



**NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC  
OF CHINA**

**中华人民共和国国家标准**

**GB/T 18204.26-2000**

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**Methods for determination of formaldehyde in  
air of public places**

**公共场所空气中甲醛测定方法**

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## Foreword

This standard is developed to implement *Implementation of regulations of public places*, GB 9663~9673—1996 and GB 16153—1996 *Regulation on the stadium health in the Public Health Standard* and to strengthen the supervision and management of public places. The methods in this standard is matched with monitoring and testing methods in GB 9663~9673—1996 and GB 16153—1996.

This first law of this standard is arbitration law.

This standard is the first release.

Annex A of this standard is normative annex.

Annex B of this standard is informative annex.

This standard is proposed by Ministry of Health of People's Republic of China.

Drafting units of this standard: Wuhan sanitary and antiepidemic station and Liaoning Providence sanitary and antiepidemic station.

Main drafters of this standard: Zhang Qisheng, Wang Hanping (phenol reagent method), Jiang Shuqiu, Gao Wei and Gao Guichun (gas chromatographic method).

Methods for determination of formaldehyde in air of public places

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**1 Scope**

This standard specified the methods for determination of formaldehyde concentration in air of public places.

This standard applies to the determination of formaldehyde concentration in air of public places.

**Method one Phenol reagent spectrophotometry**

**2 Principal**

Formaldehyde in the air and phenol reagent set off a chemical reaction to generate triazine and triazine is oxidized by ferric ion in an acidic solution to be bluish green compound. The colorimetric quantification shall be compared according to the color depth.

**3 Reagents**

The water used in this method is heavy distilled water or deionized water exchange water; the purity of used agent is usually analytically pure.

3.1 Original solution of absorbing solution: weight 0.10g of phenol reagent [ $C_6H_4SN(CH_3)C: NNH_2 \cdot HCl$ , referred as MBTH] and add water to dissolve it. Put it into mixing cylinder with stopper with 10 ml and add water to the mark. Then store it in the fridge and it can be kept stably for three days.

3.2 Absorbing solution: weight 5 ml original absorbing solution and add 95 ml water to make absorbing solution. Formulate it in field for temporary use in sampling.

3.3 1% of ammonium iron sulfate solution: weight 1.0 g of ammonium iron sulfate [ $NH_4Fe(SO_4)_2 \cdot 12H_2O$ ] and dissolve it by using 0.1 mol/L of hydrochloric acid to 100 ml.

3.4 Iodine solution ( $c(1/2I_2) = 0.1000 \text{ mol/L}$ ) : Weight 40 g of potassium iodide and dissolve it in 25 ml water. Add 12.7 g of iodine. Dilute it with water to 100mL after it has been dissolved completely. Then move it into a brown bottle and storage it in dark place.

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