

Supplementary Information

The Updated Brazilian National Air Quality Standards: A Critical Review

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Calculation of AQI

The air quality index (AQI) are calculated, for each compound, using the limits displayed in Table 5 and the following equation S1:¹⁻³

$$I_p = [(I_{\max} - I_{\min}) / (C_{\max} - C_{\min})] \times (C - C_{\min}) + I_{\min} \quad (S1)$$

where: C = mean concentration of pollutant p ; I_p = AQI for pollutant p ; I_{\max} = maximum AQI value for the concentration interval where the pollutant p was determined (C); I_{\min} = minimum AQI value for the concentration interval where the pollutant p was determined (C); C_{\max} = maximum concentration value for the concentration interval where the pollutant p was determined (C); C_{\min} = minimum concentration value for the concentration interval where the pollutant p was determined (C).

After calculating the AQI for the five pollutants (CO, SO₂, NO₂, O₃ and PM₁₀), the highest value is reported.

References

1. <http://www2.mma.gov.br/port/conama/legiabre.cfm?codlegi=740>, accessed in August 2019.
2. <https://cetesb.sp.gov.br/ar/padroes-de-qualidade-do-ar/>, accessed in August 2019.
3. http://jeap.rio.rj.gov.br/je-metinfosmac/institucional/docs/entenda_iqa.pdf, accessed in August 2019.

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