

Nitrogen Oxides NO_x (NO / NO₂)

1. General characterization

The oxides of nitrogen are a very reactive group of gases containing nitrogen and oxygen in variable amounts. Most oxides of nitrogen are colorless or odorless gases. The main oxides of nitrogen are:

- Nitrogen monoxide (NO) is a colorless and odorless gas;
- Nitrogen dioxide (NO₂) is a reddish brown gas with a strong odor.

The nitrogen dioxide combined with air particles can form a reddish brown coat. In the presence of sunlight the nitrogen oxides can react with hydrocarbons to form photochemical oxidants.

Nitrogen Oxides are responsible for acid rain which affects both the terrestrial and aquatic ecosystem.

2. Air pollutant effects on human health

- progressive inflammation of lungs leading to the pulmonary edema (acute exposure);
- neurological symptoms (headaches or dizziness);
- chronic bronchitis (chronic exposure);
- pulmonary emphysema;
- increased rates of breathing infections (especially at children).

3. Air pollutant effects on ecosystems

- serious injury of vegetation by bleaching or death of plant tissues, decrease of vegetation growing rate;
- stimulation of plant and unwanted organism growth;
- pulmonary diseases at animals, similar to emphysema;
- reduction of fish populations and other aquatic species;
- it is detrimental to the commercial value of fishes and shells.
- it generates acid rains that affect both the terrestrial surface and aquatic ecosystem;
- accumulation of nitrates in the soil, causing the alteration of environmental ecologic balance.

4. Specific Index

Concentration Range [$\mu\text{g}/\text{m}^3$]	Specific Index
0-49.99	1
50-99.99	2
100-139.99	3
140-199.99	4
200-399.99	5
>400	6