

Control of PM in the National Ambient National Ambient Air Quality Monitoring System

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Executive Environment Agency (ExEA) is established to the Ministry of Environment and Water for environmental monitoring. It designs and manages the National System for Environmental Monitoring for monitoring and information on the state of environmental components and factors on the complete territory of the country.

The Agency is *a National Reference Centre* within the European Environment Agency (EEA).

The Agency is *a Member of EPA Network* (European Network of the Heads of Environment Protection Agencies)

**AIR QUALITY LABORATORY IS A NATIONAL
REFERENCE LABORATORY**

**MEMBER OF AQUILA – NETWORK OF NATIONAL
AIR QUALITY LABORATORIES**

National Ambient National Ambient Air Quality Monitoring System (NAAMS)

- Air quality monitoring has been conducted in Bulgaria since 1974.**
- The manual monitoring sites in the NAAMS are built in the period 1973 – 1998 before implementation of the EU legislation in Bulgaria.**
- The air quality monitoring stations are built after and in compliance with EU requirements**

**Order of the Minister of Environment and Water:
regulates the work of the NAAMS since 01.01.2005, incl.
updating of the number of AAQ monitoring stations,
controlled air pollutants, as well as measuring methods
and measuring devices.**

At present NAAMS consist of 48 stationary stations:

39 automatic stations in real time (AS);

4 automatic stations for control of limit values in ecosystems;

5 DOAS systems (Differential Optical Absorption Spectroscopy)

- The automatic stations (AS and DOAS) operates continuously. The AQ data from automatic stations are received in local and national databases by National Real Time Air Quality Information Network /PHARE-Project BG 9807-01-03/.

METHODS FOR ASSESSMENT OF PM 10 and PM2.5 CONCENTRATIONS

→ **EN 12341:2014** Ambient air - Standard gravimetric measurement method for the determination of the PM10 or PM2,5 mass concentration of suspended particulate matter

→ **EN 16450:2017** Ambient air - Automated measuring systems for the measurement of the concentration of particulate matter (PM10; PM2,5)

Demonstration of equivalence of the measurements in the case of PM10

Regarding the implementation of Article 11, point 2 and Appendix 6, Section B of Directive 2008/50/EO of the European Parliament and of the Council of 21 May 2008 on Ambient Air Quality and Cleaner Air for Europe, which concern the requirements for demonstration of equivalence of the measurements, hereby I would like to inform you as follows:

In the currently operating National Ambient Air Quality Monitoring Network, for determination of the levels of PM10, both the reference method of measurement and the non-reference method of β -absorption are used. Owing to that fact and in pursuance of the requirements of the Directive, the Executive environmental agency has started conducting an experiment according to the requirements of the Guide to the demonstration of equivalence of ambient air monitoring methods

According to the requirements of the EC's Guide to the Demonstration of Equivalence, all the results from the experiment have been reviewed and approved by the national competent authority (the Air Protection Directorate at the Ministry of Environment and Waters).

The common requirements for QA/QC of the measurements of pollutant levels in ambient air has been prepared according to the requirements of CAFÉ 2008/50/EC.

The **common requirements** are an approach, in which the quality of all the measurements of ambient air pollutant levels is assured and controlled by identical procedures, methods and calibration and test devices. Currently, there is a single developed and operating National Ambient Air Quality Monitoring Network, which is part of the National System for Environmental Monitoring and as such is administered by the Executive Environment Agency (EEA), in the territory of the Republic of Bulgaria. In this context, the EEA is fully in charge of providing reliable information about the pollutants that are reported to the European Commission and the European Environment Agency.

In compliance with the requirements of “Quality assurance for ambient air quality assessment: data validation” “Data quality objectives for ambient air quality assessment”, **the testing laboratory and the calibration laboratory** at the EEA have been accredited respectively for testing and calibration according to the requirements of the EN ISO/IEC 17025 “General requirements for the competence of testing and calibration laboratories” concerning sulphur dioxide, nitrogen dioxide, nitrogen oxides, particulate matter (PM₁₀ and PM_{2.5}), lead, benzene, carbon monoxide and ozone in ambient air and they are responsible for the proper implementation of the current common requirements.

The common requirements for QA/QC include the following basic elements:

1. Data quality objectives for ambient air quality assessment

2. Normative assurance of the measurements

3. Metrological assurance of the measurements, incl. the measurement uncertainty

4. Use of reference materials

5. Use of equipment from type approval

6. Participation in the intercomparison exercises

Mobile automatic stations (MAS) for AAQ measurements

- 🚗 The NAAMS has 6 MAS for AAQ measurements;
- 🚗 The MAS are used for AAQ measurements in the regions, where the stationary stations are not available (preliminary assessment of AQ)

Dissemination of AQ information

- Instruction for public information when an alert threshold is exceeded;
 - Daily bulletin for AQ in the country;
- Three-months bulletins for AQ in the country;
- Annual report for the state of Environment.

2018

**Limit value for one day 50 mkg/m³, not to be exceed more
tnan 35 times a calendar year**

At 24 stations it is exceeded the limit value for one day /more than 35 times/

Limit value for calendar year 40 mkg/m³

At 8 stations it is exceeded the limit value for one year



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