

New Psychoactive Substances Act*

(*Neue-psychoaktive-Stoffe-Gesetz*)

(NpSG)

Non-official translation¹

Last amended by Article 1 of the ordinance of 3 July 2020

The Act was adopted as Article 1 of the Act to combat the distribution of new psychoactive substances of 21 November 2016 by the *Bundestag*. It entered into force on 26 November 2016 according to Article 4 of this Act.

§ 1

Scope of application

- (1) This Act shall apply to new psychoactive substances as specified in § 2 number 1.
- (2) This Act shall not apply to:
 1. narcotic drugs as specified in § 1 paragraph 1 of the Narcotic Drugs Act or to
 2. medicinal products as specified in § 2 paragraphs 1, 2, 3a and 4 sentence 1 of the Medicinal Products Act.

§ 2

Definitions

For the purposes of this Act:

1. a new psychoactive substance is a substance or substance preparation in one of the substance groups listed in the annex;
2. a preparation, regardless of its state of matter, is a mixture of substances or the solution of one or more substances other than naturally occurring mixtures and solutions;
3. manufacturing means producing, preparing, formulating, treating or processing, purifying, transforming, packaging and filling as well as decanting;
4. putting into circulation means possession of NPSs for sale or other forms of supply as well as the displaying and offering for sale, and putting at the disposal of others for direct consumption.

* **Notified according to Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (codification) (OJ L 241, 17.9.2015, p. 1)**

¹ Disclaimer: Translations of any materials into languages other than German are intended solely as a convenience to the non-German-reading public. If any questions arise related to the accuracy of the information contained in the translation, please refer to the German version of the document which is the official version of the document. Any discrepancies or differences created in the translation are not binding and have no legal effect for compliance or enforcement purposes.

§ 3

Illicit trafficking of new psychoactive substances

(1) It is prohibited to traffic a new psychoactive substance, to put it into circulation, to manufacture it, to bring it into, outside or through the territory to which this Act applies, to acquire it, to own it or to administer it to others.

(2) The following are excluded from the prohibition:

1. uses of a new psychoactive substance recognised to be in line with the state of the art in science and technology for commercial, industrial or scientific purposes and
2. uses of a new psychoactive substance by federal or state authorities for their official business and by authorities appointed by them to investigate new psychoactive substances.

(3) In the cases mentioned under paragraph 1, new psychoactive substances shall be seized, kept in safe custody and destroyed in accordance with §§ 47 to 50 of the *Bundespolizeigesetz* [Federal Police Act] and the provisions of state police laws.

(4) Notwithstanding paragraph 3, the customs authorities may, as part of their enforcement functions under § 1 paragraph 3 of the *Zollverwaltungsgesetz* [Customs Administration Act], seize products where there is a justified assumption that they are new psychoactive substances which, contrary to paragraph 1, have been or will be brought into, outside or through the territory in which this Act applies. §§ 48 to 50 of the *Bundespolizeigesetz* shall apply accordingly. The responsible person shall bear the costs incurred by the customs authorities for seizure and safe custody; §§ 17 and 18 of the *Bundespolizeigesetz* shall apply accordingly. Several responsible persons bear joint and several liability. The costs can be recovered by an administrative enforcement procedure.

§ 4

Penal provisions

(1) Anyone who, contrary to § 3 paragraph 1:

1. traffics a new psychoactive substance, puts it into circulation or administers it to another person or
2. for the purpose of putting it into circulation
 - a) manufactures a new psychoactive substance or
 - b) brings a new psychoactive substance into the territory in which this Act applies,is liable to imprisonment for up to 3 years or a fine.

(2) An attempt to commit such acts is also punishable.

(3) Anyone who:

1. in the cases set out
 - a) under paragraph 1 is operating commercially or as a member of an organisation which has come together for the recurrent commission of such acts, or
 - b) under paragraph 1 number 1 as a person over the age of 21 gives, administers or supplies a new psychoactive substance for direct consumption to a person under the age of 18 or

2. through an action mentioned in paragraph 1
 - a) endangers the health of a large number of people or
 - b) endangers the life of another or exposes another to serious injury or places another's health at risk,is liable to imprisonment from one to ten years.

(4) In minor cases under paragraph 3 the penalty is imprisonment of three months to five years.

(5) If the perpetrator acts negligently in the cases mentioned in paragraph 3 number 1 letter b or number 2 in conjunction with paragraph 1 number 1, the penalty is imprisonment of up to three years or a fine.

(6) If the perpetrator acts negligently in the cases mentioned in paragraph 1 number 1, the penalty is imprisonment of up to one year or a fine.

§ 5

Confiscation

Items relating to an offence pursuant to § 4 may be confiscated. § 74a of the Criminal Code shall apply.

§ 6

Data transfer

For offences under § 4, the *Zollkriminalamt* [Customs Investigation Bureau] may, under the statutory instrument enacted pursuant to § 7 paragraph 11 of the *Bundeskriminalamtgesetz* [Federal Criminal Police Office Act], transfer information, including personal data, to the *Bundeskriminalamt* to fulfil its duties as the central agency, unless this runs counter to the purposes of criminal proceedings. Transfers under sentence 1 are also permissible where they relate to data that is subject to tax secrecy under § 30 of the *Abgabenordnung* [Fiscal Code]. Transfer authorisations pursuant to other legislation remain unaffected.

§ 7

Power to issue ordinances

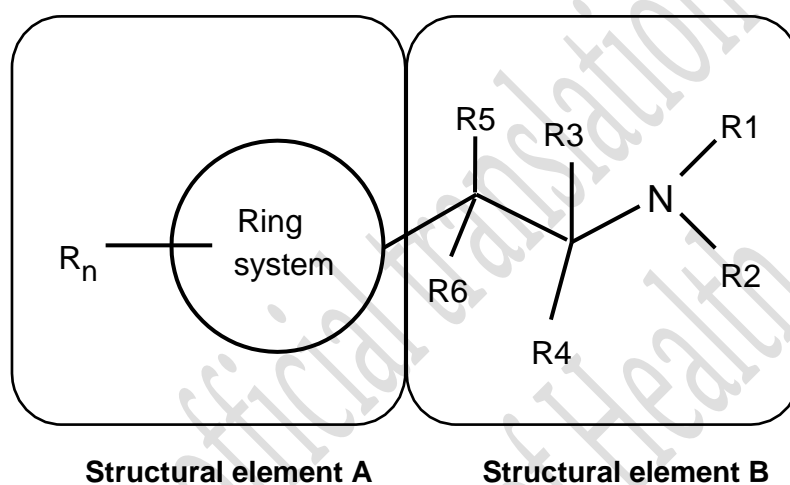
The Federal Ministry of Health is hereby empowered to amend, by ordinance subject to the approval of the Bundesrat, in agreement with the Federal Ministry of the Interior, the Federal Ministry of Justice and Consumer Protection and the Federal Ministry of Finance and after consultation with experts, the list of substance groups in the annex if this is necessary according to scientific evidence because of the mode of action of psychoactive substances, the extent of their abuse and the direct or indirect risk to health.

Appendix

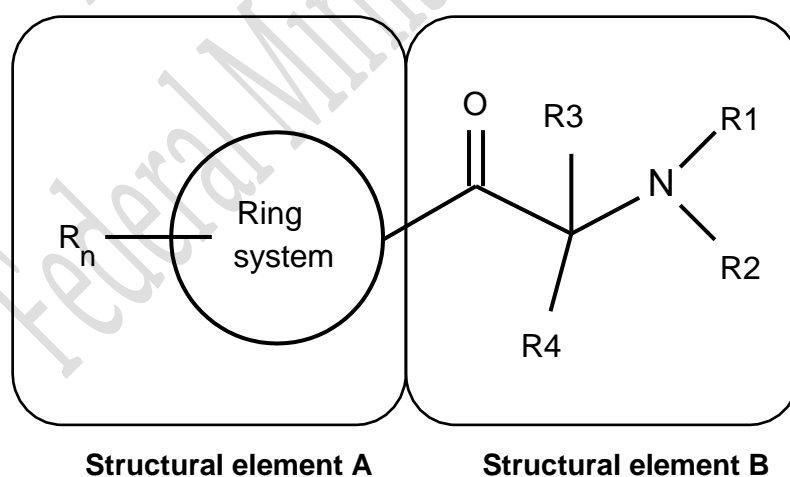
The substance group definitions in numbers 1 to 5 include all possible charged forms and salts of a listed substance, where they exist. For charged forms and salts, any molecular weight limits comprised in the substance group definitions apply only to the part of the molecule that excludes the counterion.

1. Compounds derived from 2-phenethylamine

A compound derived from 2-phenethylamine is any chemical compound that can be derived from a 2-phenylethan-1-amine basic structure (except for 2-phenethylamine itself), has a maximum molecular weight of 500 u, and corresponds to the modular composition consisting of structural element A and structural element B as described below.



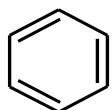
This includes chemical compounds with a cathinone basic structure (2-amino-1-phenyl-1-propanone):



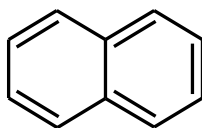
1.1 Structural element A

The following ring systems or structures are included for structural element A, where structural element B can be in any position of structural element A:

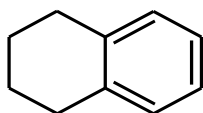
Phenyl-, naphthyl-, tetralinyl-, methylenedioxyphenyl-, ethylenedioxyphenyl-, furyl-, pyrrolyl-, thienyl-, pyridyl-, benzofuranyl-, dihydrobenzofuranyl-, indanyl-, indenyl-, tetrahydrobenzodifuranyl-, benzodifuranyl-, tetrahydrobenzodipyranyl-, cyclopentyl-, cyclohexyl-.



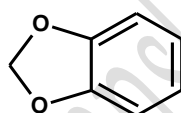
phenyl-



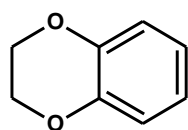
naphthyl-



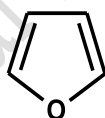
tetralinyl-



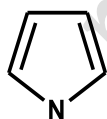
methylenedioxyphenyl-



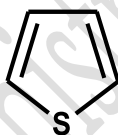
ethylenedioxyphenyl-



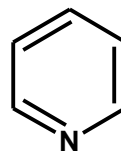
furyl-



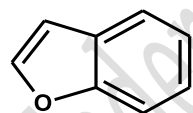
pyrrolyl-



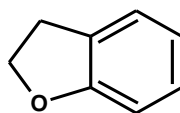
thienyl-



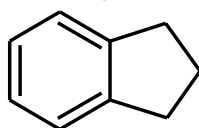
pyridyl-



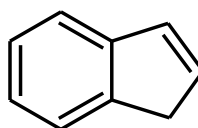
benzofuranyl-



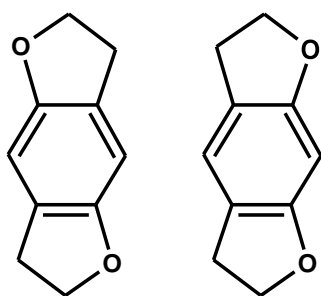
dihydrobenzofuranyl-



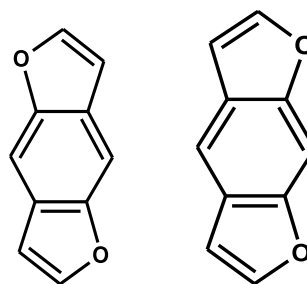
indanyl-



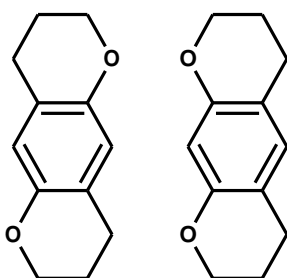
indenyl-



tetrahydrobenzodifuranyl-



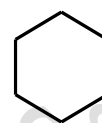
benzodifuranyl-



tetrahydrobenzodipyranyl-



cyclopentyl-



cyclohexyl-

These ring systems can be substituted in any position with the following atoms or atom groups (R_n):

hydrogen, fluorine, chlorine, bromine, iodine, alkyl- (up to C_6), alkenyl- (up to C_6), alkynyl- (up to C_6), alkoxy- (up to C_6), carboxy-, alkylsulfanyl- (up to C_6) and nitro- groups.

The atom groups listed can also be substituted with any chemically possible combinations of carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine or iodine. The substituents arrived at in this manner may have a continuous chain of not more than eight atoms (without counting hydrogen atoms). Atoms of ring structures are not included in the count.

1.2 Structural element B

The 2-aminoethyl side chain of structural element B can be substituted with the following atoms, atom groups or ring systems:

a) R_1 and R_2 on the nitrogen atom:

hydrogen, alkyl- (up to C_6), cycloalkyl- (up to C_6), benzyl-, alkenyl- (up to C_6), alkylcarbonyl- (up to C_6), hydroxy- and amino- groups. Furthermore, substances in which the nitrogen atom forms an integral part of a cyclic system are also included (for example, pyrrolidinyl-, piperidinyl-). A ring closure of the nitrogen atom using parts of structural element B (residues R_3 to R_6) is possible. The resultant ring systems may contain the elements carbon, oxygen, sulphur, nitrogen and hydrogen. These ring systems may contain five to seven atoms.

Compounds in which the nitrogen atom is directly integrated in a cyclic system that is fused on structural element A are excluded from the scheduled substances of the substance group of compounds derived from 2-phenethylamine.

The substituents R_1 and R_2 can also be substituted with any chemically possible combinations of carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine and iodine. The substituents arrived at in this manner may have a continuous chain of not more than ten atoms (without counting hydrogen atoms). Atoms of ring structures are not included in the count.

- b) R_3 and R_4 on the C_1 atom and R_5 and R_6 on the C_2 atom:

hydrogen, fluorine, chlorine, bromine, iodine, alkyl- (up to C_{10}), cycloalkyl- (up to C_{10}), benzyl-, phenyl-, alkenyl- (up to C_{10}), alkynyl- (up to C_{10}), hydroxy-, alkoxy- (up to C_{10}), alkylsulfanyl- (up to C_{10}), alkyloxycarbonyl- groups (up to C_{10}), including chemical compounds where substitutions could lead to a ring closure with structural element A or to ring systems containing the residues R_3 to R_6 . These ring systems may contain four to six atoms.

The atom groups and ring systems listed can also be substituted with any chemically possible combinations of the elements carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine and iodine. The substituents arrived at in this manner may have a continuous chain of not more than ten atoms (without counting hydrogen atoms). Atoms of ring structures are not included in the count.

If residues R_3 to R_6 are part of a ring system containing the nitrogen atom of structural element B, then further substituents are subject to the restrictions of paragraph 1.2(a).

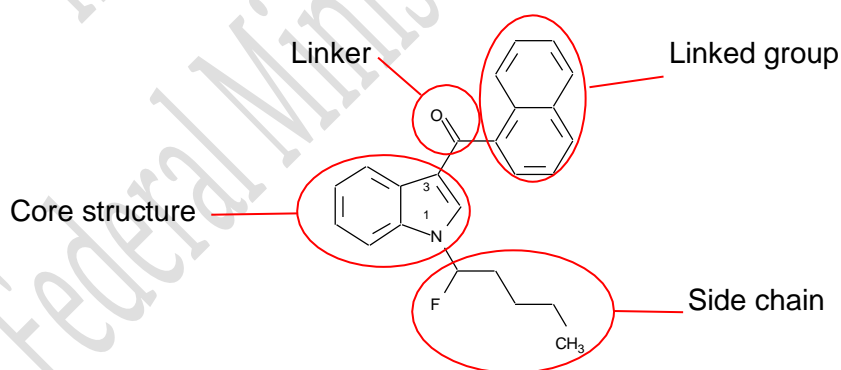
- c) Carbonyl groups in beta position to the nitrogen atom (known as bk derivatives, see the figure on the basic structure of cathinone under point 1: R_5 and R_6 on the C_2 atom: Carbonyl group ($C=O$)).

2. Cannabimimetics/synthetic cannabinoids

2.1 Compounds derived from indole, pyrazole and 4-quinolone

A cannabimimetic or synthetic cannabinoid of the indole-, pyrazole- and 4-quinolone-derived compounds is any chemical compound that corresponds to the following modular design described using a structural example with a core structure that is connected at a defined position via a linker to a linked group and that has a side chain in a defined position in the core structure.

The figure illustrates the modular design by the example 1-fluoro-JWH-018:



1-fluoro-JWH-018 has a core structure of indole-1,3-diyl, a carbonyl linker at position 3, a 1-naphthyl linked group and a 1-fluoropentyl side chain at position 1.

Core structure, linker, linked group and side chain are defined as follows:

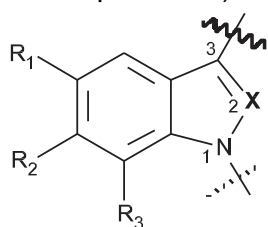
2.1.1 Core structure

The core structure includes the ring systems described below in subparagraphs a to g. The ring systems of subparagraphs a to f may be substituted in the positions shown in the following figures with any combination of the following atoms or atom groups (residues R₁ to R₃): hydrogen, fluorine, chlorine, bromine, iodine, methyl-, methoxy- and nitro- groups.

The residue R of the 4-quinolone-derived compounds (subparagraph g) may consist of any of the following atoms or atom groups: hydrogen, fluorine, chlorine, bromine, iodine and phenylthio-group (connected to the core structure via the sulphur).

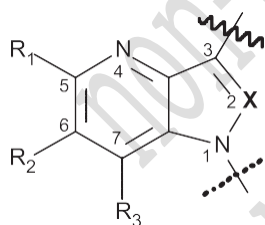
The wavy line indicates the binding site for the linker, the broken line indicates the binding site for the side chain.

- a) Indole-1,3-diyl (X = CH, C-CH₃, C-F, C-Cl, C-Br and C-I) and indazole-1,3-diyl (X = N) (binding site for the linker at position 3, binding site for the side chain at position 1)

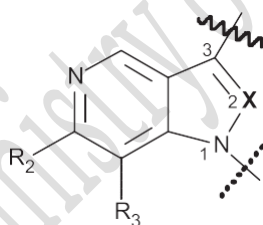


X = CH, C-CH₃, C-F, C-Cl, C-Br, C-I or N

- b) 4-, 5-, 6- or 7-azaindole-1,3-diyl (X = CH, C-CH₃, C-F, C-Cl, C-Br and C-I) and 4-, 5-, 6- or 7-azaindazole-1,3-diyl (X = N) (binding site for the linker at position 3, binding site for the side chain at position 1)



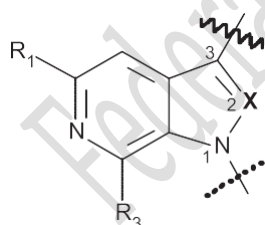
4-aza-derivates



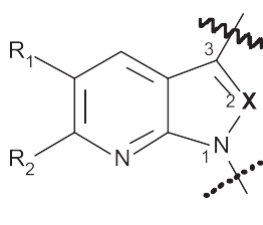
5-aza-derivates

respectively:

X = CH, C-CH₃, C-F, C-Cl, C-Br, C-I or N

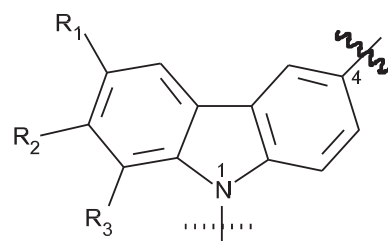


6-aza-derivates

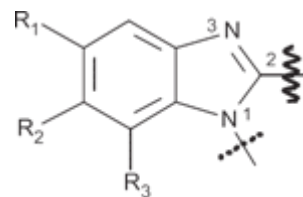


7-aza-derivates

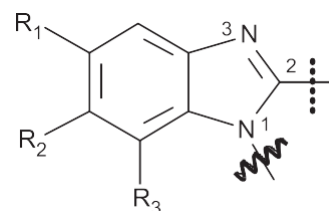
- c) Carbazole-1,4-diyl (binding site for the linker at position 4, binding site for the side chain at position 1)



- d) Benzimidazole-1,2-diyl-isomer I
(binding site for the linker at position 2,
binding site for the side chain at position 1)



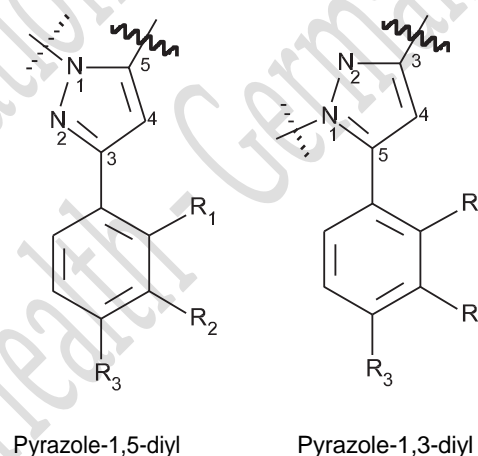
- e) Benzimidazole-1,2-diyl-isomer II
(binding site for the linker at position 1,
binding site for the side chain at position 2)



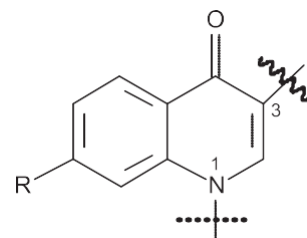
- f) Pyrazole-1,5-diyl
(binding site for the linker at position 5,
binding site for the side chain at position 1)

and

- Pyrazole-1,3-diyl
(binding site for the linker at position 3,
binding site for the side chain at position 1)



- g) 4-quinolone-1,3-diyl
(binding site for the linker at position 3,
binding site for the side chain at position 1)



2.1.2 Linker on the core structure

The linker on the core structure includes the following structural elements, which are bound to the site on the core structure given in paragraph 2.1.1:

- carbonyl- and azacarbonyl- groups;
- carboxamido group (carbonyl group linked to the core structure) including carbon- and hydrogen-containing substituents on the amide nitrogen which together with position 2 of the indole core structure (Paragraph 2.1.1 (a): X = CH) form a six-membered ring;
- carboxyl group (carbonyl group linked to the core structure);
- nitrogen-, oxygen- or sulphur-containing heterocycles directly attached to the core structure with a ring size of up to five atoms with a double bond to the nitrogen atom at the linking site.

2.1.3 Linked group

The linked group can contain combinations of the elements carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine and iodine, which can have a maximum molecular weight of 400 u and can include the following structural elements:

- arbitrarily substituted saturated, unsaturated or aromatic ring structures including polycycles and heterocycles, with linkage also possible via substituents on the linker;
- arbitrarily substituted chain structures that have a continuous chain of up to twelve atoms including heteroatoms (without counting hydrogen atoms).

2.1.4 Side chain

The side chain includes the following structural elements, which are bound to the site on the core structure as indicated in paragraph 2.1.1:

- saturated and monounsaturated, branched and unbranched hydrocarbon chains, which can also contain oxygen- and sulphur- atoms in the chain, with a continuous chain length including heteroatoms of three to seven atoms (without counting hydrogen atoms), including halogen-, trifluoromethyl- and cyano- substituents, as well as substituents containing oxygen and sulphur,
- directly attached saturated, unsaturated or, if possible, aromatic rings with three to seven ring atoms, including nitrogen-, oxygen- or sulphur- heterocycles and fluorine-, chlorine-, bromine-, iodine-, trifluoromethyl-, methoxy- or cyano- substituted derivatives on the ring as well as methyl- or ethyl-substituted derivatives on the ring nitrogen.
- saturated, unsaturated or, if possible, aromatic rings with three to seven ring atoms, including nitrogen-, oxygen- or sulphur- heterocycles and fluorine-, chlorine-, bromine-, iodine-, trifluoromethyl-, methoxy- or cyano- substituted derivatives on the ring as well as methyl- or ethyl-substituted derivatives on the ring nitrogen, coupled via a hydrocarbon linker (saturated and monounsaturated, branched and unbranched, optionally oxo-substituted in position 2).

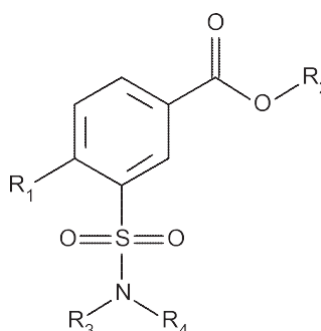
2.2 Compounds derived from 3-sulfonylamido benzoic acid

This separate group of cannabimimetics/synthetic cannabinoids not having the modular composition described in paragraph 2.1 includes the substances that have one of the core structures described in paragraph 2.2.1, that may contain the substituents described in paragraph 2.2.2, and that have a maximum molecular weight of 500 u.

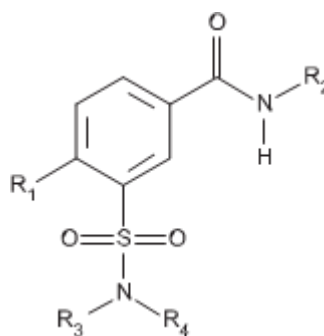
2.2.1 Core structure

The core structure includes the molecules described below in subparagraphs a and b. These may be substituted in the positions shown in the following figures with the atoms and atom groups (residues R₁ to R₄) listed in 2.2.2:

- 3-Sulfonylamidobenzoates



b) 3-Sulfonylamidobenzamides

**2.2.2 Residues R₁, R₂, R₃ and R₄**

- a) Residue R₁ may consist of the following atoms or atom groups: Hydrogen, fluorine, chlorine, bromine, iodine, methyl-, ethyl- and methoxy- groups.
- b) Residue R₂ may consist of the following ring systems: Phenyl-, pyridyl-, cumyl-, 8-chinolinylnyl-, 3-isoquinolinylnyl-, 1-naphthyl-, or adamantyl- residue. These ring systems may furthermore be substituted with arbitrary combinations of the following atoms or atom groups: Hydrogen, fluorine, chlorine, bromine, iodine, methoxy-, amino-, hydroxyl-, cyano-, methyl- and phenylether- groups.
- c) Residues R₃ and R₄ may consist of an arbitrary combination of the atoms or atom groups hydrogen, methyl-, ethyl-, propyl-, and isopropyl- groups. Residues R₃ and R₄ may also form a saturated ring system with a size of up to seven atoms including the nitrogen atom. This ring system may furthermore contain the elements nitrogen, oxygen and sulphur, and bear an arbitrary combination of the elements hydrogen, fluorine, chlorine, bromine and iodine. Substitution of the nitrogen atom in such a ring is governed by the substitution options indicated for the residues R₃ and R₄ in sentence 1.

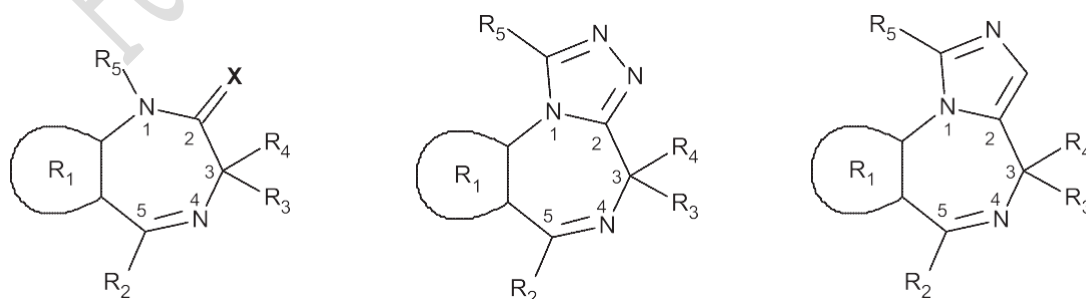
3. Benzodiazepines

The group of benzodiazepines comprises 1,4- and 1,5-benzodiazepines and their triazolo- and imidazolo- derivatives (paragraph 3.1 (a) and (b)) as well as some specially substituted subgroups of these benzodiazepines (paragraph 3.1 (c) to (f)). The maximum molecular weight is 600 u in each case.

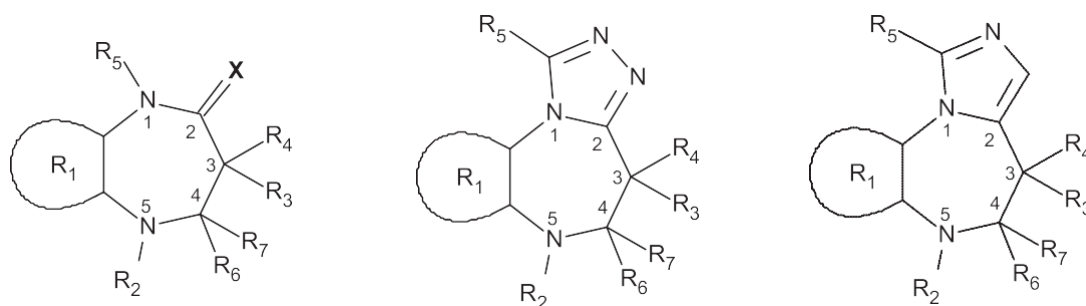
3.1 1 Core structure

The core structure includes the ring systems described below in subparagraphs a to f. These ring systems may be substituted in the positions shown in the following figures with the atoms or atom groups as specified in paragraph 3.2 (residues R₁ to R₇ and X):

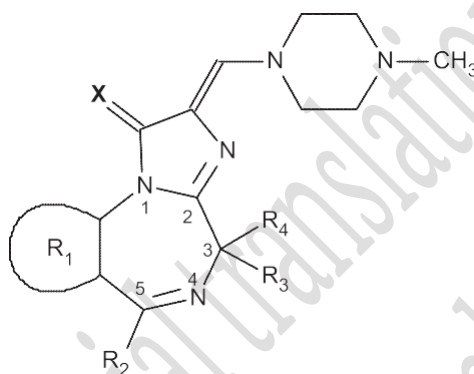
a) 1,4-benzodiazepines



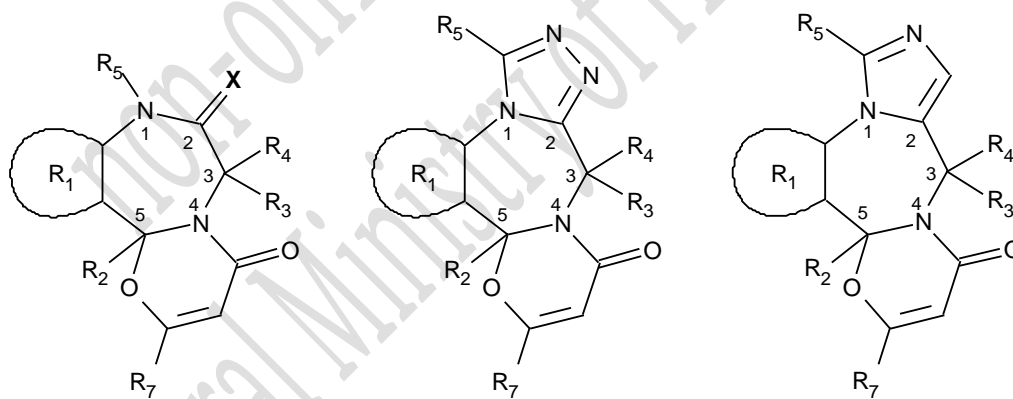
b) 1,5-benzodiazepines



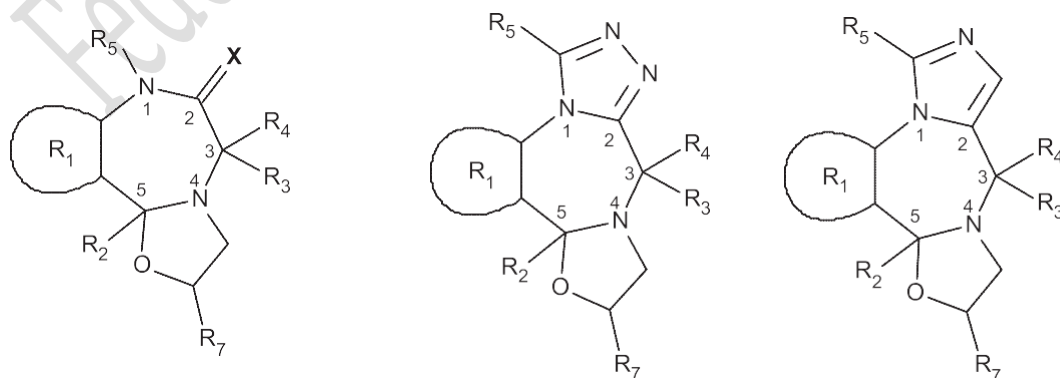
c) Loprazolam derivatives



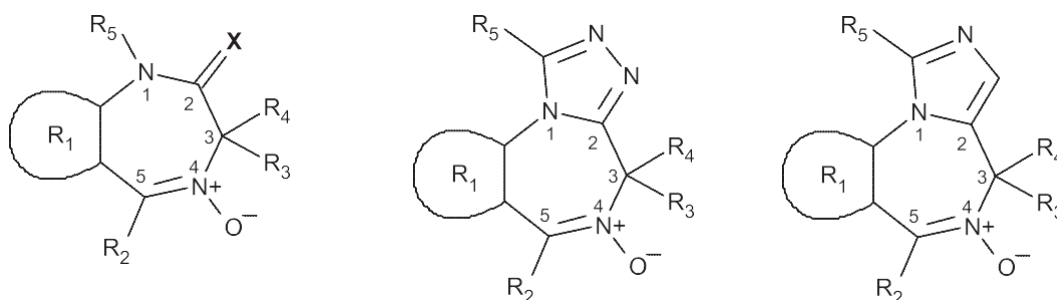
d) Ketazolam derivatives



e) Oxazolam derivatives



f) Chlordiazepoxide derivatives

3.2 Residues R₁ to R₇ and X

- a) Residue R₁ includes the following ring systems, anellated to the seven-membered rings of the core structures:

Phenyl-, thienyl-, furanyl- and pyridyl- ring; the heteroatoms in the thienyl-, furanyl- or pyridyl- ring may be located in an arbitrary position outside of the seven-membered ring of the core structure.

Residue R₁ may also be substituted with one or more of the following atoms or atom groups, in arbitrary combinations and in arbitrary positions outside the seven-membered ring: Hydrogen, fluorine, chlorine, bromine, iodine, methyl-, ethyl-, nitro- and amino- groups.

- b) Residue R₂ includes the following ring systems:

Phenyl-, pyridyl- (with nitrogen atom at arbitrary position in the pyridyl ring) and cyclohexenyl- ring (with double bond at arbitrary position in the cyclohexenyl ring).

Phenyl- and pyridyl- ring may bear one or more of the following substituents in an arbitrary combination and at arbitrary position: Hydrogen, fluorine, chlorine, bromine, iodine, methyl-, ethyl-, nitro- and amino- groups.

- c) Residue R₃ may consist of the following atoms or atom groups:

Hydrogen, hydroxyl-, carboxyl-, ethoxycarbonyl-, (N,N-dimethyl)carbamoyl- and methyl- groups.

- d) Residue R₄ may consist of the following atoms or atom groups: Hydrogen, methyl- and ethyl- groups.

- e) Residues R₃ and R₄ may also form a carbonyl group (C=O) together.

- f) Residue R₅ may consist of the following atoms or atom groups:

Hydrogen, methyl-, ethyl-, (N,N-dimethylamino)methyl-, (N,N-diethylamino)methyl-, (N,N-dimethylamino)ethyl-, (N,N-diethylamino)ethyl-, (cyclopropyl)methyl-, (trifluoromethyl)methyl- and prop-2-in-1-yl groups.

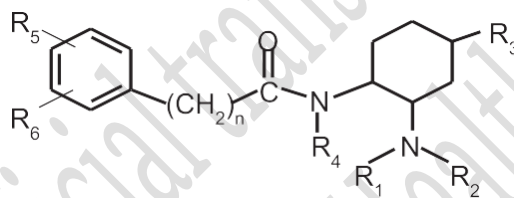
- g) Residue R₆ may consist of the following atoms or atom groups:

Hydrogen, hydroxy- and methyl- groups.

- h) Residue R₇ may consist of the following atoms or atom groups:
Hydrogen, methyl- and ethyl- groups.
- i) Residues R₆ and R₇ may also form together a carbonyl group (C=O) for the 1,5-benzodiazepines.
- j) The 1,5-benzodiazepines may also have a R₆-substituted double bond to the 5-nitrogen atom (instead of R₂ and R₇).
- k) Residue X includes the following substituents:
Oxygen, sulphur, imino- and N-methylimino- groups. If R₅ consists of hydrogen, the corresponding enols, thioenols or enamines may also be present as tautomeric forms.

4. N-(2-aminocyclohexyl)amide derived compounds

An N-(2-aminocyclohexyl)amide derived compound is any chemical compound that can be derived from the base structure shown below, has a maximum molecular weight of 500 u, and may bear the substituents as described below.



The base structure N-(2-aminocyclohexyl)amide may be substituted at the positions shown in the figure with an arbitrary combination of the following atoms, branched or unbranched atom groups, or ring systems (residues R₁ to R₆):

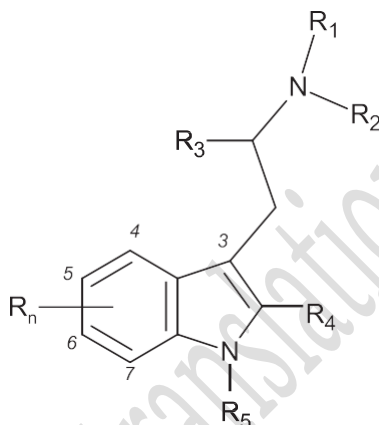
- a) R₁ and R₂:
Hydrogen, alkyl group (up to C₇).
Furthermore, substances in which the nitrogen atom is part of a cyclic system with a ring size of up to seven atoms (for example pyrrolidinyl-) are also included.
- b) R₃:
Hydrogen, oxaspiro group.
- c) R₄:
Hydrogen, alkyl group (up to C₅).
- d) R₅ and R₆:
The phenyl ring may contain arbitrary combinations of the following substituents at positions 2, 3, 4, 5, and 6: Hydrogen, bromine, chlorine, fluorine, iodine.
Included are also substances where R₅ and R₆ together form a ring system (up to C₆) on neighbouring carbon atoms while including heteroatoms (oxygen, sulphur, nitrogen). If there is a nitrogen in this ring system, it may bear the substituents hydrogen and methyl group.

The number (n) of methyl groups (CH₂)_n between the phenyl ring and the carbonyl group in the base structure may be zero or one.

5. Tryptamine derived compounds

5.1 Indole-3-alkylamines

An indole-3-alkylamine-derived compound is any chemical compound that can be derived from the base structure shown below, has a maximum molecular weight of 500 u, and may bear the substituents as described below. This does not include tryptamine, the naturally occurring neurotransmitters serotonin and melatonin, and their active metabolites (e.g. 6-hydroxy-melatonin).



The base structure indole-3-alkylamine may be substituted at the positions shown in the figure with the following atoms, branched or unbranched atom groups, or ring systems (residues R₁ to R₅ and R_n):

a) R₁ and R₂:

Hydrogen, alkyl- (up to C₆) and allyl- groups.

Furthermore, substances in which the nitrogen atom is part of a pyrrolidinyl ring system are also included.

b) R₃:

Hydrogen, alkyl group (up to C₃).

c) R₄:

Hydrogen, alkyl group (up to C₂).

d) R₅:

Hydrogen, alkyl group (up to C₃).

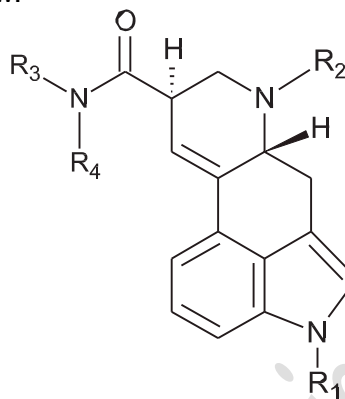
e) R_n

The indole ring system may be substituted in positions 4, 5, 6 and 7 with the following atoms or atom groups: Hydrogen, methoxy-, acetoxy-, hydroxyl- and methylthio-groups, and at position 4 also dihydrogen phosphate.

Substances where R_n links two neighbouring carbon atoms in positions 4, 5, 6 and 7 with a methylenedioxy group are also included.

5.2 $\Delta^{9,10}$ -Ergolene

A $\Delta^{9,10}$ -ergolene-derived compound is any chemical compound that can be derived from the base structure shown below, has a maximum molecular weight of 500 u, and may bear the substituents as described below.



The base structure $\Delta^{9,10}$ -ergolene may be substituted at the positions shown in the figure with the following atoms, branched or unbranched atom groups, or ring systems (residues R₁ to R₄):

- R₁:
Hydrogen, alkyl- (up to C₃) and alkyl carbonyl- (up to C₄) groups.
- R₂:
Hydrogen, alkyl- (up to C₄), allyl- and prop-2-in-1-yl- groups.
- R₃ and R₄:
Hydrogen, alkyl- (up to C₅), cyclopropyl-, allyl-, and 1-hydroxyalkyl- (up to C₂) groups.
Furthermore, substances in which the amide nitrogen atom is part of a morpholino-, pyrrolidino-, or dimethylazetidide- ring system are also included.