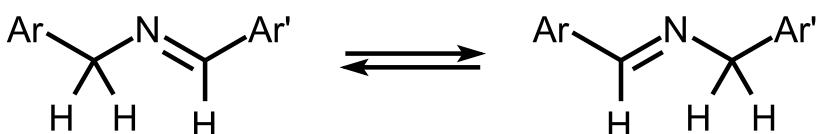
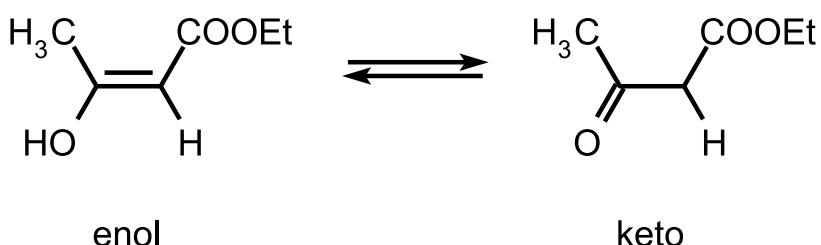


### **tautomerism**

Isomerism of the general form:

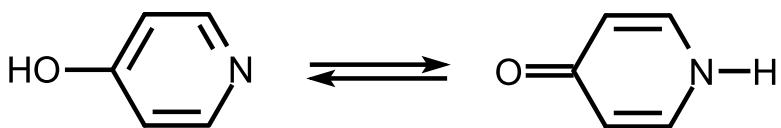


where the isomers (called tautomers) are readily interconvertible; the atoms connecting the groups X, Y, Z are typically any of C, H, O or S, and G is a group which becomes an electrofuge or nucleofuge during isomerization. The commonest case, when the electrofuge is  $H^+$ , is also known as 'prototropy'. Examples, written so as to illustrate the general pattern given above, include: Keto-enol tautomerism, such as:



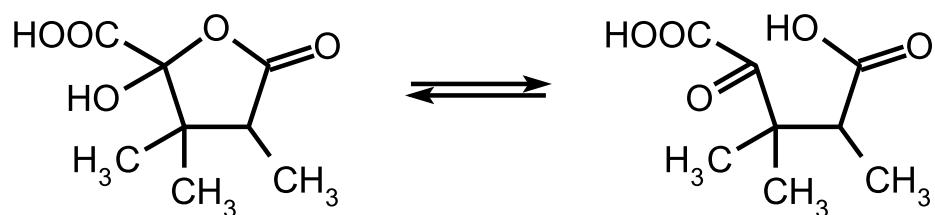
(G = H, X = CHAr, Y = N, Z = CHAr')

The grouping Y may itself be a three-atom (or five-atom) chain extending the conjugation, as in:

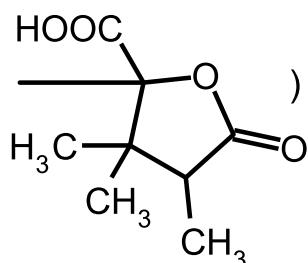


(G = H, X = O, Y = C-CH=CH, Z = N)

The double bond between Y and Z may be replaced by a ring, when the phenomenon is called ring-chain tautomerism, as in:



$(G = H, X = O, (Y = Z) =$



*See also:* ambident, sigmatropic rearrangement, tautomerization, valence tautomerization

**Source:**

PAC, 1994, 66, 1077 (*Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)*) on page 1171