS

QS01FA Anticholinergics

Combinations with sympathomimetics are classified in this group.

Combinations with corticosteroids are classified in QS01BB - *Corticosteroids and mydriatics in combination.*

QS01FB Sympathomimetics, excl. antiglaucoma preparations

Phenylephrine at high strengths is classified in this group, see also QS01GA - *Sympathomimetics used as decongestants*. Sympathomimetics used in glaucoma therapy, see QS01EA.

QS01G DECONGESTANTS AND ANTIALLERGICS

Drugs used to treat symptoms of e.g. allergy should be classified in this group.

QS01GA Sympathomimetics used as decongestants

Sympathomimetics used as decongestants, plain and in combinations, should be classified in this group. Low-strength phenylephrine, for example, in combination with other drugs is classified in this group. See also QS01FB - *Sympathomimetics excl. antiglaucoma preparations.*

QS01GX Other antiallergics

Combinations of cromoglicic acid and antihistamines are classified in QS01GX51.

QS01H LOCAL ANESTHETICS

Topical drugs used as local anesthetics in the eye should be classified in this group. Local anesthetics for other indications are classified in QN01B - *Anesthetics, local*. Other exceptions, see comments to QN01B.

Combinations of local anesthetics and diagnostic agents, e.g. fluorescein, are classified in QS01J - *Diagnostic agents*.

QS01HA Local anesthetics

QS01J DIAGNOSTIC AGENTS

Topical drugs used for diagnosing diseases in the eye should be classified in this group. Mydriatics and cycloplegics used as diagnostic aids are classified in QS01F. Diagnostic agents for systemic use for ophthalmological diagnoses, e.g. fluorescein injection, are classified in QV04CX - *Other diagnostic agents*.

QS01JA Colouring agents

QS01JX Other ophthalmological diagnostic agents

QS01K SURGICAL AIDS

Preparations used in ophthalmological surgery should be classified in this group. Miotics are classified in QS01E - *Antiglaucoma preparations and miotics*. Mydriatics and cycloplegics are classified in QS01F.

QS01KA Viscoelastic substances

Hyaluronic acid injection used during surgical procedures on the eye is classified in this group. Hyaluronic acid injection for intra-articular administration used in the treatment of arthritis is classified in QM09A - *Other drugs for disorders of the musculo-skeletal system*.

Hypromellose is classified in this group. Hypromellose used as artificial tears, however, is classified in QS01XA20 - *artificial tears and other indifferent preparations*.

QS01KX Other surgical aids

Preparations containing for example enzymes (chymotrypsin) for use in eye surgery are classified in this group.

QS01L OCULAR VASCULAR DISORDER AGENTS

QS01LA Antineovascularisation agents

QS01X OTHER OPHTHALMOLOGICALS

Preparations which cannot be assigned to the preceding groups, e.g. artificial tears, drugs against cataract etc., should be classified in this group. All preparations containing boric acid are classified in QS01AX - *Other antiinfectives.*

QS01XA Other ophthalmologicals

Hypromellose is classified in QS01KA - *Viscoelastic substances*. However, hypromellose used in artificial tears are classified in QS01XA20.

QS02 OTOLOGICALS

Small amounts of antiseptics in otological products do not influence the classification. See also QS03 - *Opthalmological and otological preparations*.

QS02A ANTIINFECTIVES

Plain and combined antiinfective preparations for otological use should be classified in this group.

Combined preparations are classified at a separate 5th level - QS02AA30 - *antiinfectives, combinations*. This level includes combinations of different antiinfectives and combinations of antiinfectives/other substances.

Combinations with corticosteroids are classified in QS02C - *Corticosteroids and antiinfectives in combination*.

QS02AA Antiinfectives

Otological preparations containing the combination of gentamicin and dimethylsulfoxide are classified in QS02AA14 - *gentamicin*.

QS02B CORTICOSTEROIDS

All otological preparations containing corticosteroids, plain and in combination, should be classified in this group.

Combinations with antiinfectives are classified in QS02C - *Corticosteroids and antiinfectives in combination.*

QS02BA Corticosteroids

QS02C CORTICOSTEROIDS AND ANTIINFECTIVES IN COMBINATION

All otological preparations, which contain corticosteroids and antiinfectives, should be classified in this group. Preparations may also contain additional substances.

QS02CA Corticosteroids and antiinfectives in combination

The preparations are classified at separate 5th levels according to the corticosteroid. Different antiinfectives may occur at each 5th level.

QS02D OTHER OTOLOGICALS

Ear preparations, which cannot be classified in the preceding groups, should be assigned to this group.

QS02DA Analgesics and anesthetics

Preparations containing analgesics and/or local anesthetics should be classified in this group.

QS02DC Indifferent preparations

Oil-preparations, for example, used to remove ear wax are classified in this group.

QS02Q ANTIPARASITICS

Ear preparations containing antiparasitic drugs are classified in this group.

QS02QA Antiparasitics

QS03 OPHTHALMOLOGICAL AND OTOLOGICAL PREPARATIONS

Preparations, which can be used in both the eye and the ear, should be classified in this group. Small amounts of antiseptics do not influence the classification.

Formulations approved for eye, ear and nose should also be classified in QS03.

QS03A ANTIINFECTIVES

QS03AA Antiinfectives

Plain and combined antiinfective preparations for use in the eye/ear should be classified in this group.

Combined preparations are classified at a separate 5th level, QS03AA30 - *antiinfectives, combinations*. This level includes combinations of different antiinfectives and combinations of antiinfectives and other substances. Combinations with corticosteroids are classified in QS03C - *Corticosteroids and antiinfectives in combination.*

QS03B CORTICOSTEROIDS

All eye/ear products containing corticosteroids, plain and in combination, should be classified in this group. Combinations containing antiinfectives are classified in QS03C - *Corticosteroids and antiinfectives in combination*.

QS03BA Corticosteroids

QS03C CORTICOSTEROIDS AND ANTIINFECTIVES IN COMBINATION

All eye/ear preparations which contain corticosteroids and antiinfectives should be classified in this group. Preparations may also contain additional substances.

QS03CA Corticosteroids and antiinfectives in combination

The preparations are classified according to the corticosteroid. Different antiinfectives may occur at each 5th level.

QS03D OTHER OPHTHALMOLOGICAL AND OTOLOGICAL PREPARATIONS

Eye/ear preparations, which cannot be classified in the preceding groups, should be assigned to this group.

QV VARIOUS

QV01 ALLERGENS

A Allergens

QV03 ALL OTHER THERAPEUTIC PRODUCTS

A All other therapeutic products

QV04 DIAGNOSTIC AGENTS

B Urine tests
C Other diagnostic agents

QV06 GENERAL NUTRIENTS

A Diet formulations for treatment of obesity
B Protein supplements
C Infant formulas
D Other nutrients

QV07 ALL OTHER NON-THERAPEUTIC PRODUCTS

A All other non-therapeutic products

QV08 CONTRAST MEDIA

A X-ray contrast media, iodinated
B X-ray contrast media, non-iodinated
C Magnetic resonance imaging contrast media
D Ultrasound contrast media

QV09 DIAGNOSTIC RADIOPHARMAEUTICALS

A Central nervous system
B Skeleton
C Renal system
D Hepatic and reticulo endothelial system
E Respiratory system
F Thyroid
G Cardiovascular system
H Inflammation and infection detection
I Tumour detection
X Other diagnostic radiopharmaceuticals

QV10 THERAPEUTIC RADIOPHARMACEUTICALS

A Antiinflammatory agents
B Pain palliation (bone seeking agents)
C Other therapeutic radiopharmaceuticals

QV20 SURGICAL DRESSINGS

QV VARIOUS

This group is the most heterogenous one. Most preparations assigned to it cannot be classified in any other anatomical main group. Some of the preparations could also be classified as medical devices or general nutrients.

Diagnostic and therapeutic radiopharmaceuticals are classified in this group.

QV01 ALLERGENS
QV01A ALLERGENS
QV01AA Allergen extracts

QV03 ALL OTHER THERAPEUTIC PRODUCTS
QV03A ALL OTHER THERAPEUTIC PRODUCTS
QV03AB Antidotes

Sugammadex indicated for reversal of neuromuscular blockade induced by rocuronium or vecuronium is classified here.

Hydroxocobalamine is also classified in QB03BA - *Vitamin B_{12}* (cyanocobalamin and derivatives).

Medicinal charcoal is classified in QA07BA - *Charcoal preparations.*

Atropine is classified in QA03BA - *Belladonna alkaloids, tertiary amines*.

Penicillamine, which is also used in copper poisoning, is classified in QM01CC - *Penicillamine and similar agents*.

Silibinin, which is also used in amanita poisoning, is classified in QA05BA at the same 5th level as silymarin.

Anticholinesterases which are used as curare antidotes are classified in QN07AA - *Anticholinesterases.*

Combinations of oxycodone and naloxone are classified in QN02AA - *Natural opium alkaloids.*

Combinations of buprenorphine and naloxone are classified in QN07BC - *Drugs used in opioid dependence.*

QV03AC Iron-chelating agents

QV03AE Drugs for treatment of hyperkalemia and hyperphosphatemia

QV03AF Detoxifying agents for antineopastic treatment

Mesna for i.v. administration, used for the prophylaxis of urothelial toxicity, should be classified in this group. Mesna used as a mucolytic agent, however, is classified in QR05CB - *Mucolytics*.

QV03AG Drugs for treatment of hypercalcemia

Sodium cellulose phosphate should be classified here.

See also QM05 - *Drugs for treatment of bone diseases*.

Cinacalcet and evocalcet indicated for secondary hyperparathyroidism are classified in QH05BX.

QV03AH Drugs for treatment of hypoglycemia

Oral preparations containing diazoxide for the treatment of hypoglycemia should be classified in this group, while parenteral products used for treatment of hypertension are classified in QC02DA.

QV03AK Tissue adhesives

QV03AM Drugs for embolisation

QV03AN Medical gases

QV03AX Other therapeutic products

Agents which cannot be classified in the preceding groups should be assigned to this group.

Nalfurafine and difelikefalin indicated for pruritus in chronic kidney disease are classified here.

QV03AZ Nerve depressants

Ethanol used in ablation procedures is classified here.

QV04 DIAGNOSTIC AGENTS

QV04B URINE TESTS

QV04C OTHER DIAGNOSTIC AGENTS

Only substances approved as drugs and used in vivo will be included in the ATCvet classification system.

QV04CA Tests for diabetes

QV04CB Tests for fat absorption

QV04CC Tests for bile duct patency

Pancreozymin should be classified in QV04CK - *Tests for pancreatic function*.

QV04CD Tests for pituitary function

See also QV04CM - *Tests for fertility disturbances*.

QV04CE Tests for liver functional capacity

QV04CF Tuberculosis diagnostics

QV04CG Tests for gastric secretion

QV04CH Tests for renal function and ureteral injuries

QV04CJ Tests for thyreoidea function

QV04CK Tests for pancreatic function

QV04CK01 - *secretin* includes synthetic, pork, and human secretin.

QV04CL Tests for allergic diseases

See also QI - *Immunologicals*.

QV04CM Tests for fertility disturbances

Gonadorelin, for example, used for fertility disturbances is classified in this group.
See also QH01CA - *Gonadotropin-releasing hormones*.

QV04CQ Tests for mastitis

QV04CV Tests for respiratory function

QV04CX Other diagnostic agents

Aminolevulinic acid used for photodynamic diagnosis is classified in QL01XD04.

QV06 GENERAL NUTRIENTS

This group comprises nutrients for oral use. Solutions for parenteral nutrition are classified in QB05BA.

QV06A DIET FORMULATIONS FOR TREATMENT OF OBESITY

See also QA08 - *Antiobesity preparations, excl. diet products*.

QV06AA Low-energy diets

QV06B PROTEIN SUPPLEMENTS

QV06C INFANT FORMULAS

QV06CA Nutrients without phenylalanine

QV06D OTHER NUTRIENTS

This group comprises a major part of the general nutrients.

QV06DA Carbohydrates/proteins/minerals/vitamins, combinations

QV06DB Fat/carbohydrates/proteins/minerals/vitamins, combinations

QV06DC Carbohydrates

QV06DD Amino acids, incl. combinations with polypeptides

QV06DE Amino acids/carbohydrates/minerals/vitamins, combinations

QV06DF Milk substitutes

QV06DX Other combinations of nutrients

QV07 ALL OTHER NON-THERAPEUTIC PRODUCTS

QV07A ALL OTHER NON-THERAPEUTIC PRODUCTS

Solvents, diluents and solutions for blood tranfusion preparations should be classified in this group. Auxiliary preparations for performing medical examinations, e.g. plain exploration creams and lubricants, are also classified in this group.

The classifications are made according to the ATC system for human medicine.

QV07AA Plasters

Non-medicated adhesive plasters, surgical tapes etc. are classified in this group whereas liquid plasters are classified in QD02AD.

See also QD09 - *Medicated dressings*.

QV07AB Solvents and diluting agents, incl. irrigating solutions

Sterile water products and solvents for diluting or dissolving active substance are classified in this group.

QV07AC Blood transfusion, auxiliary products

Citric acid/citrate/dextrose (ACD) solutions and similar preparations are assigned to this group.

QV07AD Blood tests, auxiliary products

Solutions used as diluents or transport media for blood samples are classified in this group.

QV07AN Incontinence equipment

QV07AQ Other non-therapeutic veterinary products

QV07AR Sensitivity tests, discs and tablets

Antibiotic discs, for example, may be classified in this group.

QV07AS Stomi equipment

QV07AT Cosmetics

QV07AV Technical disinfectants

QV07AX Washing agents etc.

QV07AY Other non-therapeutic auxiliary products

Exploration creams and lubricants should be classified in this group. Creams, which contain antiseptics, are classified in QD08 - *Antiseptics and disinfectants*. Preparations for the care of teats and udder are classified in QG52.

QV07AZ Chemicals and reagents for analysis

QV08 CONTRAST MEDIA

X-ray, MRI and Ultrasound contrast media are classified in this group.

The group is subdivided according to chemical structure.

QV08A X-RAY CONTRAST MEDIA, IODINATED
QV08AA Watersoluble, nephrotropic, high osmolar X-ray contrast media
QV08AB Watersoluble, nephrotropic, low osmolar X-ray contrast media
QV08AC Watersoluble, hepatotropic, X-ray contrast media
QV08AD Non-watersoluble X-ray contrast media

QV08B X-RAY CONTRAST MEDIA, NON-IODINATED
QV08BA Barium sulfate containing X-ray contrast media

QV08C MAGNETIC RESONANCE IMAGING CONTRAST MEDIA
QV08CA Paramagnetic contrast media
QV08CB Superparamagnetic contrast media
QV08CX Other magnetic resonance imaging contrast media

QV08D ULTRASOUND CONTRAST MEDIA
QV08DA Ultrasound contrast media

The microspheres may contain various ingredients. E.g. perflutren suspension in microspheres of phospholipids is classified in QV08DA04.

Perflenapent covers structural isomers of dodecafluoropentane i.e. perflisopent.

QV09 DIAGNOSTIC RADIOPHARMACEUTICALS

An expert group has been responsible for the ATCvet classification of radiopharmaceuticals in QV09 and QV10. The group has also prepared guidelines on the classification of these products.

Radiopharmaceuticals for diagnostic use are classified in this group, while those for therapeutic use are classified in QV10. In general, 3rd level groups are defined by site of action or organ system, 4th level groups according to the radionuclide, while the 5th level code specifies the chemical substance involved. The ATCvet 5th level code defines the actual form essential in nuclear medicine procedures, which includes radionuclide and carrier molecule. Consequently, products on the market, which can often be regarded as intermediate products rather than ready-to-use radiopharmaceuticals, can be given more than one (5th level) ATCvet code, e.g. technetium (^{99m}Tc) exametazime (QV09AA01) and technetium (^{99m}Tc) labelled cells (QV09HA02).

ATCvet codes are not assigned for radionucleotide precursors which are used only in the radiolabelling of another substance prior to administration.

QV09A CENTRAL NERVOUS SYSTEM

This group comprises preparations used in CNS investigations in diagnostic nuclear medicine.

QV09AA Technetium (^{99m}Tc) compounds

QV09AB Iodine (^{123}I) compounds

QV09AX Other central nervous system diagnostic radiopharmaceuticals

QV09B SKELETON

This group comprises preparations used in bone imaging. Radiopharmaceuticals used for the investigation of bone marrow are classified in QV09D - *Hepatic and reticulo endothelial system.*

QV09BA Technetium (^{99m}Tc) compounds

This group comprises various technetium bisphosphonates and pyrophosohates.

QV09C RENAL SYSTEM

This group comprises preparations used for the visualisation of the kidneys and urinary tract and preparations for functional studies of the renal system.

QV09CA Technetium (^{99m}Tc) compounds

This group comprises technetium compunds given intravenously. Technetium compounds used in aerosols for inhalation are classified in QV09E - *Respiratory system*. Technetium-succimer prepared as 'pentavalent' is classified in QV09I - *Tumour detection*.

QV09CX Other renal system diagnostic radiopharmaceuticals

QV09D HEPATIC AND RETICULO ENDOTHELIAL SYSTEM

This group comprises radiopharmaceuticals for the imaging of liver, gall bladder, spleen, lymphatic system and bone marrow.

QV09DA Technetium (^{99m}Tc) compounds

This group contains technetium iminodiacetic acid derivatives for cholescintigraphy.

QV09DB Technetium (^{99m}Tc) particles and colloids

This group contains technetium colloidal and particle containing preparations for the scintigraphy of liver, spleen, lymphatic system and bone marrow. Also orally administered preparations used for gastrointestinal tract imaging (gastric emptying, reflux etc.) are classified in this group.

Preparations containing larger particles that are used for lung perfusion studies are classified in QV09E - *Respiratory system*. Denaturated labelled erythrocytes for spleen scintigraphy are classified in QV09G - *Cardiovascular system*.

QV09DX Other hepatic and reticulo endothelial system diagnostic radiopharmaceuticals

QV09E RESPIRATORY SYSTEM

This group comprises radiopharmaceuticals for the lung ventilation and lung perfusion studies.

QV09EA Technetium (^{99m}Tc), inhalants

Technetium preparations for inhalation are classified in this group. Preparations with other indications when given intravenously are classified according to such indications, e.g technetium-pentetate is classified in QV09C - *Renal system*.

QV09EB Technetium (^{99m}Tc), particles for injection

Preparations containing smaller particles or colloids that are used for RES function are classified in QV09D - *Hepatic and reticulo endothelial system*.

QV09EX Other respiratory system diagnostic radiopharmaceuticals

QV09F THYROID

This group comprises radiopharmaceuticals used for thyroid imaging.

Thalliumchloride and technetium-sestamibi used for parathyroid imaging are classified in QV09G - *Cardiovascular system*.

QV09FX Various thyroid diagnostic radiopharmaceuticals

Technetium-pertechnetate used for the scintigraphy of salivary glands and Meckels diverticulum is classified in this group. Technetium-pentavalent succimer used in medullary thyroid carcinoma is classified in QV09I - *Tumour detection*. Sodium iodide (^{131}I) in low dose is classified here. Sodium iodide (^{131}I) in high dose for therapy is classified in QV10X - *Other therapeutic radiopharmaceuticals.*

QV09G CARDIOVASCULAR SYSTEM

This group comprises radiopharmaceuticals for mycardial scintigraphy, ejection fraction measurements, and vascular disorders.

QV09GA Technetium (^{99m}Tc) compounds

Labelled cells (erythrocytes) for the investigation of cardiocvascular function are classified in this group. No subdivision is made between *in vitro* or *in vivo* labelling.

Pertechnetate for thyroid imaging is classified in QV09F - *Thyroid*.

QV09GB Iodine (^{125}I) compounds

QV09GX Other cardiovascular system diagnostic radiopharmaceuticals

QV09H INFLAMMATION AND INFECTION DETECTION

This group comprises agents for the detection of inflammation and infection. Labelled blood cells are classified in this group. Agents that are used for the labelling of these cells can also be classified elsewhere, e.g. technetium-exametazime is classified in QV09A - *Central nervous system*. No subdivision is made for the type of labelled cells (erythrocytes, granulocytes or autologous etc.).

QV09HA Technetium (^{99m}Tc) compounds

QV09HB Indium (^{111}In) compounds

QV09HX Other diagnostic radiopharmaceuticals for inflammation and infection detection

QV09I TUMOUR DETECTION

This group comprises monoclonal antibodies and other compounds used for tumour detection.

QV09IA Technetium (^{99m}Tc) compounds

QV09IB Indium (^{111}In) compounds

QV09IX Other diagnostic radiopharmaceuticals for tumour detection

Gallium-citrate used for non-specific tumour localisation is classified in QV09H - *Inflammation and infection detection*. Thallium-chloride used for tumour detection is classified in QV09G - *Cardiovascular system*. Iobenguane (^{131}I) in low dose is classified here while high dose for therapy is classified in QV10X - *Other therapeutic radiopharmaceuticals*.

QV09X OTHER DIAGNOSTIC RADIOPHARMACEUTICALS

This group contains various diagnostic radiopharmaceuticals, which cannot be classified in the preceding groups.

QV09XA Iodine (^{131}I) compounds

QV09XX Various diagnostic radiopharmaceuticals

QV10 THERAPEUTIC RADIOPHARMACEUTICALS

Radiopharmaceuticals for therapeutic use are classified in this group, while those for diagnostic use are classified in QV09 - *Diagnostic radiopharmaceuticals*. Radiopharmaceuticals for cancer treatment are classified in QV10X.

See comments to QV09.

QV10A ANTIINFLAMMATORY AGENTS

This group comprises radiopharmaceuticals for the therapy of inflammatory processes.

QV10AA Yttrium (^{90}Y) compounds

QV10AX Other antinflammatory therapeutic radiopharmaceuticals

This group comprises non-yttrium particulate radiopharmaceuticals for radiation synovectomy and intracavitary instillation.

QV10B PAIN PALLIATION (BONE SEEKING AGENTS)

This group comprises therapeutic radiopharmaceuticals used for pain palliation in bone malignancies.

QV10BX Various pain palliation radiopharmaceuticals

QV10X OTHER THERAPEUTIC RADIOPHARMACEUTICALS

This group contains various therapeutic radiopharmaceuticals, which cannot be classified in the preceding groups.

QV10XA Iodine (^{131}I) compounds

Sodium iodine (^{131}I) in low dose for diagnostic nuclear medicine is classified in QV09F - *Thyroid*.

Iobenguane (^{131}I) in low dose for diagnostic nuclear medicine is classified in QV09I - *Tumour detection*.

QV10XX Various therapeutic radiopharmaceuticals

Radiopharmaceuticals for cancer treatment and various therapeutic radiopharmaceuticals which cannot be classified in the preceding groups are classified here.

QV20 SURGICAL DRESSINGS

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