



**THE SOCIALIST REPUBLIC OF VIETNAM**

**QCVN 05: 2009/BTNMT**

**National Technical Regulation on ambient air quality**

**(This English version is for reference only)**

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## **Foreword**

QCVN 05:2009/BTNMT was prepared by the Committee of the National Technical Regulation on Air Quality, submitted by the General Department of Environment, Science and Technology Department and the Legal Department and promulgated in accordance with Circular No. 16/2009/TT-BTNMT dated October 7th, 2009 by the Minister of Natural Resources and Environment.



# National Technical Regulation on ambient air quality

## 1. GENERAL PROVISIONS

### 1.1. Scope of regulation

1.1.1. This regulation defines limit values of basic parameters included: Sulphur dioxide (SO<sub>2</sub>), carbon dioxide (CO), nitrogen oxide (NO<sub>x</sub>), ozone (O<sub>3</sub>), suspended dust, dust PM10 (dust ≤ 10µm) and lead (Pb) in the ambient air.

1.1.2. This regulation is applied to evaluate the quality of ambient air and control air pollution.

1.1.3. This regulation is not applicable to quality of ambient air in the production establishments and in the house.

### 1.2. Explanation of terms

In this regulation, the following terms are expressed as follows:

1.2.1. Average one hour: the arithmetic average of values measured within about one hour for measures which were done more than one time in one hour, measurement values in one time within about one hour. Hourly average value is measured in many times for 24 hours (one day and night) with specific frequency. Maximum hourly average value among measured values for 24 hours is compared with limits given in Table 1.

1.2.2. Average 8 hours: the arithmetic average of values measured within 8 continuously hours.

1.2.3. Average 24 hours: the arithmetic average of values measured within 24 hours (one day and night).

1.2.4. Yearly average: the arithmetic average of average values of 24 hours which are measured within one year.

## 2. TECHNICAL REGULATIONS

Limit values of parameters of ambient air quality are given in Table 1.

**Table 1: Limit values of parameters of ambient air quality**

(Unit:  $\mu\text{g}/\text{m}^3$ )

No.	Parameters	Average 1 hour	Average 8 hours	Average 24 hours	Yearly average
1.	SO <sub>2</sub>	350	-	125	50
2.	CO	30000	10000	5000	-
3.	NO <sub>x</sub>	200	-	100	40
4.	O <sub>3</sub>	180	120	80	-
5.	Suspended dust (TSP)	300	-	200	140
6.	Dust $\leq 10 \mu\text{m}$	-	-	150	50
7.	Pb	-	-	1,5	0,5
Note: (-) mark is not regulated.					

## 3. DETERMINATION METHOD

Determination method of parameters of air quality shall be made in accordance guidances of national standards or corresponding standards of the international standards:

- TCVN 5978:1995 (ISO 4221:1980) Air quality. Determination of mass concentration of sulphur dioxide in ambient air. Thorin spectrophotometric method
- TCVN 5971:1995 (ISO 6767:1990) Ambient air. Determination of the mass concentration of sulfur dioxide. Tetrachloromercurate (TCM)/pararosaniline method
- TCVN 7726:2007 (ISO 10498:2004) Ambient air. Determination of sulfur dioxide. Ultraviolet fluorescence method
- TCVN 5972:1995 (ISO 8186:1989) Ambient air. Determination of the mass concentration of carbon monoxide. Gas chromatographic method

- TCVN 7725:2007 (ISO 4224:2000) Ambient air. Determination of carbon monoxide. Non-dispersive infrared spectrometric method
- TCVN 5067:1995 Air quality. Weight method for determination of suspended dusts content
- TCVN 6138:1996 (ISO 7996:1985) Ambient air. Determination of the mass concentration of nitrogen oxides. Chemiluminescence method
- TCVN 7171:2002 (ISO 13964:1998) Air quality. Determination of ozone in ambient air. Ultraviolet photometric method
- TCVN 6157:1996 (ISO 10313:1993) Ambient air. Determination of the mass concentration of ozone. Chemiluminescence method
- TCVN 6152:1996 (ISO 9855:1993) Ambient air. Determination of the particulate lead content of aerosols collected on filters. Atomic absorption spectrometric method

#### **4. ORGANIZATION OF IMPLEMENTATION**

This Regulation is applied for replacing TCVN 5937:2005- Air quality. Ambient air quality which is issued with the enclosure with Decision No. 22/2006/QĐ-BKHCMNT dated December 18th, 2006 by the Minister of Science, Technology and Quality on the compulsory application of Vietnam Standards on Environment.

In that case that national or international standards on the analysis method cited in this regulation have amendments, supplements or replacements, shall apply the new ones.

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