

## 16. HYGIENIC ASSESSMENT OF AIR QUALITY IN CHISINAU

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**Introduction.** Atmospheric air is an important component of life on Earth. The pollution of the air appeared with the development of the industry, the increase in the number of land and air transport, the excessive burning of fuel. Air pollution is a global problem that most countries in the world are struggling with. Pollution causes an increase in the incidence and prevalence of pathologies of the respiratory and cardiovascular systems, oncological diseases. About 7 million deaths are reported annually due to exposure of the population to polluted air.

**Aim of study.** The purpose of the study is to research and analyze the atmospheric air quality in Chişinău.

**Methods and materials.** A hygienic analytical study was conducted by researching the Monthly Bulletins generated by the Hydrometeorological Service of Chisinau from 2019-2021. By the historical method was analyzed the scientific works of local and foreign authors on atmospheric air quality.

**Results.** Research results show that the main pollutants in Chisinau are: nitrogen dioxide, nitrogen monoxide, phenol, formic aldehyde and solid suspensions. The amount of nitrogen dioxide is almost constant in these years, in 2019- 31.6% of the total amount for 3 years, in 2020-35% and in 2021 -33.2%. There was a 20% decrease in the amount of carbon monoxide emissions, in 2019 41.5% of the total amount of pollutant is attributed. At the same time, there is a considerable increase in phenol emissions by 30% in 2021 (51.2%) compared to previous years, 2019 (24.9%) and 2020 (23.8%). Gradually the amount of formic aldehyde is decreasing, in 2019 it will account for 42.9% of the total amount, in 2020-29.9% and in 2021-28.2%. The data show that in 2019 there were several days of exceeding the maximum concentration, 23 days of nitrogen dioxide and 22 days of nitrogen monoxide compared to 2020-20 days and 15 days, respectively. In 2021, there were 14 days of formic aldehyde exceedances compared to 16 days in 2019, but the number of days with phenol exceedances increased in 2021 (12 days) than in 2019 (9 days). During the week it is observed that Tuesday is the day with the highest values exceeding the maximal concentration, and Sunday is the day with the lowest emissions.

**Conclusion.** Air pollution in Chisinau is an important problem. The year 2019 is marked by a more intense degree of pollution than the years 2020-2021. The year 2020 compared to 2021 is marked by lower indices of nitrogen dioxide and nitrogen monoxide, but the amount of phenol has increased considerably. Tuesday is considered the most polluted day of the week.