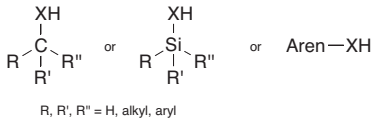
CA ¶ 175, 229, 291
IUPAC R-5.5.1, R-5.5.2, R-5.4.4, C-201–C-204, C-511, C-21–C-24, C-331.4, C-533.2

6.21 Alcohols and Phenols (Class 10)

Definition

An alcohol or phenol **1** has a substituent –XH (X = O, S, Se, Te) *at a C or Si atom* of a molecular-skeleton parent. In the following, the term alcohol is employed as a general expression for all chalcogeno replacement analogs **1** (X = O, S, Se, Te).



1 an alcohol or phenol (X = O)
a thiol (X = S)
a selenol (X = Se)
a tellurol (X = Te)

According to the degree of substitution, an alcohol is designated generally as:

primary alcohol	RCH_2–OH	(R ≠ H)
secondary alcohol	RCH(R′)–OH	(R, R′ ≠ H)
tertiary alcohol	RC(R′)(R″)–OH	(R, R′, R″ ≠ H)

Notice

§ 3.2.2
- If possible, conjunctive nomenclature according to *§ 3.2.2* must be employed, see **11**, **27**, **28**, **34**, **40**, **73**, **75**, **76**, and **78** – **80**.
- Hemiacetals RC(R′)(XR″)XH (X = O, S, Se, Te; R″ ≠ H) are designated as alcohols, see **41** and **42**.

§ 6.4.2.2 (c) § 6.30, 6.31
- Alcoholates R–X^- are described in (c) of *§ 6.4.2.2* and ethers R–X–R′ (X = O, S, Se, Te) in *§ 6.30* and *6.31*.

Instructions are given for:

(a) alcohols and phenols with the substituent –XH (X = O, S, Se, Te) at a C or Si atom: suffixes and substituent prefixes (exception: 'phenol'; trivial names 'ethylene glycol', 'glycerol', 'pentaerythritol', 'pinac~ol', 'cresol', 'carvacrol', 'thymol', 'pyrocatechol', 'resorcinol', 'hydroquinone', 'picric acid', 'naphthol', 'anthrol', 'phenanthrol');
(b) nontraditional alcohols with the substituent HX– (X = O, S, Se, Te) at a heteroatom (≠ Si): substituent prefixes;
(c) nontraditional esters with the substituent acyl–X– (X = O, S, Se, Te) at a heteroatom (≠ Si): ester names;
(d) ether substituents R–X– (X = O, S, Se, Te; R = alkyl, aryl, silyl): substituent prefixes.

Instructions

(a) *Alcohols and phenols*

The name of an alcohol or phenol **R–XH** (X = O, S, Se, Te; R = alkyl, aryl, silyl), i.e., with *–XH at a C or Si atom*, consists of:

parent name of the molecular-skeleton parent **R–H**, by *§ 4.2–4.10* § 4.2–4.10
+
suffix

'**-ol**'	(–OH)
'**-thiol**'	(–SH)
'**-selenol**'	(–SeH)
'**-tellurol**'	(–TeH)

If necessary, multiplying affixes are employed, e.g., 'ethane-1,2-diol' ($HOCH_2CH_2OH$).

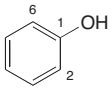
Aromatic alcohols **arene–OH** and chalcogen analogs are also designated as alcohols, e.g., **16**–**26**, *except* for 'phenol' (**2**) and its derivatives. Hemiacetals **RC(R′)(OR″)OH** and chalcogen analogs are substituted alcohols, see **41** and **42**.

The prefix for an alcohol substituent **HX–** (H atom not substitutable) at a molecular-skeleton parent is:

prefix

'**hydroxy**-'	(HO–)
'**mercapto**-'	(HS–)
'**selenyl**-'	(HSe–)
'**telluryl**-'	(HTe–)

Exception (a)



2 '**phenol**'
H at C substitutable, but not by Ph (see ring assemblies, *§ 4.10*); e.g., Ph–C_6H_4–OH is '[1,1′-biphenyl]-4-ol'

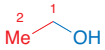
IUPAC accepts for alcohols with –XH = –OH also functional-class nomenclature (*§ 3.2.6*), see **3**–**11** (for trivial substituent prefixes, see *§ 4.2* and *4.4–4.6*).

The following trivial names are still accepted: '**ethylene glycol**' (**12**), '**glycerol**' (**13**), '**pentaerythritol**' (**14**), '**pinacol**' (**15**), '**cresol**' (see **16**), '**carvacrol**' (**17**), '**thymol**' (**18**), '**pyrocatechol**' (**19**), '**resor~cinol**' (**20**), '**hydroquinone**' (**21**), '**picric acid**' (**22**), '**naphthol**' (see **23**), '**anthrol**' (see **24**), and '**phenanthrol**' (see **25**). However, since 1978, the **carbinol** nomenclature has *no longer* been accepted (IUPAC C-201.1; see **28**), and the affixes 'thio-', 'seleno-', and 'telluro-' in connection with trivial names are no longer employed (IUPAC R-5.5.1.2, cf. C-511.2; see **26**). Instead of the formerly recommended substituent prefixes 'mercapto-' (HS-; C-511.1) and '(hydroseleno)-' (HSe–; C-701), the prefixes '**sulfanyl**-' (HS–), '**selanyl**-' (HSe–), and '**tellanyl**-' (HTe–) are proposed (IUPAC R-5.5.1.2).

IUPAC derives the names of **α-amino alcohols** from the names of the corresponding α-aminocarboxylic acids, e.g.,
'L-alaninol' (L-$MeCH(NH_2)CH_2OH$),
'L-glutaminol' (L-$H_2NC(O)CH_2CH_2CH(NH_2)CH_2OH$).

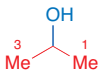
Examples (a)

3 'methanol'
IUPAC: also '**methyl alcohol**'; substitutable



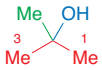
4 'ethanol'

IUPAC: also '**ethyl alcohol**'; substitutable



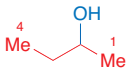
5 'propan-2-ol'

- IUPAC: also '**isopropyl alcohol**'; not substitutable
- *not* 'isopropanol'



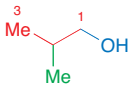
6 '2-methylpropan-2-ol'

- IUPAC: also '***tert*-butyl alcohol**'; not substitutable
- *not* '*tert*-butanol'



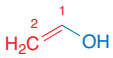
7 'butan-2-ol'

- IUPAC: also '***sec*-butyl alcohol**'; not substitutable
- *not* '*sec*-butanol'



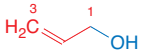
8 '2-methylpropan-1-ol'

- IUPAC: also '**isobutyl alcohol**'; not substitutable
- *not* 'isobutanol'



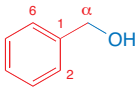
9 'ethenol'

IUPAC: also '**vinyl alcohol**'; substitutable



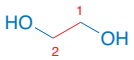
10 'prop-2-en-1-ol'

IUPAC: also '**allyl alcohol**'; substitutable



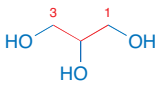
11 'benzenemethanol'

- conjunctive name
- IUPAC: also '**benzyl alcohol**'; substitutable only at the ring



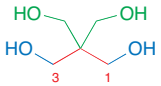
12 'ethane-1,2-diol'

IUPAC: also '**ethylene glycol**'; not substitutable



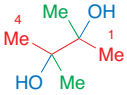
13 'propane-1,2,3-triol'

IUPAC: also '**glycerol**'; not substitutable



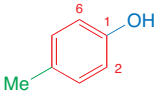
14 '2,2-bis(hydroxymethyl)propane-1,3-diol'

IUPAC: also '**pentaerythritol**'; not substitutable



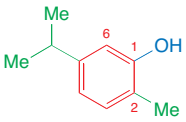
15 '2,3-dimethylbutane-2,3-diol'

IUPAC: also '**pinacol**'; not substitutable; 'pinacol' was also used as a general name for vicinal diols



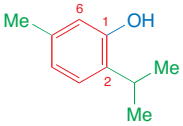
16 '4-methylphenol'

IUPAC: also '***p*-cresol**'; similarly for '*o*-' and '*m*-cresol'; not substitutable



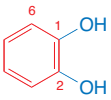
17 '2-methyl-5-(1-methylethyl)phenol'

IUPAC: also '**carvacrol**'; not substitutable



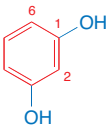
18 '5-methyl-2-(1-methylethyl)phenol'

IUPAC: also '**thymol**'; not substitutable



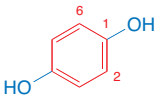
19 'benzene-1,2-diol'

- IUPAC: also '**pyrocatechol**'; not substitutable
- trivially also '**catechol**'
- the trivial name '**guaiacol**' (= '2-methoxyphenol') for *o*-MeO–C_6H_4–OH is no longer accepted by IUPAC



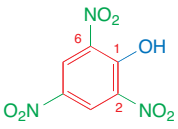
20 'benzene-1,3-diol'

IUPAC: also '**resorcinol**'; not substitutable



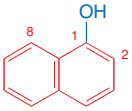
21 'benzene-1,4-diol'

- IUPAC: also '**hydroquinone**'; not substitutable
- formerly also 'hydroquinol'



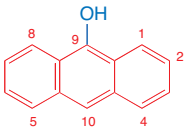
22 '2,4,6-trinitrophenol'

IUPAC: also '**picric acid**'; not substitutable



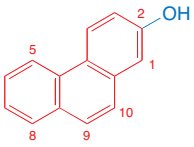
23 'naphthalen-1-ol'

IUPAC: also '**1-naphthol**'; substitutable



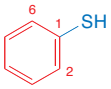
24 'anthracen-9-ol'

IUPAC: also '**9-anthrol**'; substitutable



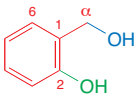
25 'phenanthren-2-ol'

IUPAC: also '**2-phenanthrol**'; substitutable



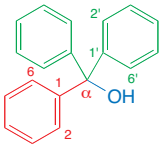
26 'benzenethiol'

formerly '**thiophenol**'



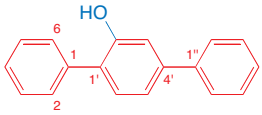
27 '2-hydroxybenzenemethanol'

- conjunctive name
- choice of the molecular-skeleton parent by (e) of *§ 3.3*
- trivially '**salicyl alcohol**'



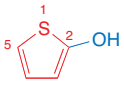
28 'α,α-diphenylbenzenemethanol'

- conjunctive name
- IUPAC: also '**trityl alcohol**'; H at rings substitutable
- *not* '**triphenylcarbinol**'



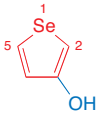
29 '[1,1′:4′,1″-terphenyl]-2′-ol'

not '2,5-diphenylphenol'



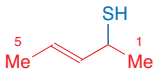
30 'thiophene-2-ol'

CA: 'thiophene-2-ol'; no elision of 'e' to avoid confusion with the formerly used trivial name 'thiophenol' (PhSH; **26**)

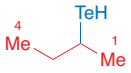


31 'selenophene-3-ol'

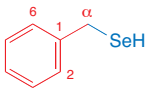
CA: 'selenophene-3-ol'; no elision of 'e' to avoid confusion with the formerly used trivial name 'selenophenol' (PhSeH); analogously for 'tellurophene-3-ol'



32 'pent-3-ene-2-thiol'

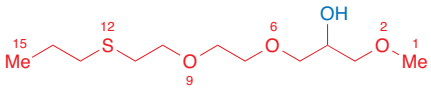


33 'butane-2-tellurol'

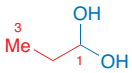


34 'benzenemethaneselenol'

conjunctive name

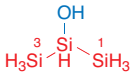


35 '2,6,9-trioxa-12-thiapentadecan-4-ol'

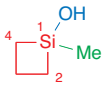


36 'propane-1,1-diol'

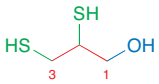
an **aldehyde hydrate**



37 'trisilan-2-ol'

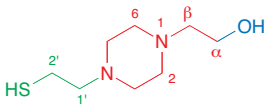


38 '1-methylsilacyclobutan-1-ol'



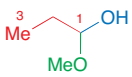
39 '2,3-dimercaptopropan-1-ol'

IUPAC: also '2,3-bis(sulfanyl)propan-1-ol'



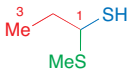
40 '4-(2-mercaptoethyl)piperazine-1-ethanol'

- conjunctive name
- IUPAC: also '4-(2-sulfanylethyl)piperazine-1-ethanol'



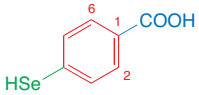
41 '1-methoxypropan-1-ol'

- a **hemiacetal**
- IUPAC: also 'propanal methyl hemiacetal'



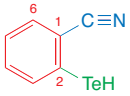
42 '1-(methylthio)propane-1-thiol'

- a **dithiohemiacetal**
- IUPAC: also '1-(methylsulfanyl)propane-1-thiol' or 'propanal methyl dithiohemiacetal'



43 '4-selenylbenzoic acid'

IUPAC: '4-selanylbenzoic acid'



44 '2-tellurylbenzonitrile'

IUPAC: '2-tellanylbenzonitrile

(b) *Nontraditional alcohols*

A substituent **HX–** (X = O, S, Se, Te) attached at a heteroatom different from an Si atom of a heterochain or heterocycle **Y–H** is treated as a **nontraditional alcohol**. Its name consists of:

prefix

'**hydroxy**-'	(HO–)
'**mercapto**-'	(HS–)
'**selenyl**-'	(HSe–)
'**telluryl**-'	(HTe–)

+

parent name of the heterochain or heterocycle **Y–H**, by *§ 4.3* or *4.5–4.10*

§ 4.3, 4.5–4.10

The senior compound class (not necessarily an alcohol!) is then determined by possibly present other substituents, see **52** or **94**. Note that HX– groups which are part of an acid function are not concerned (see acids of the *Classes 5c*, *5e–g*, *5j*, and *5k* in *Tab. 3.2*, e.g., 'methanesulfonic acid' ($Me–S(=O)_2–OH$), 'sulfuric acid' ($HO–S(=O)_2–OH$), 'phosphonic acid' ($HP(=O)(OH)_2$)), 'phosphinous acid' ($H_2P–OH$)).

Tab. 3.2

§ 6.25–6.29

Nontraditional alcohols are also described in *§ 6.25–6.29* dealing with the N, P, As, Sb, Bi, B, Ge, Sn, and Pb compounds of the *Classes 14–20* (see *Tab. 3.2*).

Tab. 3.2

CA ¶ 193

Exceptions (b)

$H_2N—OH$

45 '**hydroxylamine**'

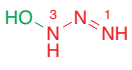
compound of *Class 14* (*§ 6.25*); **45** is now a substitutive functional parent compound, i.e., a nontraditional alcohol; an *O*-alkyl or *O*-aryl derivative $R–O–NH_2$ is denoted by a prefix (with locant '*O*'); an *O*-acyl derivative $Ac–O–NH_2$ is an azanyl ester (see (b_0) and (c) of *§ 6.14*); an *N*-alkylidene derivative R=N–OH is an oxime (see *§ 6.19* and *6.20*); an *N*-alkyl or *N*-aryl derivative R–NH–OH is an amine (see *§ 6.23*); an *N*-acyl derivative Ac–NH–OH is an amide (see *§ 6.16*); see *§ 6.25* for some derivatives of **45**

$H_2N—SH$

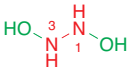
46 '**thiohydroxylamine**'

- compound of *Class 14* (*§ 6.25*); **46** is now a substitutive functional parent compound; see **45** for derivatives; however, an *S*-alkyl or *S*-aryl derivative $R–S–NH_2$ is a sulfenamide (see *§ 6.16*)
- correspondingly for Se and Te analogs

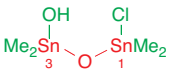
Examples (b)



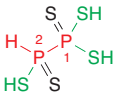
47 '3-hydroxytriaz-1-ene'



48 '1,2-dihydroxyhydrazine'

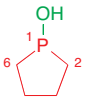


49 '1-chloro-3-hydroxy-1,1,3,3-tetramethyl~distannoxane'

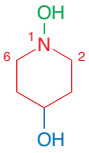


50 '1,1,2-trimercaptodiphosphine 1,2-disulfide'

additive name (=S at P^{III}); cf. (d) of *§ 6.20*

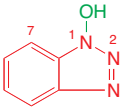


51 '1-hydroxyphospholane'



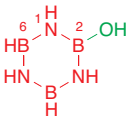
52 '1-hydroxypiperidin-4-ol

not 'piperidine-1,4-diol'

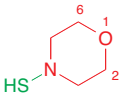


53 '1-hydroxy-1*H*-benzotriazole'

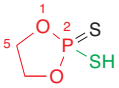
- indicated H atom by (a) and (d) of *§ A.5*
- abbreviation: '**HOBt**'



54 '2-hydroxyborazine'



55 '4-mercaptomorpholine'



56 '2-mercapto-1,3,2-dioxaphospholane 2-sulfide'

additive name (=S at P^{III}); cf. (d) of *§ 6.20*

(c) *Nontraditional esters*

A substituent **acyl–X–** (X = O, S, Se, Te) attached at a heteroatom different from an Si atom of a heterochain or heterocycle **Y–H** is treated as a **nontraditional ester** **acyl–X–Y** according to (b_0) and (c) of *§ 6.14*, similarly to a nontraditional alcohol (see (b)).

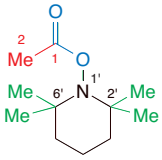
§ 6.14 (b_0) (c)

Nontraditional esters are also described in *§ 6.25–6.29* dealing with the N, P, As, Sb, Bi, B, Ge, Sn, and Pb compounds of the *Classes 14–20* (see *Tab. 3.2*).

§ 6.25–6.29

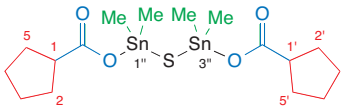
Tab. 3.2

E.g.,



57 'acetic acid 2,2,6,6-tetramethylpiperidin-1-yl ester'/'2,2,6,6-tetramethylpiperidin-1-yl acetate'

ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of a common acid and a nontraditional alcohol



'58 'cyclopentanecarboxylic acid 1,1′-(1,1,3,3-tetra~methyldistannathiane-1,3-diyl) ester'/'1,1′-(1,1,3,3-tetramethyldistannathiane-1,3-diyl) bis[cyclopentanecarboxylate]'

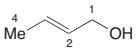
ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of an exotic acid and a nontraditional alcohol

(d) *Ether-substituent prefixes*

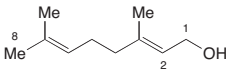
§ 5.8
§ 6.30, 6.31

The prefix of a substituent **R–X–** (X = O, S, Se, Te; R = alkyl, aryl, silyl) is a composite prefix and built according to *§ 5.8* (cf. (c); see *§ 6.30* and *6.31*). Note that the trivial names '**methoxy**-' (MeO–), '**ethoxy**-' (EtO–), '**propoxy**-' ($MeCH_2CH_2O$–), '**butoxy**-' ($MeCH_2CH_2CH_2O$–), and '**phenoxy**-' (PhO–) are used.

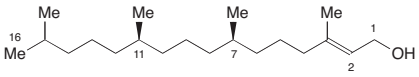
Additional Examples



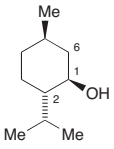
59 'but-2-en-1-ol'
- by (a)
- formerly trivially '**crotyl alcohol**'



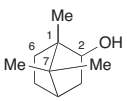
60 '(2*E*)-3,7-dimethylocta-2,6-dien-1-ol'
- by (a)
- '(2*E*)' by *§ A.6.3*
- trivially '**geraniol**'



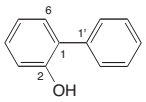
61 '(2*E*,7*R*,11*R*)-3,7,11,15-tetramethylhexadec-2-en-1-ol'
- by (a)
- '(2*E*,7*R*,11*R*)' by *§ A.6.3*
- trivially '**phytol**'



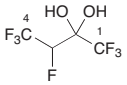
62 '(1*R*,2*S*,5*R*)-5-methyl-2-(1-methylethyl)cyclohexanol'
- by (a)
- '(1*R*,2*S*,5*R*)' by *§ A.6.3*
- trivially '**(1*R*)-menthol**'



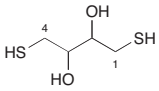
63 '1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol'
- by (a)
- trivially '**borneol**'



64 '[1,1′-biphenyl]-2-ol'
- by (a)
- not '2-phenylphenol'

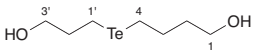


65 '1,1,1,3,4,4,4-heptafluorobutane-2,2-diol'
- by (a)
- a **ketone hydrate**

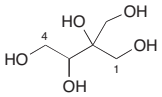


66 '1,4-dimercaptobutane-2,3-diol'

by (a)

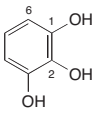


67 '4-[(3-hydroxypropyl)telluro]butan-1-ol'
- by (a)
- C_4 chain > C_3 chain

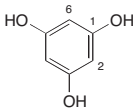


68 '2-(hydroxymethyl)butane-1,2,3,4-tetrol'

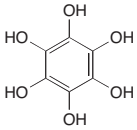
by (a)



69 'benzene-1,2,3-triol'
- by (a)
- formerly trivially '**pyrogallol**'

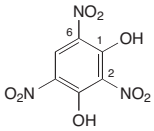


70 'benzene-1,3,5-triol'
- by (a)
- formerly trivially 'phloroglucinol' or '**phloroglucin**'

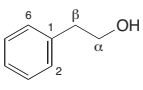


71 'benzene-1,2,3,4,5,6-hexol'

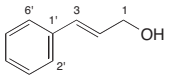
by (a)



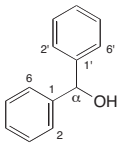
72 '2,4,6-trinitrobenzene-1,3-diol'
- by (a)
- formerly trivially '**styphnic acid**'



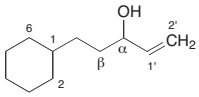
73 'benzeneethanol'
- by (a)
- conjunctive name
- IUPAC: also '**phenethyl alcohol**'; only H at ring substitutable



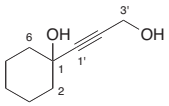
74 '3-phenylprop-2-en-1-ol'
- by (a)
- a conjunctive name is not possible because of the unsaturation in the chain
- IUPAC: also '**cinnamyl alcohol**'; only H at ring substitutable; *not* 'cinnamic alcohol'



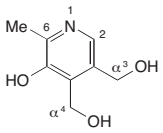
75 'α-phenylbenzenemethanol'
- by (a)
- conjunctive name
- IUPAC: also '**benzhydryl alcohol**'; only H at rings substitutable; trivially '**benzhydrol**'



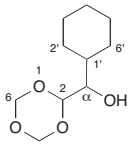
76 'α-ethenylcyclohexanepropanol'
- by (a)
- conjunctive name



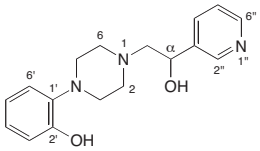
77 '1-(3-hydroxyprop-1-yn-1-yl)cyclohexanol'
- by (a)
- a conjunctive name is not possible because of the unsaturation in the chain



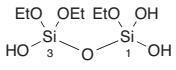
78 '5-hydroxy-6-methylpyridine-3,4-dimethanol'
- by (a)
- conjunctive name
- trivially '**pyridoxine**' or '**pyridoxol**', a '**vitamin B_6**'



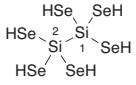
79 'α-cyclohexyl-1,3,5-trioxane-2-methanol'
- by (a)
- conjunctive name
- heterocycle > carbocycle



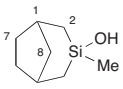
80 '4-(2-hydroxyphenyl)-α-pyridin-3-ylpiperazine-1-ethanol'
- by (a)
- conjunctive name



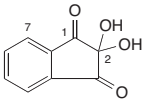
81 '1,3,3-triethoxydisiloxane-1,1,3-triol'
by (a)



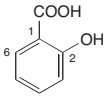
82 'disilane-1,1,1,2,2,2-hexaselenol'
by (a)



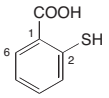
83 '3-methyl-3-silabicyclo[3.2.1]octan-3-ol'
by (a)



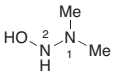
84 '2,2-dihydroxy-1*H*-indene-1,3(2*H*)-dione'
- by (a)
- indicated H atom by (h) of *§ A.5*, 'added' indicated H atom by (i_2) of *§ A.5*
- trivially '**ninhydrin**'



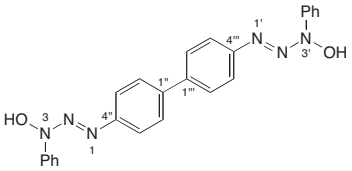
85 '2-hydroxybenzoic acid'
- by (a)
- trivially '**salicylic acid**'



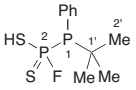
86 '2-mercaptobenzoic acid'
- by (a)
- trivially '**thiosalicylic acid**'



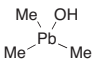
87 '2-hydroxy-1,1-dimethylhydrazine'
by (b)



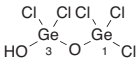
88 '1,1′-[1,1′-biphenyl]-4,4′-diylbis[3-hydroxy-3-phenyltriaz-1-ene]'
- by (b)
- multiplicative name



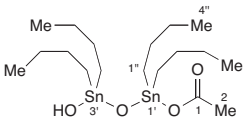
89 '1-(1,1-dimethylethyl)-2-fluoro-2-mercapto-1-phenyl~diphosphine 2-sulfide'
- by (b)
- additive name (=S at P^{III}); cf. (d) of *§ 6.20*



90 'hydroxytrimethylplumbane'
by (b)

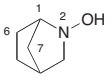


91 '1,1,1,3,3-pentachloro-3-hydroxydigermoxane'
by (b)



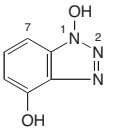
'**92** 'acetic acid 1,1,3,3-tetrabutyl-3-hydroxydistannoxan-1-yl ester'/'1,1,3,3-tetrabutyl-3-hydroxydistannoxan-1-yl acetate'

- by (c)
- ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of a common acid and a nontraditional alcohol



93 '2-hydroxy-2-azabicyclo[2.2.1]heptane'

by (b)

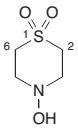


94 '1-hydroxy-1*H*-benzotriazol-4-ol'

- by (b)
- indicated H atom by (a) and (d) of *§ A.5*

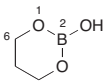
95 '1-hydroxy-1*H*-pyrazole 2-oxide'

- by (b)
- additive name (=O at N^{III}); cf. (d) of *§ 6.20*
- indicated H atom by (a) and (d) of *§ A.5*



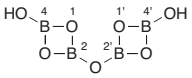
96 '4-hydroxythiomorpholine 1,1-dioxide'

- by (b)
- additive name (2 =O at S^{II}); cf. (d) of *§ 6.20*



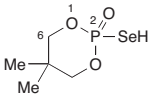
97 '2-hydroxy-1,3,2-dioxaborinane'

by (b)



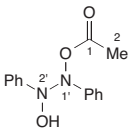
98 '2,2′-oxybis[4-hydroxy-1,3,2,4-dioxadiboretane]'

- by (b)
- multiplicative name



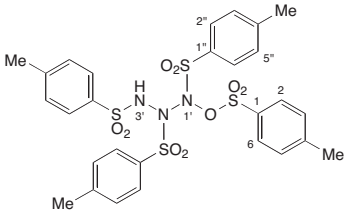
99 '5,5-dimethyl-2-selenyl-1,3,2-dioxaphosphorinane 2-oxide'

- by (b)
- additive name (=O at P^{III}); cf. (d) of *§ 6.20*



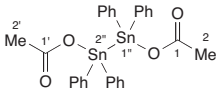
100 'acetic acid 2-hydroxy-1,2-diphenylhydrazinyl ester'/'2-hydroxy-1,2-diphenylhydrazinyl acetate'

- by (c)
- ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of a common acid and a nontraditional alcohol



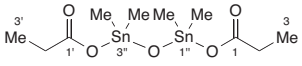
'**101**'4-methylbenzenesulfonic acid 1,2,3-tris[(4-methylphenyl)~sulfonyl]triazanyl ester'/'1,2,3-tris[(4-methylphenyl)sulfonyl]~triazanyl 4-methylbenzenesulfonate'

- by (c)
- ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of a common acid and a nontraditional alcohol



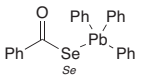
102 'acetic acid 1,1′-(1,1,2,2-tetraphenyldistannane-1,2-diyl ester)'/'1,1′-(1,1,2,2-tetraphenyldistannane-1,2-diyl) bis[acetate]'

- by (c)
- ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of a common acid and a nontraditional alcohol



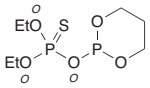
103 'propanoic acid 1,1′-(1,1,3,3-tetramethyldistannoxane-1,3-diyl) ester'/'1,1′-(1,1,3,3-tetramethyldistannoxane-1,3-diyl) bis[propanoate]'

- by (c)
- ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of a common acid and a nontraditional alcohol



104 'benzenecarboselenoic acid *Se*-(triphenylplumbyl) ester'/'*Se*-(triphenylplumbyl) benzenecarboselenoate'

- by (c)
- ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of an exotic acid and a nontraditional alcohol



105 'phosphorothioic acid *O*-1,3,2-dioxaphosphorinan-2-yl *O,O*-diethyl ester'/'*O*-1,3,2-dioxaphosphorinan-2-yl *O,O*-diethyl phosphorothioate'

- by (c)
- ester; see ester definition in (b_0) and (c) of *§ 6.14*, i.e., ester of a common acid and a nontraditional alcohol