GETEROSIKLIK BIRIKMALAR

Xamrayeva Mohinur Erkin qizi
Siyob Abu Ali ibn Sino nomidagi Jamoat salomatligi texnikumi

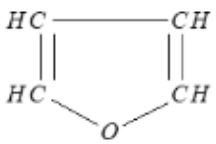
Anotatsiya: Geterosiklik birikmalar molekulasida uglerod atomlaridan tashqari bir yoki bir nechta boshqa element atomlari bo'lgan siklik birikmalar tushuniladi.

Geterosiklik birikmalar

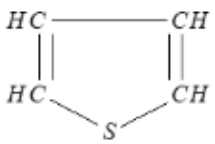
Geterosiklik birikmalarning besh va olti azoli sikldan tashkil topgan xillari nisbatan keng tarqalgan . Bular tuzulishi va xossalari jixatdan karbosiklik birikmalardan farq qiladi va barqaror birikmalar hisoblanadi. O'zlarining xossalari jixatdan benzolga yaqin turadi yani aromatik xususiyatga ega bo'ladi.O'simlik xlorofili,geteroauksin, indigo, pentsilin, vitaminlar alkaloidlar va pegmentlar geterosiklik birikmalardan iborat.

Geterosiklik birikmalarning asosiy sinflari quyudagicha:

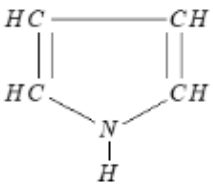
1. 5 azoli 1 ta geteroatomli birikmalar.



furan

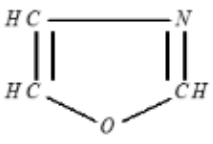


tiofen

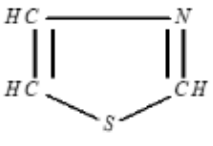


pirrol

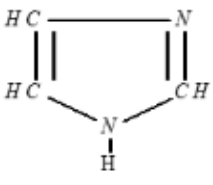
2. 5 azoli 2 ta geteroatomli birikmalar.



oksazol

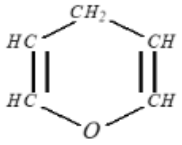


tiazol

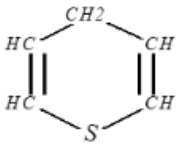


imidazol

3. 6 azoli 1 ta geteroatomli birikmalar.



piran



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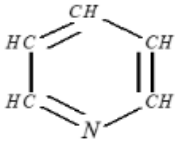
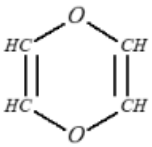
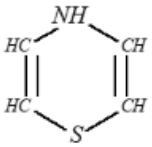


piridin

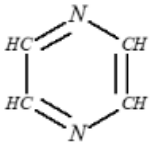
4. 6 azoli 2 ta geteroatomli birikmalar.



dioksin



tiazin



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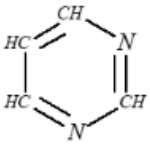
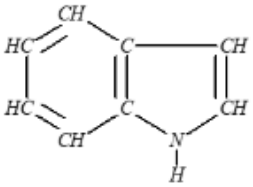
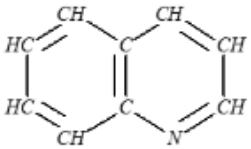


pirimidin

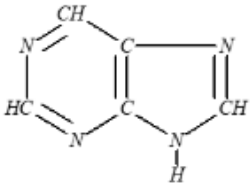
5. Ikki halqali geterosiklik birikmalar



indol

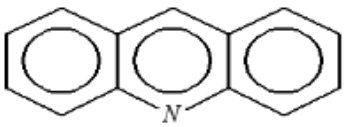


xinolin

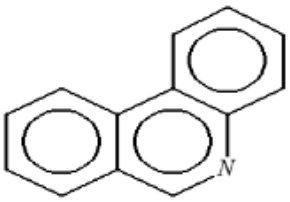


purin

6. Uch halqali geterosiklik birikmalar

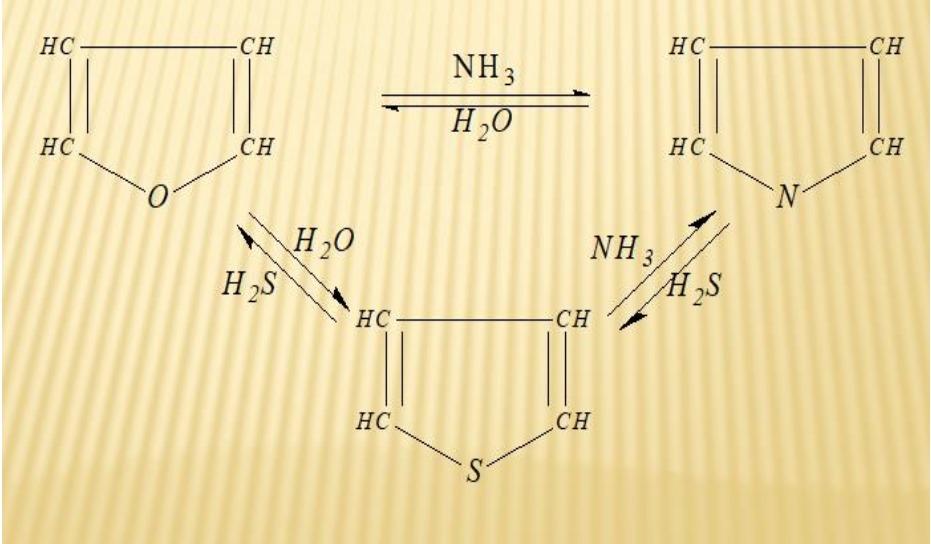


akridin

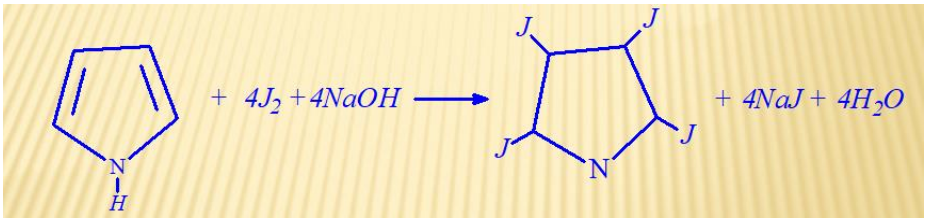


fenantredin

Pirrol: rangsiz, havoda tez oksidlanadigan beqaror suyuqlik. Uning qaynash temperarurasi 131 ‘C. Pirrol suvda yomon lekin spirt va efirda oson eriydi. Pirrol furan tiofin halqalari o’zaro genetik o’xshash bo’ladi . Y.K.Yuryevning ko’rsatishicha furan bug’uni sulfid yoki ammiak bilan aralashtirib 450-500 ‘C da Al2O3 ustidan o’tkazilsa ular biridan ikkinchisiga o’zgarib turadi.



Pirrol va uning hosilalari aromatik xossalarni yaqqol namoyon qiladi. U o‘z xossalari jihatidan fenolga ham o‘xshaydi. Pirrol xlor, brom, hattoki, yod bilan oson elektrofil o‘rin almashinish reaksiyasiga kirishadi. Masalan, ishqoriy muhitda yodlashda pirrolning to‘rtta vodorodi yodga almashinadi, natijada 2,3,4,5 tetrayodpirrol hosil bo‘ladi



Oqsillar tarkibidagi prolin, oksi prolin va tri ptofan, qon gemoglobini, yashil o‘simliklar pigmenti— xlorofill pirrol va uning hosilalaridir.

Pirrol va uning hosilalari tabiatda keng tarqalgan bo’lib ularga:Oqsillar tarkibidagi prolin, oksi prolin va tri ptofan, qon gemoglobini, yashil o‘simliklar pigmenti— xlorofill kabilar kiradi.