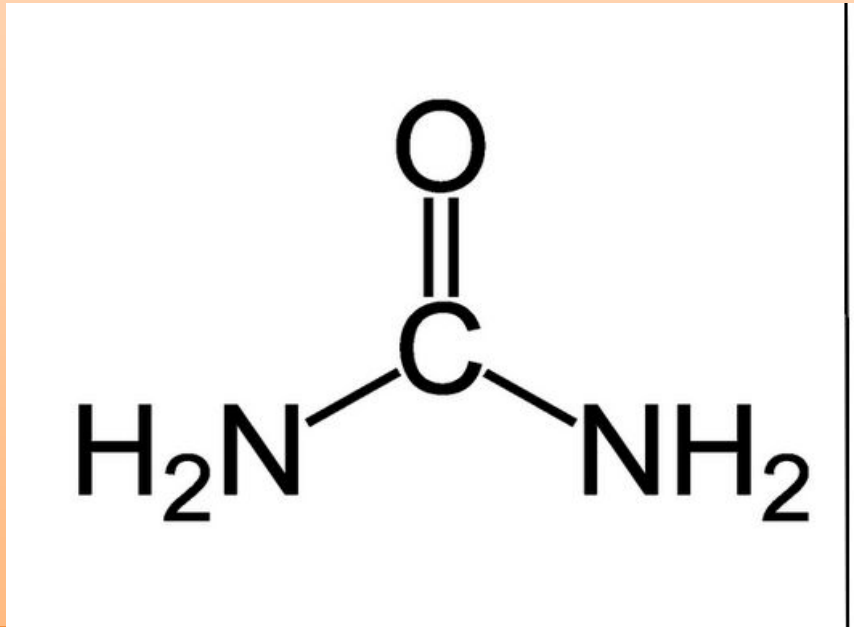
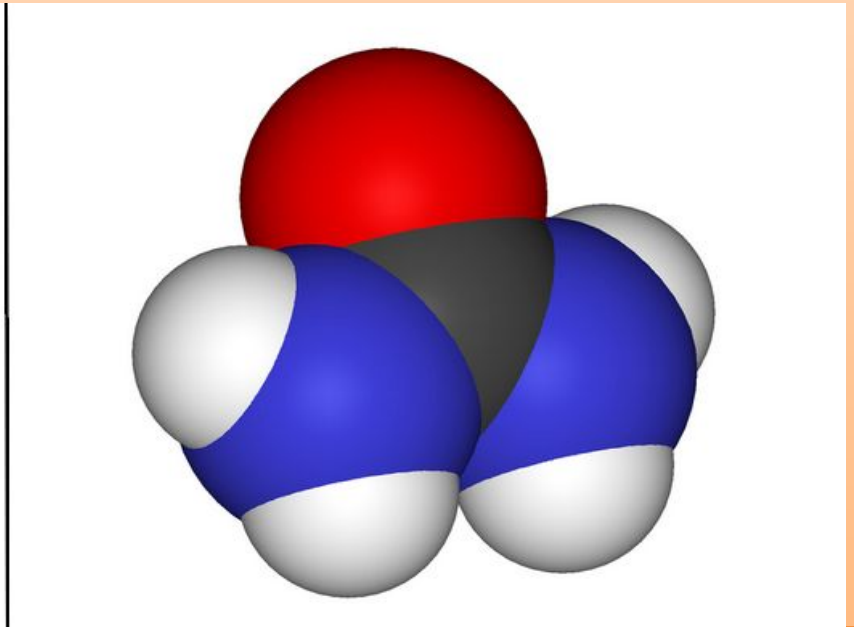
UREA

Urea, also known as **carbamide**, is an organic compound. This amide has two $-NH_2$ groups joined by a carbonyl (C=O) functional group.

Chemical formula CH_4N_2O





Urea serves an important role in the metabolism of nitrogen-containing compounds by animals and is the main nitrogen-containing substance in the urine of mammals. It is a colorless, odorless solid, highly soluble in water, and practically non-toxic (LD_{50} is 15 g/kg for rats). Dissolved in water, it is neither acidic nor alkaline. The body uses it in many processes, most notably nitrogen excretion. The liver forms it by combining two ammonia molecules (NH_3) with a carbon dioxide (CO_2) molecule in the urea cycle. Urea is widely used in fertilizers as a source of nitrogen and is an important raw material for the chemical industry.

Urea’s names

- **Urea has a lot name. For example: Carbamide, Carbony ldiamide and Carbonyldiamine.**

- More than 90% of world industrial production of urea is destined for use as a nitrogen-release fertilizer.[5] Urea has the highest nitrogen content of all solid nitrogenous fertilizers in common use. Therefore, it has the lowest transportation costs per unit of nitrogen nutrient.

- Many soil bacteria possess the enzyme urease, which catalyzes conversion of urea to ammonia (NH_3) or ammonium ion (NH_4^+) and bicarbonate ion (HCO_3^-).