Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	0.12 ppm (235 µg/m^3)	Same as Primary Standard	Ethylene Chemiluminescence
suspended particulate matter (PM_{10})	Annual geometric mean	30 µg/m^3	Size Selective Inlet High Volumn Sampler and Gravimetric Analysis	—	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	24 Hour	50 µg/m^3		150 mg/m^3		
	Annual arithmetic mean	—		50 µg/m^3		
carbon monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	Non-dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m^3)	—	Non-dispersive Infrared Spectroscopy (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—		
nitrogen dioxide ($N0_2$)	Annual average	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m^3)		—		
lead	30 days average	1.5 µg/m^3	Atomic Absorption	—	—	Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3	Same as Primary Standard	
sulfur dioxide (SO_2)	Annual average	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m^3)	—	Pararosoaniline
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	—	
	3 Hour	—		—	0.5 ppm(1300 µg/m^3)	
	1 Hour	0.25 ppm (655 µg/m^3)		—	—	
visibility reducing particles	8 Hour (10 am to 6 pm, PST)	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer—visibility of ten miles or more (0.07—30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent. Method: ARB Method V.		No Federal Standards		
sulfates	24 Hour	25 µg/m^3	Turbidimetric Barium Sulfate			
hydrogen sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Cadmium Hydroxide STRactan			

Notes

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded.
2. National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one (i.e., no more than 3 days above the standard in 3 years).
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. All measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method”and must be approved by the EPA.