

# HETEROCYCLES IN ORGANIC CHEMISTRY

A HETEROCYCLE IN ORGANIC CHEMISTRY IS A RING OF CONNECTED ATOMS, WHERE ONE OR MORE OF THE ATOMS IN THE RING ARE ELEMENTS DIFFERENT FROM CARBON. HETEROCYCLES WITH OXYGEN, NITROGEN, AND SULFUR ARE THE MOST PREVALENT; SELENIUM, BORON, SILICON, ARSENIC & PHOSPHORUS CAN ALSO BE INCORPORATED.

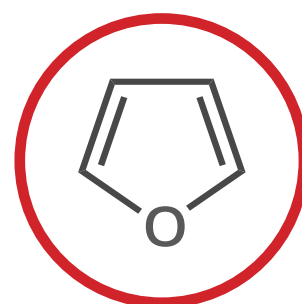
 OXYGEN-BASED HETEROCYCLES     NITROGEN-BASED HETEROCYCLES     SULFUR-BASED HETEROCYCLES     MULTIPLE HETEROATOM HETEROCYCLES



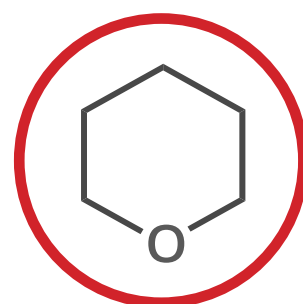
**ETHYLENE OXIDE**  
*Oxirane*  
 $C_2H_4O$



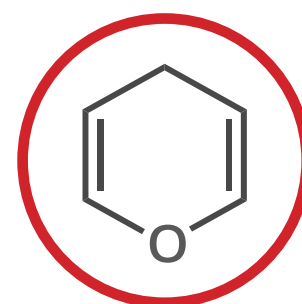
**TETRAHYDROFURAN**  
*Oxolane*  
 $C_4H_8O$



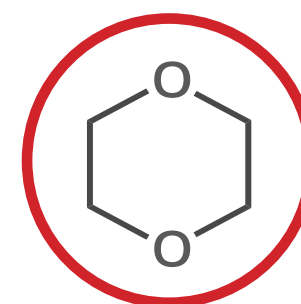
**FURAN**  
*Oxole*  
 $C_4H_4O$



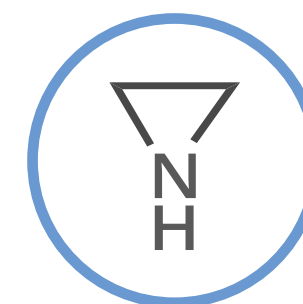
**TETRAHYDROPYRAN**  
*Oxane*  
 $C_5H_{10}O$



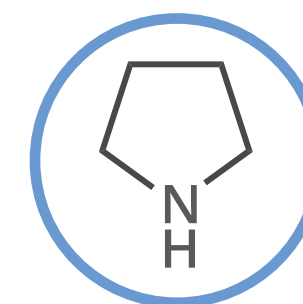
**4H-PYRAN**  
*4H-Oxine*  
 $C_5H_6O$



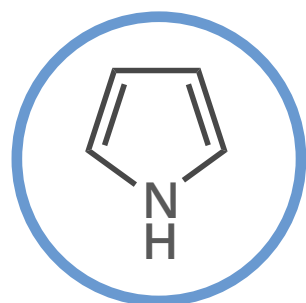
**1,4-DIOXANE**  
*p-Dioxane*  
 $C_4H_8O_2$



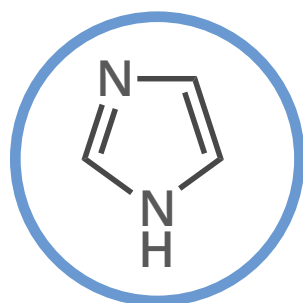
**ETHYLENE IMINE**  
*Aziridine*  
 $C_2H_5N$



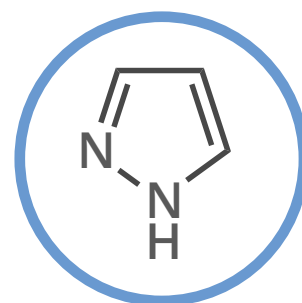
**PYRROLIDINE**  
*Azolidine*  
 $C_4H_9N$



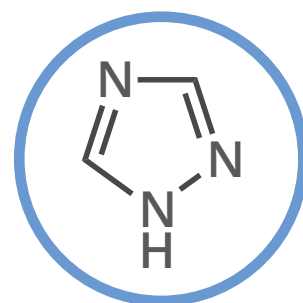
**PYRROLE**  
*Azole*  
 $C_4H_5N$



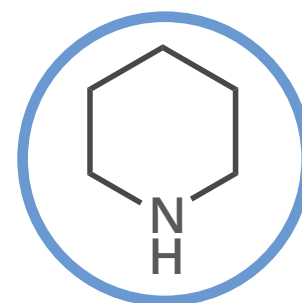
**IMIDAZOLE**  
*1,3-diazole*  
 $C_3H_4N_2$



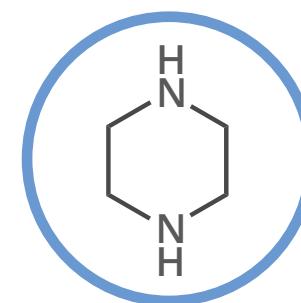
**PYRAZOLE**  
*1,2-diazole*  
 $C_3H_4N_2$



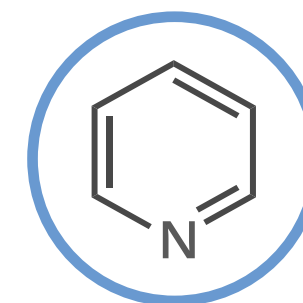
**TRIAZOLE**  
*1,2,4-triazole*  
 $C_2H_3N_3$



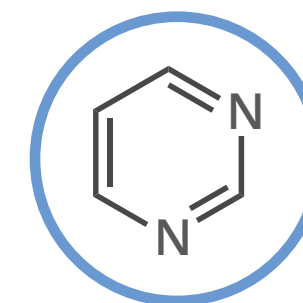
**PIPERIDINE**  
*Azinane*  
 $C_5H_{11}N$



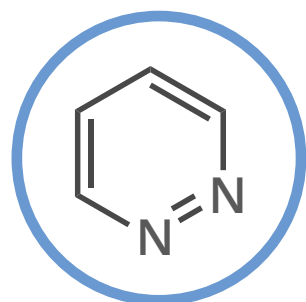
**PIPERAZINE**  
*Piperazidine*  
 $C_4H_{10}N_2$



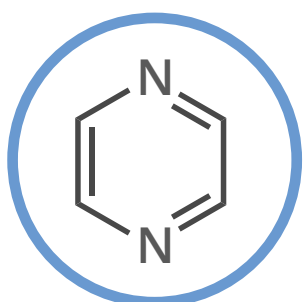
**PYRIDINE**  
*Azine*  
 $C_5H_5N$



**PYRIMIDINE**  
*1,3-diazine*  
 $C_4H_4N_2$



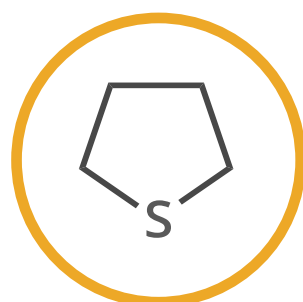
**PYRIDAZINE**  
*1,2-diazine*  
 $C_4H_4N_2$



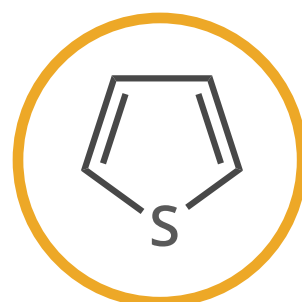
**PYRAZINE**  
*1,4-diazine*  
 $C_4H_4N_2$



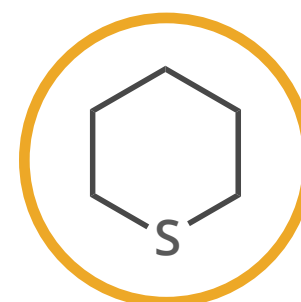
**ETHYLENE SULFIDE**  
*Thiirane*  
 $C_2H_4S$



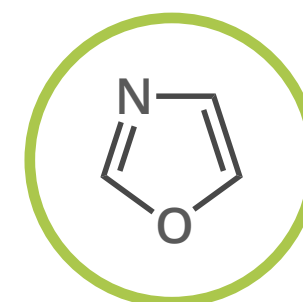
**TETRAHYDROTHIOPHENE**  
*Thiolane*  
 $C_4H_8S$



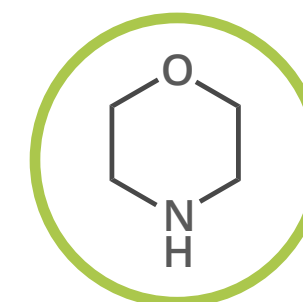
**THIOPHENE**  
*Thiole*  
 $C_4H_4S$



**TETRAHYDROTHIOPYRAN**  
*Thiane*  
 $C_5H_{10}S$



**OXAZOLE**  
*1,3-oxazole*  
 $C_3H_3NO$



**MORPHOLINE**  
*Tetrahydro-1,4-oxazine*  
 $C_4H_9NO$