

NITROGEN



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Forms of Nitrogen

- ◆ In nature, nitrogen exists in a variety of forms:
 - Organic nitrogen
 - Inorganic nitrogen



Forms of Nitrogen

◆ Inorganic nitrogen

- Ammonia, NH_3
- Nitrate, NO_3^-
- Nitrite, NO_2^-
- Nitrogen gas, N_2

◆ Inorganic nitrogen changes forms by the processes of nitrification and denitrification.

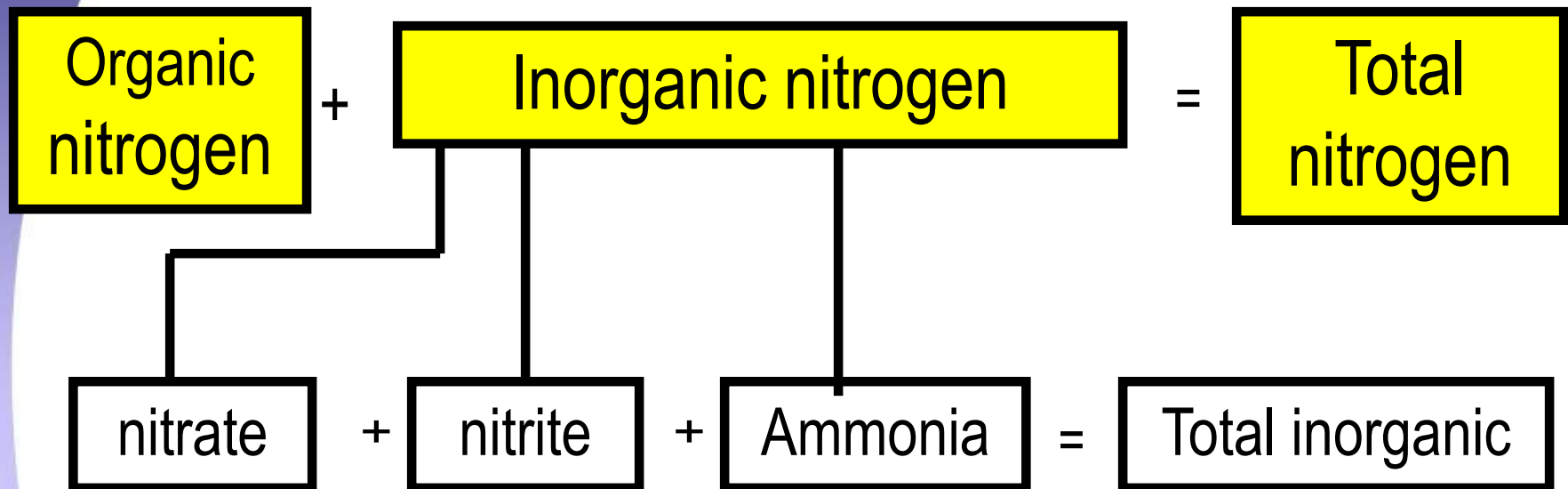


Organic Nitrogen

- ◆ Organic nitrogen is found in living organisms:
 - Proteins
 - Peptides
 - Nucleic acids (DNA, RNA)
 - Urea
- ◆ Also found in decaying dead organisms.



Forms of Nitrogen





Ammonia, nitrate and nitrite in water.

Sources of ammonia, nitrate and nitrite in water come from:

1. Livestock wastes
2. Urea and fertilizer industry
3. Domestic sewage
4. Runoff from agricultural grounds



Ammonia, nitrate and nitrite in water.

Too much ammonia, nitrate and nitrite in water will leads to:

1. Algae bloom.
2. Increase turbidity.
3. Lowers dissolved oxygen level.
4. Decreases aquatic life.



Nitrogen – Take Home Messages

- ◆ Nitrogen is a nutrient, essential to plant growth.
- ◆ Nitrogen occurs in many forms and may be converted from one form to another.
- ◆ Nitrogen is an important parameter to monitor in environmental water.

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the end.



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