

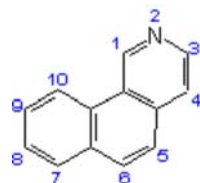
Heterocyclic Systems

Rule B-3. Fused Heterocyclic Systems

3.1 - "Ortho-fused" and "ortho- and peri-fused" ring compounds containing hetero atoms are named according to the fusion principle described in Rule [A-21](#) for hydrocarbons. The components are named according to Rules [A-21](#), [B-1](#) and [B-2](#). When the name of a component in a fusion name contains locants (numerals or letters) that do not apply also to the numbering of the fused system, these locants are placed in square brackets (as are also the locants for fusion positions required by Rule [A-21.5](#)). The base component should be a heterocyclic system. If there is a choice, the base component should be, by order of preference:

(a) A nitrogen-containing component.

Example to Rule B-3.1(a)

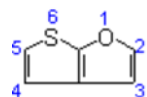


Benz[z]isoquinoline

not Pyrido[2,3-*b*]naphthalene

(b) A component containing a heteroatom (in the absence of nitrogen) as high as possible in [Table B-I](#).

Example to Rule B-3.1(b)

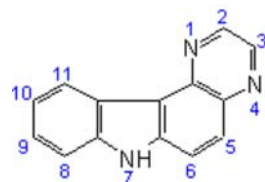


Thieno[2,3-*b*]furan

not Furo[2,3-*b*]thiophene

(c) A component containing the greatest number of rings.

Example to Rule B-3.1(c)

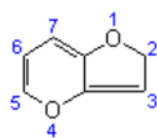


7*H*-Pyrazino[2,3-*c*]carbazole

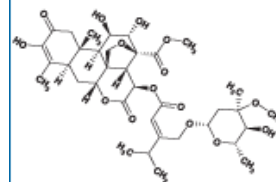
not 7*H*-Indolo[3,2-*f*]quinoxaline

(d) A component containing the largest possible individual ring.

Example to Rule B-3.1(d)



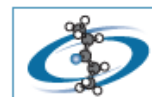
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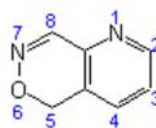
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2*H*-Furo[3,2-*b*]pyran

not 2*H*-pyrano[3,2-*b*]furan

(*e*) A component containing the greatest number of hetero atoms of any kind.

Example to Rule B-3.1(*e*)

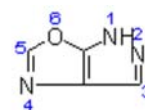


5*H*-Pyrido[2,3-*d*]-*o*-oxazine

not *o*-Oxazino[4,5-*b*]pyridine

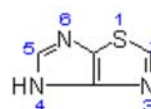
(*f*) A component containing the greatest variety of hetero atoms.

Examples to Rule B-3.1(*f*)



1*H*-Pyrazolo[4,3-*d*]oxazole

not 1*H*-Oxazolo[5,4-*c*]pyrazole

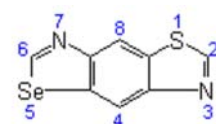


4*H*-Imidazo[4,5-*d*]thiazole

not 4*H*-Thiazolo[4,5-*d*]imidazole

(*g*) A component containing the greatest number of hetero atoms first listed in [Table B-I](#).

Example to Rule B-3.1(*g*)

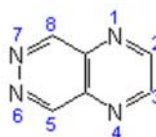


Selenazolo[5,4-*f*]benzothiazole

not Thiazolo[5,4-*f*]benzoselenazole

(*h*) If there is a choice between components of the same size containing the same number and kind of hetero atoms choose as the base component that one with the lower numbers for the hetero atoms before fusion.

Example to Rule B-3.1(*h*)



Pyrazino[2,3-*d*]pyridazine

3.2 - If a position of fusion is occupied by a hetero atom, the names of the component rings to be fused are so chosen as both to contain the hetero atom.

Example to Rule B-3.2