

# Environmental Quality Standards in Japan - Air Quality

## 1. Environmental Quality Standards in Japan

Substance	Environmental conditions	Measuring method
Sulfur dioxide	The daily average for hourly values shall not exceed 0.04 ppm, and hourly values shall not exceed 0.1 ppm (Notification on May 16, 1973)	Conductometric method or ultraviolet fluorescence method
Carbon monoxide	The daily average for hourly values shall not exceed 10 ppm, and average of hourly values for any consecutive eight hour period shall not exceed 20ppm (Notification on May 8, 1973)	Nondispersive infrared analyzer method
Suspended particulate matter	The daily average for hourly values shall not exceed 0.10 mg/m <sup>3</sup> , and hourly values shall not exceed 0.20 mg/m <sup>3</sup> (Notification on May 8, 1973)	Weight concentration measuring methods based on filtration collection, or -rayβlight scattering method; or piezoelectric microbalance method; or attenuation method that yields values having a linear relation with the values of the above methods.
Nitrogen dioxide	The daily average for hourly values shall be within the 0.04-0.06 ppm zone or below that zone (Notification on July 11, 1978)	Colorimetry employing Saltzman reagent (with Saltzman's coefficient being 0.84) or chemiluminescent method using ozone.
Photochemical oxidants	Hourly values shall not exceed 0.06 ppm (Notification on May 8, 1973)	Absorption spectrophotometry using a neutral potassium iodide solution; coulometry; ultraviolet absorption spectrometry; or chemiluminescent method using ethylene.

1. Suspended particulate matter is defined as airborne particles with a diameter smaller than or equal to 10 μm.
2. Photochemical oxidants are oxidizing substances such as ozone and peroxyacetyl nitrate produced by photochemical reactions (only those capable of isolating iodine from neutral potassium iodide , excluding nitrogen dioxide.)

## 2. Environmental Quality Standards for Benzene, Trichloroethylene, Tetrachloroethylene and Dichloromethane

(Notification on February 4th,1997)

Substance	Environmental conditions	Measuring method
Benzene	Annual average shall not exceed 0.003 mg/m <sup>3</sup> (Notification on February 4,1997)	Preference method: gas chromatograph-mass spectrometer (sample gas should be collected with a canister or tube) or equivalent method.
Trichloroethylene	Annual average shall not exceed 0.2 mg/m <sup>3</sup> (Notification on February 4,1997)	
Tetrachloroethylene	Annual average shall not exceed 0.2 mg/m <sup>3</sup> (Notification on February 4,1997)	
Dichloromethane	Annual average shall not exceed 0.15 mg/m <sup>3</sup> (Notification on April 20,2001)	

## 3. Environmental Quality Standards for Dioxins

(Notification on December 27,1999)

Substance	Environmental conditions	Measuring method
Dioxins (PCDDs,PCDFs and coplanar PCBs)	Annual average shall not exceed 0.6pg-TEQ/m <sup>3</sup>	Using high resolution gas chromatograph - high resolution mass spectrometry (HRGC-HRMS). (Samples should be collected by an air sampler equipped with an inlet filter followed by a cartridge filled with polyurethane foam.)

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