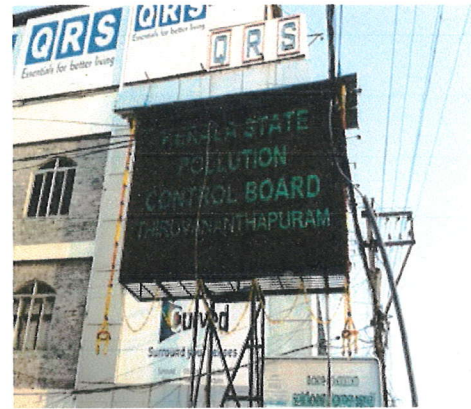
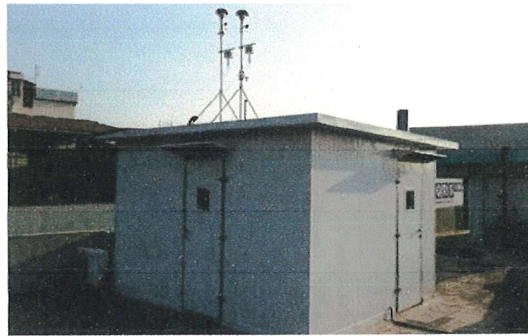


Kerala State Pollution Control Board
Pattom P.O., Thiruvananthapuram - 695 004
Head Office: 0471 - 2318153, 54, 55, 56, 2312910



Continuous Ambient Air Quality Monitoring Station



Quarterly Report (Dec. 2023 to Feb. 2024)

CAAQMS

Operated and Maintained by:-
Ecotech Monitoring Solutions P Ltd





Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Monthly Report on Criteria Pollutants

December 2023

| Date/Day | CO (mg/m ³) | Ozone (µg/m ³) | NO (µg/m ³) | NO ₂ (µg/m ³) | NO _X (µg/m ³) | NH ₃ (µg/m ³) | SO ₂ (µg/m ³) | PM _{2.5} (µg/m ³) | PM ₁₀ (µg/m ³) |
|----------------|----------------------------|-------------------------------|----------------------------|---|---|---|---|---|--|
| 01/12/2023 Fri | 0.64 | 12.7 | 5.8 | 11.5 | 17.4 | 8.9 | 9.1 | 11 | 27 |
| 02/12/2023 Sat | 0.50 | 13.4 | 5.9 | 11.5 | 17.4 | 8.9 | 7.8 | 9 | 22 |
| 03/12/2023 Sun | 0.42 | 16.8 | 5.8 | 11.7 | 17.5 | 8.8 | 7.7 | 12 | 23 |
| 04/12/2023 Mon | 0.74 | 19.0 | 5.9 | 11.5 | 17.4 | 8.8 | 7.5 | 11 | 24 |
| 05/12/2023 Tue | 0.70 | 15.8 | 5.9 | 11.6 | 17.5 | 8.8 | 7.7 | 14 | 32 |
| 06/12/2023 Wed | 1.09 | 18.0 | 5.9 | 11.6 | 17.5 | 8.9 | 8.8 | 19 | 43 |
| 07/12/2023 Thu | 0.76 | 15.3 | 5.6 | 11.5 | 17.1 | 8.9 | 7.8 | 16 | 37 |
| 08/12/2023 Fri | 0.48 | 12.4 | 5.8 | 11.5 | 17.3 | 8.9 | 8.8 | 11 | 33 |
| 09/12/2023 Sat | 0.44 | 13.1 | 5.9 | 11.6 | 17.5 | 8.9 | 8.0 | 17 | 41 |
| 10/12/2023 Sun | 0.56 | 16.0 | 5.9 | 11.6 | 17.5 | 8.8 | 7.2 | 31 | 60 |
| 11/12/2023 Mon | 0.75 | 15.3 | 5.9 | 11.5 | 17.4 | 8.9 | 10.2 | 26 | 50 |
| 12/12/2023 Tue | 0.99 | 19.8 | 5.9 | 11.6 | 17.5 | 8.8 | 9.9 | 25 | 49 |
| 13/12/2023 Wed | 0.89 | 18.8 | 5.9 | 11.6 | 17.5 | 8.8 | 8.3 | 41 | 69 |
| 14/12/2023 Thu | 0.77 | 18.3 | 5.8 | 11.6 | 17.4 | 8.8 | 8.7 | 44 | 74 |
| 15/12/2023 Fri | 0.63 | 15.6 | 5.9 | 11.6 | 17.5 | 8.8 | 8.1 | 41 | 69 |
| 16/12/2023 Sat | 1.06 | 13.1 | 5.9 | 11.5 | 17.3 | 8.8 | 7.5 | 52 | 86 |
| 17/12/2023 Sun | 0.69 | 12.6 | 5.8 | 11.5 | 17.3 | 8.8 | 7.3 | 17 | 29 |
| 18/12/2023 Mon | 0.79 | 14.7 | 5.8 | 11.5 | 17.3 | 8.8 | 8.5 | 8 | 20 |
| 19/12/2023 Tue | 0.92 | 16.2 | 5.8 | 11.4 | 17.2 | 8.8 | 9.1 | 19 | 38 |
| 20/12/2023 Wed | 0.85 | 15.7 | 5.8 | 11.4 | 17.2 | 8.8 | 8.8 | 31 | 58 |
| 21/12/2023 Thu | 0.95 | 14.0 | 5.8 | 11.4 | 17.3 | 8.7 | 9.0 | 30 | 49 |
| 22/12/2023 Fri | 0.66 | 13.8 | 5.9 | 11.5 | 17.5 | 8.6 | 7.6 | 36 | 64 |
| 23/12/2023 Sat | 0.66 | 15.3 | 5.7 | 11.3 | 17.1 | 8.7 | 8.9 | 55 | 84 |
| 24/12/2023 Sun | 0.60 | 16.2 | 6.1 | 11.2 | 17.3 | 8.4 | 8.8 | 54 | 85 |
| 25/12/2023 Mon | 0.52 | 14.0 | 6.8 | 10.0 | 16.9 | 7.5 | 10.0 | 31 | 50 |
| 26/12/2023 Tue | 0.77 | 16.3 | 6.5 | 10.4 | 17.0 | 7.8 | 8.7 | 21 | 41 |
| 27/12/2023 Wed | 0.85 | 15.8 | 5.8 | 11.6 | 17.5 | 8.9 | 8.1 | 27 | 51 |
| 28/12/2023 Thu | 0.90 | 13.6 | 5.8 | 11.5 | 17.3 | 8.9 | 9.2 | 28 | 52 |
| 29/12/2023 Fri | 0.50 | 14.4 | 5.8 | 11.4 | 17.2 | 8.8 | 8.3 | 16 | 34 |
| 30/12/2023 Sat | 0.59 | 12.3 | 5.9 | 11.6 | 17.5 | 8.9 | 8.2 | 24 | 45 |
| 31/12/2023 Sun | - | - | - | - | - | - | - | - | - |
| Average | 0.72 | 15.3 | 5.9 | 11.4 | 17.3 | 8.7 | 8.5 | 26 | 48 |
| Minimum | 0.42 | 12.3 | 5.6 | 10.0 | 16.9 | 7.5 | 7.2 | 8 | 20 |
| Maximum | 1.09 | 19.8 | 6.8 | 11.7 | 17.5 | 8.9 | 10.2 | 55 | 86 |
| Capture | 91.1 | 94.9 | 94.6 | 94.6 | 94.6 | 94.6 | 94.9 | 94.9 | 94.9 |



Kerala State Pollution Control Board
Continuous Ambient Air Quality Monitoring Station, Trivandrum
Monthly Report on Meteorological Parameters
December 2023

| Date/Day | AT (°C) | RH (%) | WS (m/s) | WD (deg.) | SR (W/m ²) | BP (mmHg) | RF (mm) |
|----------------|-------------|-------------|-------------|--------------|---------------------------|--------------|-------------|
| 01/12/2023 Fri | 25.3 | 80 | 1.0 | 90 | 121 | 752 | 0.0 |
| 02/12/2023 Sat | 25.0 | 81 | 1.5 | 81 | 135 | 751 | 0.0 |
| 03/12/2023 Sun | 25.6 | 78 | 1.1 | 76 | 137 | 751 | 0.0 |
| 04/12/2023 Mon | 26.3 | 78 | 1.3 | 60 | 154 | 751 | 0.0 |
| 05/12/2023 Tue | 26.3 | 77 | 1.2 | 75 | 156 | 750 | 0.0 |
| 06/12/2023 Wed | 26.4 | 75 | 1.0 | 71 | 160 | 752 | 0.0 |
| 07/12/2023 Thu | 26.2 | 74 | 1.2 | 76 | 164 | 752 | 0.0 |
| 08/12/2023 Fri | 26.1 | 75 | 1.2 | 91 | 150 | 752 | 0.0 |
| 09/12/2023 Sat | 25.9 | 79 | 1.0 | 84 | 119 | 752 | 0.0 |
| 10/12/2023 Sun | 26.0 | 78 | 0.7 | 82 | 87 | 752 | 0.0 |
| 11/12/2023 Mon | 26.3 | 75 | 1.1 | 77 | 147 | 752 | 0.0 |
| 12/12/2023 Tue | 26.0 | 77 | 0.8 | 67 | 95 | 752 | 0.0 |
| 13/12/2023 Wed | 26.0 | 74 | 1.0 | 78 | 145 | 752 | 0.0 |
| 14/12/2023 Thu | 26.3 | 71 | 1.1 | 71 | 163 | 752 | 0.0 |
| 15/12/2023 Fri | 26.2 | 74 | 0.8 | 71 | 105 | 753 | 0.0 |
| 16/12/2023 Sat | 24.6 | 84 | 0.5 | 93 | 41 | 753 | 0.0 |
| 17/12/2023 Sun | 22.7 | 92 | 0.6 | 76 | 16 | 752 | 0.0 |
| 18/12/2023 Mon | 25.1 | 74 | 1.0 | 83 | 141 | 752 | 0.0 |
| 19/12/2023 Tue | 26.2 | 67 | 1.0 | 74 | 159 | 752 | 0.0 |
| 20/12/2023 Wed | 26.2 | 70 | 1.0 | 69 | 136 | 753 | 0.0 |
| 21/12/2023 Thu | 26.0 | 73 | 0.9 | 76 | 136 | 753 | 0.0 |
| 22/12/2023 Fri | 25.8 | 75 | 0.8 | 74 | 123 | 753 | 0.0 |
| 23/12/2023 Sat | 25.6 | 73 | 0.9 | 82 | 145 | 754 | 0.0 |
| 24/12/2023 Sun | 25.6 | 72 | 1.0 | 76 | 152 | 754 | 0.0 |
| 25/12/2023 Mon | 26.3 | 69 | 1.1 | 78 | 144 | 754 | 0.0 |
| 26/12/2023 Tue | 26.4 | 64 | 1.0 | 81 | 168 | 753 | 0.0 |
| 27/12/2023 Wed | 26.3 | 67 | 1.0 | 63 | 163 | 753 | 0.0 |
| 28/12/2023 Thu | 26.8 | 70 | 1.0 | 72 | 130 | 752 | 0.0 |
| 29/12/2023 Fri | 27.3 | 65 | 1.0 | 85 | 143 | 752 | 0.0 |
| 30/12/2023 Sat | 25.6 | 72 | 0.4 | 83 | 69 | 753 | 0.0 |
| 31/12/2023 Sun | - | - | - | - | - | - | - |
| Average | 25.9 | 74 | 1.0 | 77 | 130 | 752 | |
| Minimum | 22.7 | 64 | 0.4 | 60 | 16 | 750 | 0.0 |
| Maximum | 27.3 | 92 | 1.5 | 93 | 168 | 754 | 0.0 |
| Total | | | | | | | 0.0 |
| Capture | 94.9 | 94.9 | 94.9 | 94.9 | 94.9 | 93.0 | 94.9 |



Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Monthly Report on Criteria Pollutants

January 2024

| Date/Day | CO (mg/m ³) | Ozone (µg/m ³) | NO (µg/m ³) | NO ₂ (µg/m ³) | NO _X (µg/m ³) | NH ₃ (µg/m ³) | SO ₂ (µg/m ³) | PM _{2.5} (µg/m ³) | PM ₁₀ (µg/m ³) |
|----------------|----------------------------|-------------------------------|----------------------------|---|---|---|---|---|--|
| 01/01/2024 Mon | 0.81 | 12.0 | 5.7 | 11.6 | 17.4 | 8.8 | 6.6 | 31 | 59 |
| 02/01/2024 Tue | 0.66 | 13.4 | 5.8 | 11.6 | 17.5 | 8.9 | 8.9 | 39 | 64 |
| 03/01/2024 Wed | 0.55 | 16.9 | 5.8 | 11.5 | 17.3 | 8.8 | 10.3 | 34 | 61 |
| 04/01/2024 Thu | 0.83 | 13.7 | 5.8 | 11.6 | 17.4 | 8.8 | 9.2 | 35 | 60 |
| 05/01/2024 Fri | 0.50 | 14.8 | 5.7 | 11.5 | 17.2 | 8.8 | 8.4 | 21 | 37 |
| 06/01/2024 Sat | 0.59 | 13.8 | 5.7 | 11.7 | 17.4 | 8.8 | 7.4 | 25 | 46 |
| 07/01/2024 Sun | 0.58 | 14.4 | 5.8 | 11.6 | 17.4 | 8.8 | 7.8 | 29 | 37 |
| 08/01/2024 Mon | 0.97 | 13.6 | 5.7 | 11.6 | 17.3 | 8.8 | 8.7 | 24 | 29 |
| 09/01/2024 Tue | 0.68 | 12.8 | 5.7 | 11.6 | 17.3 | 8.8 | 9.0 | 26 | 26 |
| 10/01/2024 Wed | 0.78 | 14.3 | 5.9 | 11.5 | 17.4 | 8.8 | 7.7 | 28 | 25 |
| 11/01/2024 Thu | 0.59 | 14.1 | 5.8 | 11.5 | 17.3 | 9.0 | 10.0 | 22 | 24 |
| 12/01/2024 Fri | 0.66 | 15.1 | 5.6 | 11.6 | 17.2 | 8.8 | 7.4 | - | 53 |
| 13/01/2024 Sat | 0.70 | 15.6 | 5.9 | 11.6 | 17.5 | 8.7 | 6.0 | 31 | 39 |
| 14/01/2024 Sun | 0.62 | 15.5 | 5.7 | 11.6 | 17.3 | 8.8 | 5.9 | 47 | 46 |
| 15/01/2024 Mon | 0.89 | 16.2 | 5.8 | 11.6 | 17.5 | 8.8 | 5.5 | 74 | 75 |
| 16/01/2024 Tue | 0.80 | 17.2 | 5.9 | 11.7 | 17.6 | 8.7 | 5.5 | 55 | 98 |
| 17/01/2024 Wed | 0.71 | 17.2 | 5.8 | 11.7 | 17.5 | 8.7 | 5.1 | 41 | 104 |
| 18/01/2024 Thu | 0.60 | 18.3 | 5.7 | 11.6 | 17.3 | 8.7 | 5.5 | 31 | 78 |
| 19/01/2024 Fri | 0.56 | 14.6 | 5.8 | 11.5 | 17.3 | 8.7 | 8.1 | 19 | 58 |
| 20/01/2024 Sat | 0.90 | 12.5 | 5.8 | 11.5 | 17.3 | 8.8 | 9.6 | 23 | 62 |
| 21/01/2024 Sun | 0.53 | 14.2 | 5.9 | 11.6 | 17.5 | 8.7 | 8.6 | 17 | 48 |
| 22/01/2024 Mon | 0.52 | 14.9 | 5.8 | 11.5 | 17.4 | 8.7 | 9.1 | 22 | 62 |
| 23/01/2024 Tue | 0.60 | 15.2 | 5.9 | 11.4 | 17.4 | 8.7 | 7.3 | 22 | 64 |
| 24/01/2024 Wed | 0.56 | 17.4 | 5.9 | 11.4 | 17.3 | 8.7 | 7.9 | 23 | 57 |
| 25/01/2024 Thu | 0.58 | 17.8 | 5.9 | 11.3 | 17.2 | 8.7 | 6.9 | 26 | 65 |
| 26/01/2024 Fri | 0.49 | 17.8 | 5.9 | 11.3 | 17.2 | 8.6 | 8.7 | 24 | 56 |
| 27/01/2024 Sat | 0.54 | 17.9 | 6.1 | 11.1 | 17.2 | 8.8 | 7.5 | 22 | 60 |
| 28/01/2024 Sun | 0.55 | 18.0 | 6.1 | 11.0 | 17.2 | 8.7 | 8.4 | 22 | 47 |
| 29/01/2024 Mon | 0.54 | 17.4 | 6.2 | 11.1 | 17.3 | 8.7 | 9.5 | 22 | 41 |
| 30/01/2024 Tue | 0.57 | 19.5 | 6.1 | 11.0 | 17.2 | 8.7 | 8.5 | 26 | 46 |
| 31/01/2024 Wed | 0.55 | 16.7 | 6.1 | 11.1 | 17.3 | 8.7 | 10.0 | 25 | 45 |
| Average | 0.65 | 15.6 | 5.9 | 11.5 | 17.3 | 8.8 | 7.9 | 29 | 54 |
| Minimum | 0.49 | 12.0 | 5.6 | 11.0 | 17.2 | 8.6 | 5.1 | 17 | 24 |
| Maximum | 0.97 | 19.5 | 6.2 | 11.7 | 17.6 | 9.0 | 10.3 | 74 | 104 |
| Capture | 92.7 | 96.6 | 96.6 | 96.6 | 96.6 | 96.6 | 96.6 | 92.5 | 95.0 |



Kerala State Pollution Control Board
Continuous Ambient Air Quality Monitoring Station, Trivandrum
Monthly Report on Meteorological Parameters
January 2024

| Date/Day | AT (°C) | RH (%) | WS (m/s) | WD (deg.) | SR (W/m ²) | BP (mmHg) | RF (mm) |
|----------------|-------------|-------------|-------------|--------------|---------------------------|--------------|-------------|
| 01/01/2024 Mon | 26.2 | 73 | 1.1 | 70 | 96 | 753 | 0.0 |
| 02/01/2024 Tue | 26.1 | 74 | 1.1 | 76 | 152 | 752 | 0.0 |
| 03/01/2024 Wed | 26.1 | 73 | 1.1 | 75 | 145 | 752 | 0.0 |
| 04/01/2024 Thu | 26.6 | 70 | 1.0 | 79 | 158 | 752 | 0.0 |
| 05/01/2024 Fri | 26.1 | 71 | 1.3 | 65 | 145 | 752 | 0.0 |
| 06/01/2024 Sat | 26.1 | 72 | 0.8 | 78 | 108 | 752 | 0.0 |
| 07/01/2024 Sun | 25.8 | 76 | 0.9 | 79 | 132 | 752 | 0.0 |
| 08/01/2024 Mon | 25.4 | 78 | 0.9 | 76 | 88 | 753 | 0.0 |
| 09/01/2024 Tue | 24.8 | 80 | 0.5 | 87 | 66 | 753 | 0.0 |
| 10/01/2024 Wed | 25.7 | 72 | 0.8 | 77 | 111 | 752 | 0.0 |
| 11/01/2024 Thu | 25.8 | 69 | 1.2 | 76 | 146 | 754 | 0.0 |
| 12/01/2024 Fri | 26.0 | 64 | 0.8 | 66 | 113 | 753 | 0.0 |
| 13/01/2024 Sat | 25.9 | 65 | 1.0 | 73 | 166 | 754 | 0.0 |
| 14/01/2024 Sun | 25.5 | 72 | 1.1 | 68 | 162 | 753 | 0.0 |
| 15/01/2024 Mon | 25.5 | 69 | 1.1 | 68 | 157 | 754 | 0.0 |
| 16/01/2024 Tue | 25.0 | 66 | 1.1 | 84 | 158 | 753 | 0.0 |
| 17/01/2024 Wed | 25.0 | 65 | 1.1 | 89 | 161 | 752 | 0.0 |
| 18/01/2024 Thu | 25.0 | 62 | 1.3 | 78 | 226 | 753 | 0.0 |
| 19/01/2024 Fri | 26.8 | 66 | 1.4 | 69 | 191 | 752 | 0.0 |
| 20/01/2024 Sat | 25.8 | 74 | 0.8 | 71 | 99 | 753 | 0.0 |
| 21/01/2024 Sun | 26.2 | 71 | 1.2 | 67 | 166 | 753 | 0.0 |
| 22/01/2024 Mon | 26.5 | 72 | 1.3 | 68 | 168 | 754 | 0.0 |
| 23/01/2024 Tue | 26.2 | 74 | 1.2 | 64 | 152 | 754 | 0.0 |
| 24/01/2024 Wed | 25.9 | 72 | 1.2 | 77 | 163 | 754 | 0.0 |
| 25/01/2024 Thu | 25.6 | 74 | 1.3 | 68 | 150 | 754 | 0.0 |
| 26/01/2024 Fri | 26.0 | 68 | 1.2 | 75 | 177 | 755 | 0.0 |
| 27/01/2024 Sat | 25.6 | 67 | 1.2 | 67 | 177 | 755 | 0.0 |
| 28/01/2024 Sun | 25.6 | 68 | 1.1 | 73 | 179 | 755 | 0.0 |
| 29/01/2024 Mon | 25.7 | 68 | 1.2 | 74 | 174 | 755 | 0.0 |
| 30/01/2024 Tue | 26.0 | 72 | 1.2 | 74 | 166 | 754 | 0.0 |
| 31/01/2024 Wed | 26.2 | 74 | 1.2 | 65 | 145 | 755 | 98.0 |
| Average | 25.8 | 71 | 1.1 | 73 | 148 | 753 | |
| Minimum | 24.8 | 62 | 0.5 | 64 | 66 | 752 | 0.0 |
| Maximum | 26.8 | 80 | 1.4 | 89 | 226 | 755 | 98.0 |
| Total | | | | | | | 98.0 |
| Capture | 96.2 | 96.2 | 96.2 | 96.2 | 96.2 | 94.5 | 96.2 |



Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Trend Gaphs for CO

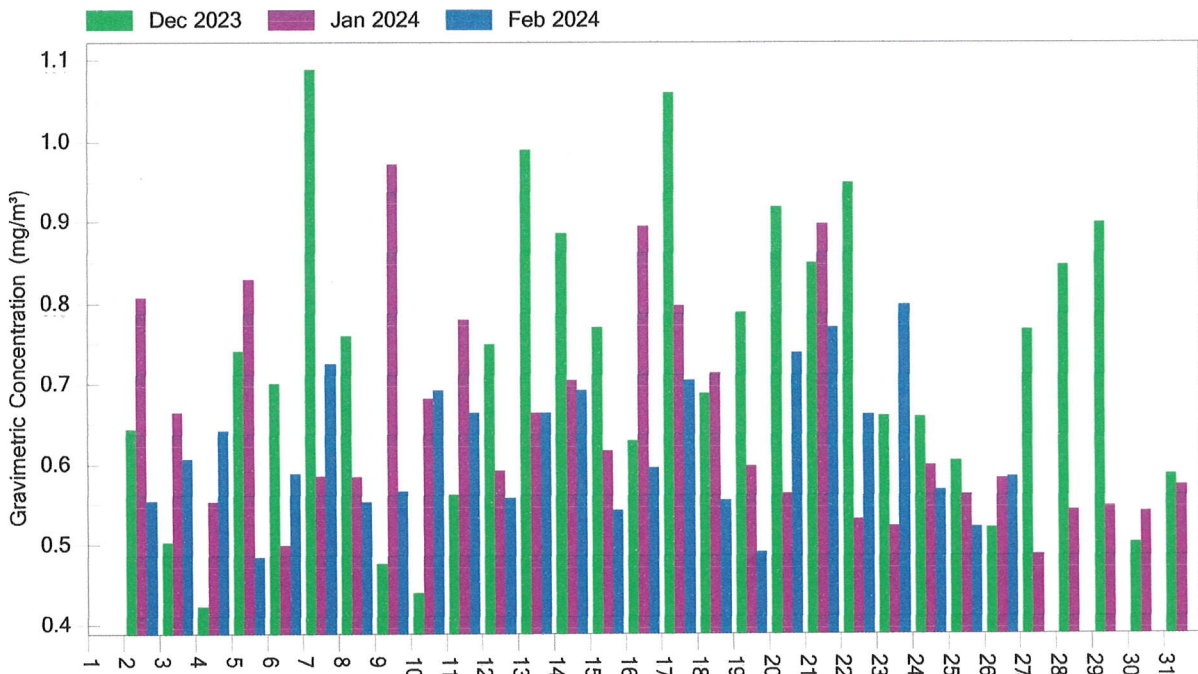
CO(mg/m³) Line Graph

12/1/2023 to 2/29/2024



CO(mg/m³) Bar Graph

12/1/2023 to 2/29/2024





Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Trend Gaps for Ozone

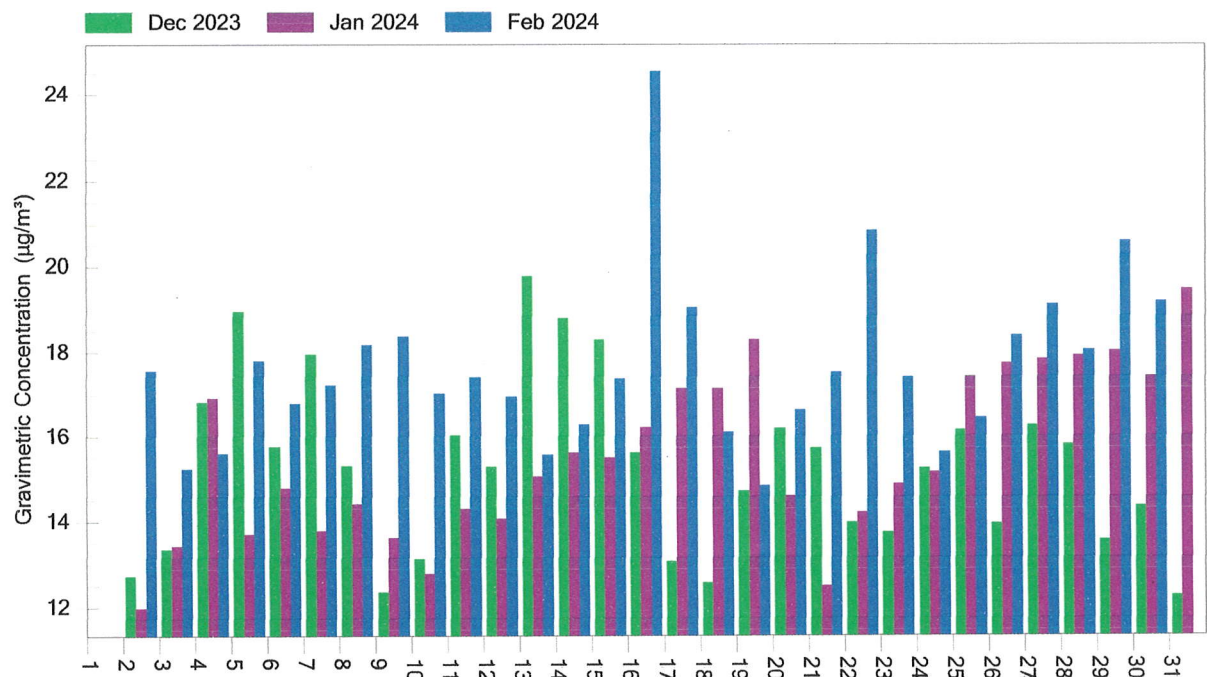
O₃($\mu\text{g}/\text{m}^3$) Line Graph

12/1/2023 to 2/29/2024



O₃($\mu\text{g}/\text{m}^3$) Bar Graph

12/1/2023 to 2/29/2024





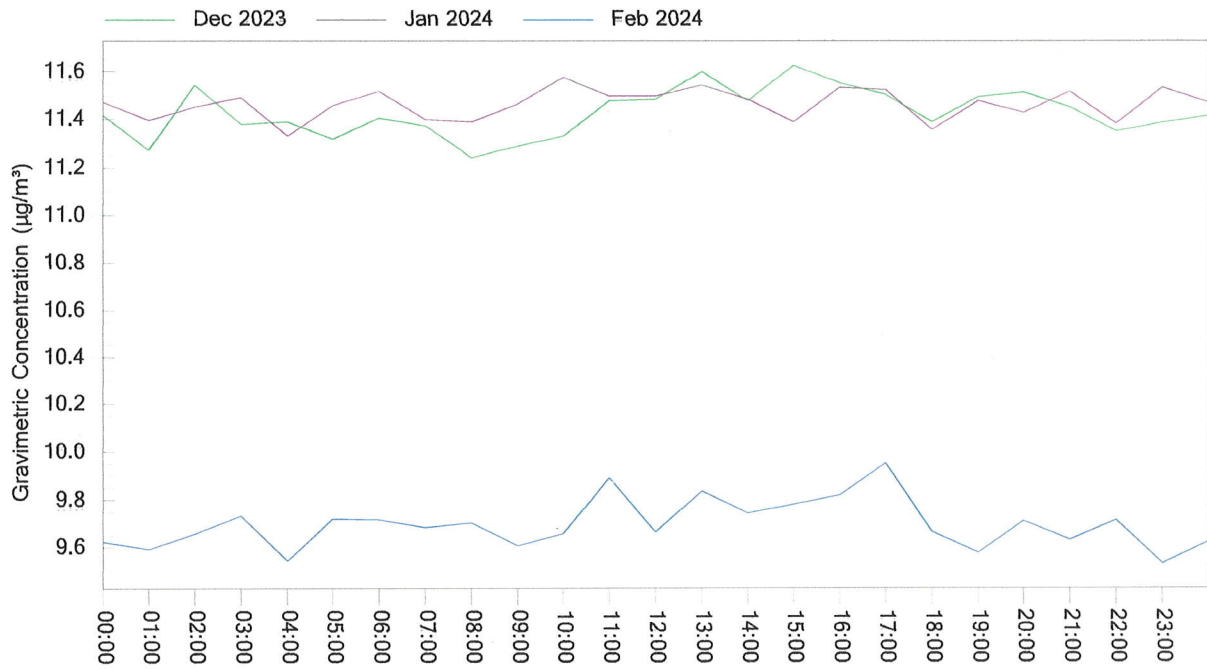
Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Trend Gaps for NO₂

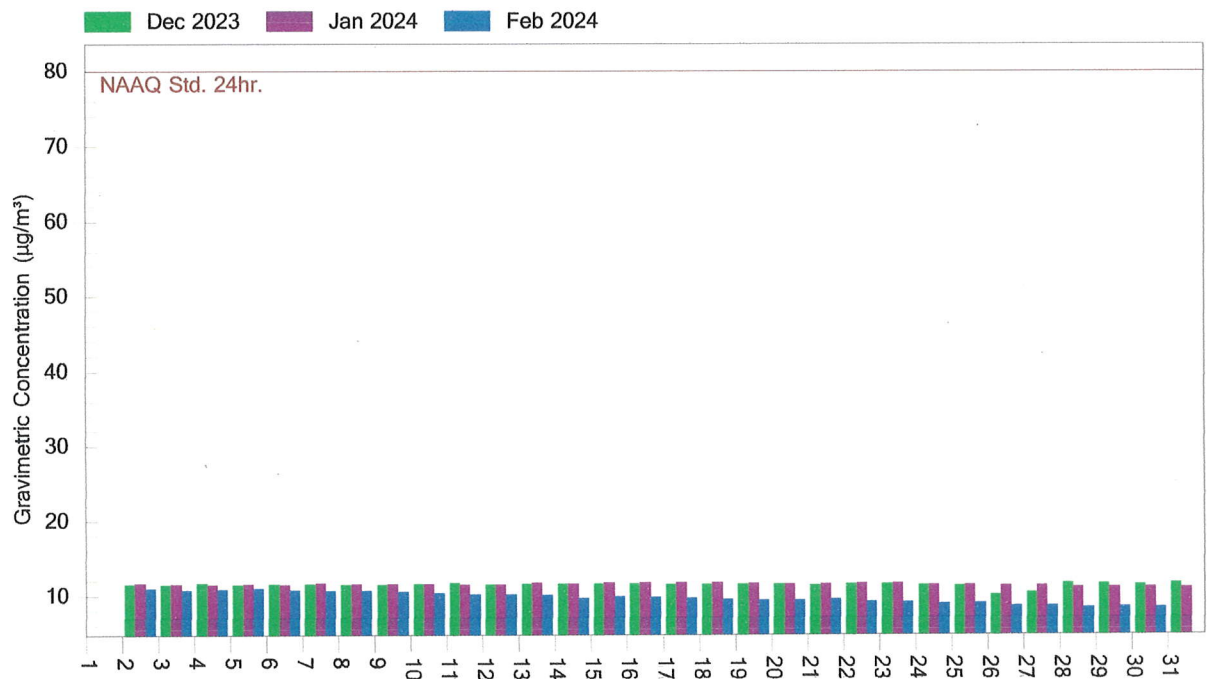
NO₂($\mu\text{g}/\text{m}^3$) Line Graph

12/1/2023 to 2/29/2024



NO₂($\mu\text{g}/\text{m}^3$) Bar Graph

12/1/2023 to 2/29/2024





Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Trend Gaps for NH3

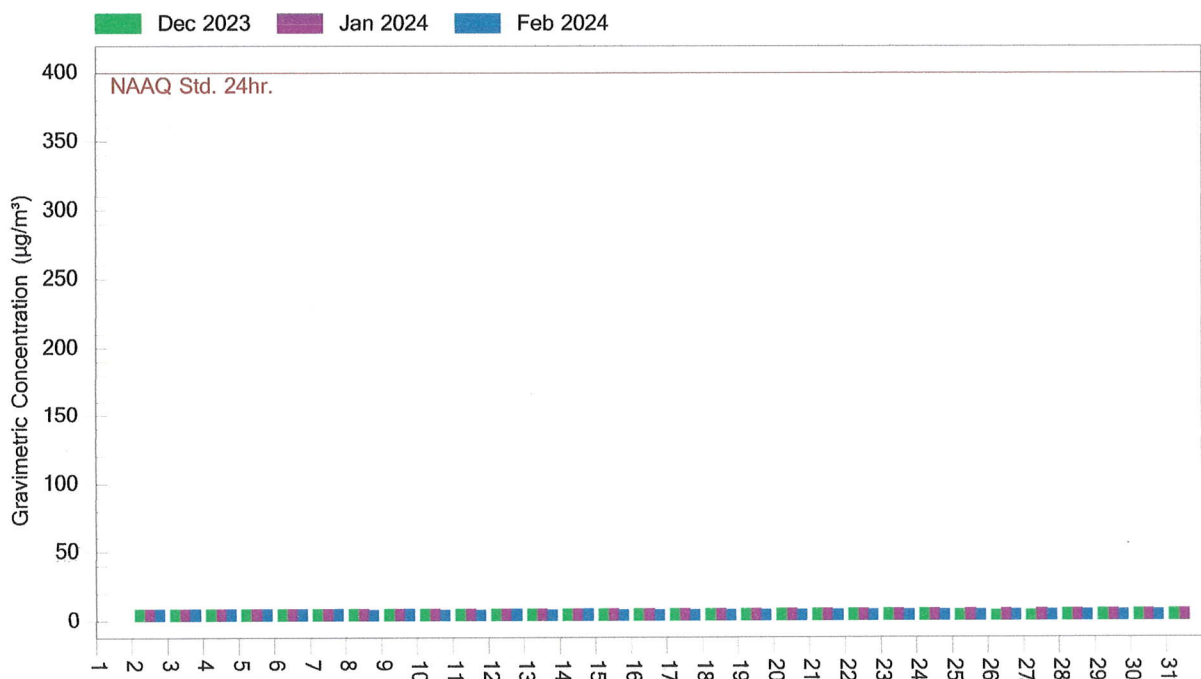
NH3($\mu\text{g}/\text{m}^3$) Line Graph

12/1/2023 to 2/29/2024



NH3($\mu\text{g}/\text{m}^3$) Bar Graph

12/1/2023 to 2/29/2024





Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Trend Gaphs for SO₂

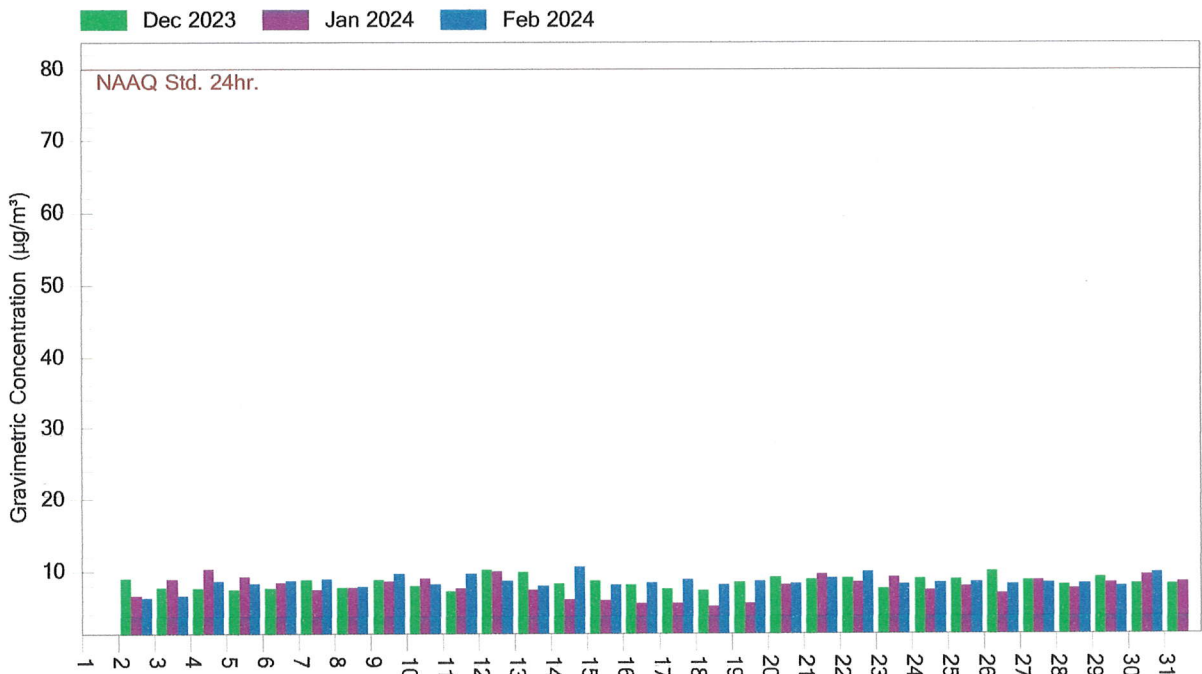
SO₂($\mu\text{g}/\text{m}^3$) Line Graph

12/1/2023 to 2/29/2024



SO₂($\mu\text{g}/\text{m}^3$) Bar Graph

12/1/2023 to 2/29/2024





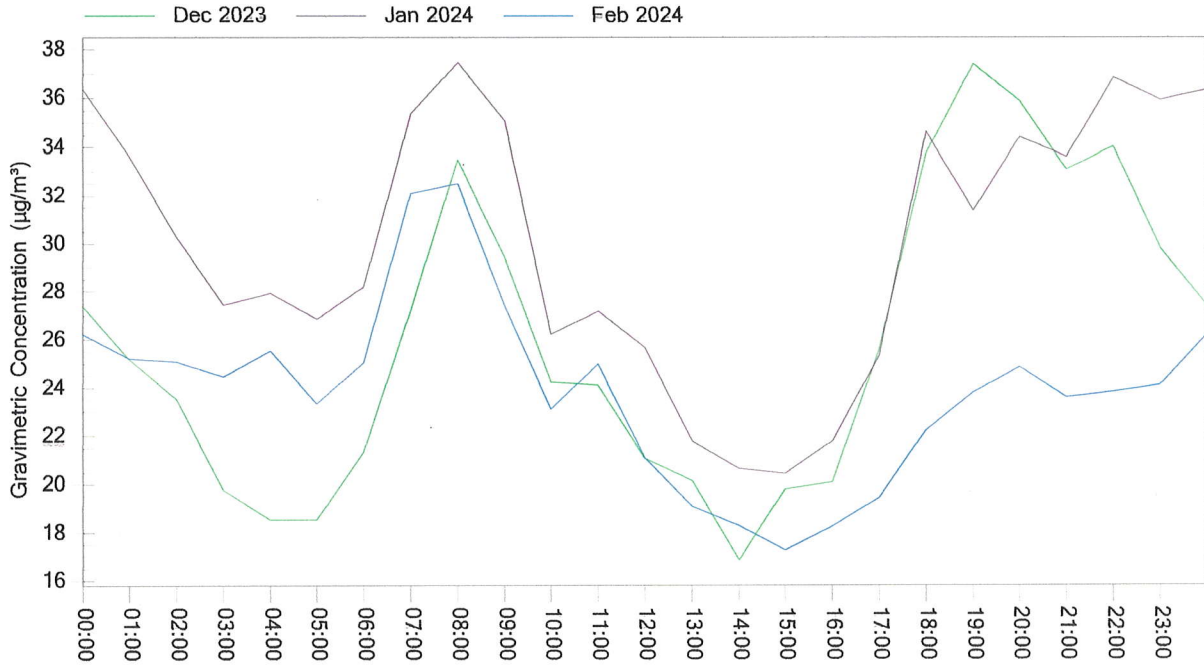
Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Trend Gaphs for PM2.5

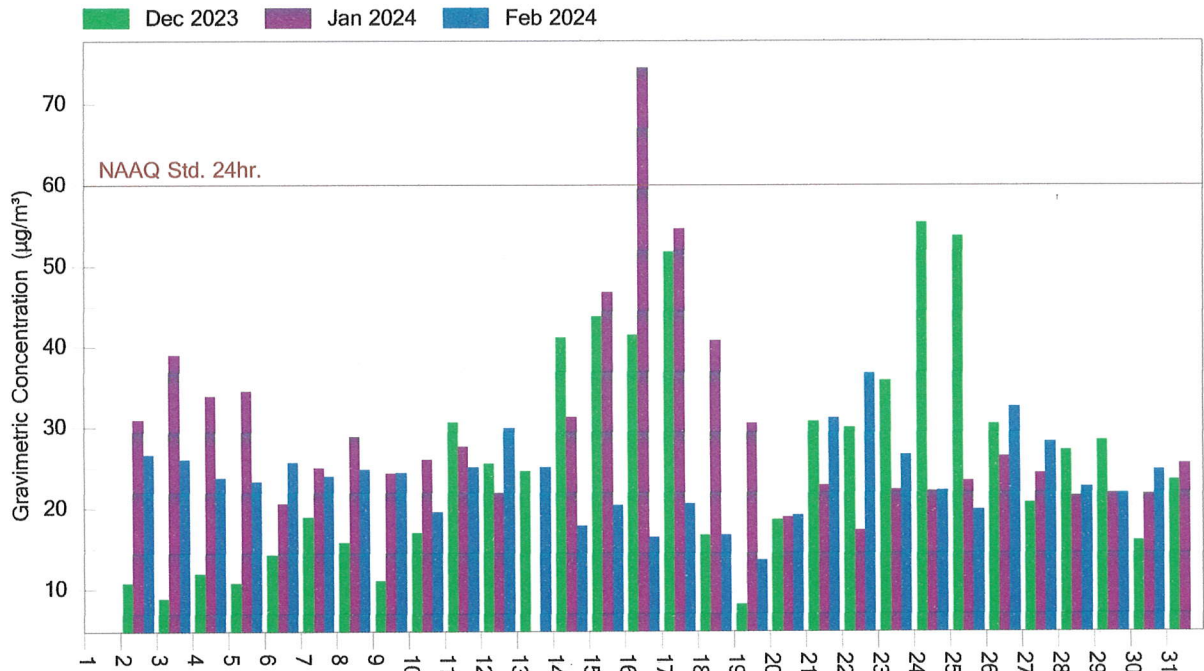
PM2.5($\mu\text{g}/\text{m}^3$) Line Graph

12/1/2023 to 2/29/2024



PM2.5($\mu\text{g}/\text{m}^3$) Bar Graph

12/1/2023 to 2/29/2024





Kerala State Pollution Control Board

Continuous Ambient Air Quality Monitoring Station, Trivandrum

Trend Gaphs for PM10

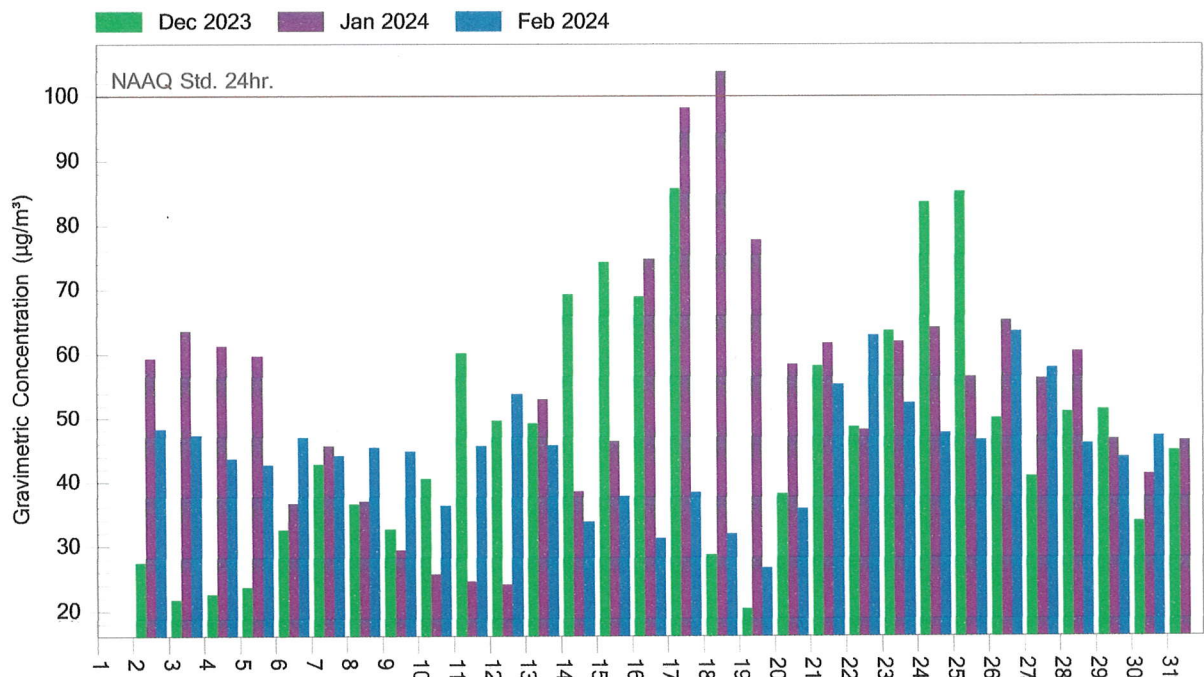
PM10($\mu\text{g}/\text{m}^3$) Line Graph

12/1/2023 to 2/29/2024



PM10($\mu\text{g}/\text{m}^3$) Bar Graph

12/1/2023 to 2/29/2024







ACOEM Group

S50 SO2 Analyser Calibration Report

| | |
|----------------|------------|
| Customer | Kspcb |
| Instrument | Serinus 50 |
| ID No. | 14-0418 |
| System/Job No. | |

| | | |
|--------------------------|---------------|-------|
| Calibration Performed by | Swathish Babu | |
| Date | 5-Dec-23 | |
| Time Begin/End | 12:00 | 13:00 |
| Location | Keralapcb | |

Calibration Equipment

| | |
|-----------------------|--------------|
| Calibrator Model | Gas cal 1100 |
| ID/Serial No. | 14-0417 |
| Zero Air Source Model | 8301LC |
| ID/Serial No. | 14-0418 |

| | |
|------------------------------|-------------|
| Gas Std. Cylinder Serial No. | M1511011058 |
| Cylinder Concentration (ppm) | 54 |
| Cylinder Expiry Date | 12/11/2023 |
| Cylinder Pressure (Bar) | 85 |
| Cylinder Calibration | PASS |

Displayed Instrument Parameters

Temperatures

| | | |
|------------------|---------------|-------|
| Set point (cell) | 50 | 50.00 |
| Cell Temp | 50 | 50.0 |
| Chassis Temp | 15 - 45 | 36.8 |
| PMT cooler | 12.95 - 13.05 | 13.0 |

Pressures and Flow

| | | |
|------------------|-------------|------|
| Ambient Pressure | 500 - 800 | 738 |
| Cell Pressure | 500 - 800 | 698 |
| Flow | 0.68 - 0.72 | 0.69 |

* Note Ambient - sample pressure should be 20 - 50 Torr

Voltages

| | | |
|------------------|---------------|-------|
| Ref. Voltage | 2.25 - 2.75 | 2.5 |
| High Voltage | 698 - 716 | 709.5 |
| Analog Supply | 11.93 - 12.05 | 12.0 |
| Digital Supply | 4.90 - 4.97 | 4.9 |
| -12 V Supply | | -12.0 |
| Firmware Version | 219.0001 | |

Pots

| | | |
|----------------|-----------|-----|
| Input Pot | 128 | 128 |
| Measure Zero | 102 - 135 | 115 |
| Reference Zero | 0 | 128 |
| Reference Gain | 12 - 90 | 80 |

| | | |
|------------------|---|-----|
| Instrument Units | 5 | ppb |
|------------------|---|-----|

Single Point Calibration

| | |
|------------------------------|--------|
| Initial Span Instrument Gain | 27.300 |
| Initial SO2 Offset (ppb) | 0 |

| | |
|------------------|-----|
| Full Scale (ppb) | 500 |
|------------------|-----|

Precalibration Check

| Calibration Point | Zero flow (sccm) | Span flow (sccm) | Calculated SO2 (ppb) | Measured SO2 (ppb) | Error (%FS) |
|-------------------|------------------|------------------|----------------------|--------------------|-------------|
| Zero | 3000 | 0 | 0 | 0.44 | 0.1% |
| 80% FS | 2975 | 22.2 | 400.0 | 407.4 | 1.5% |

Note: Pre calibration check shall be within 5% of FS value for SO2 span
Zero values should be within 2% of Full Scale

PASS/ FAIL **PASS**

Complete Filter change and perform leak check

Post-calibration Check

| | | | | | |
|--------|------|------|-------|-------|------|
| 80% FS | 2975 | 22.2 | 400.0 | 402.4 | 0.5% |
| Zero | 3000 | 0 | 0 | 0.4 | 0.1% |

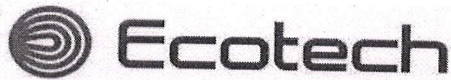
Note: Do not fill in shaded cells

Note: Post calibration check shall be within 1% of FS value for both SO2 span and all zeros

| | |
|----------------------------|--------|
| Final Span Instrument Gain | 25.600 |
| Final SO2 Offset (ppb) | 0 |

PASS/ FAIL **PASS**

| | | | |
|----------------------|--|------|----------|
| Technician Signature | | Date | 5/Dec/23 |
|----------------------|--|------|----------|



ACOEM Group

S50 SO2 Analyser Calibration Report

| | |
|----------------|------------|
| Customer | Kspcb |
| Instrument | Serinus 50 |
| ID No. | 14-0418 |
| System/Job No. | |

| | | |
|--------------------------|---------------|-------|
| Calibration Performed by | Swathish Babu | |
| Date | 8-Jan-24 | |
| Time Begin/End | 12:00 | 13:00 |
| Location | Keralapcb | |

Calibration Equipment

| | |
|-----------------------|--------------|
| Calibrator Model | Gas cal 1100 |
| ID/Serial No. | 14-0417 |
| Zero Air Source Model | 8301LC |
| ID/Serial No. | 14-0418 |

| | |
|------------------------------|-------------|
| Gas Std. Cylinder Serial No. | M1511011058 |
| Cylinder Concentration (ppm) | 54 |
| Cylinder Expiry Date | 12/11/2024 |
| Cylinder Pressure (Bar) | 85 |
| Cylinder Calibration | PASS |

Displayed Instrument Parameters

Temperatures

| | | |
|------------------|---------------|-------|
| Set point (cell) | 50 | 50.00 |
| Cell Temp | 50 | 50.0 |
| Chassis Temp | 15 - 45 | 35.5 |
| PMT cooler | 12.95 - 13.05 | 13.0 |

Pressures and Flow

| | | |
|------------------|-------------|------|
| Ambient Pressure | 500 - 800 | 736 |
| Cell Pressure | 500 - 800 | 698 |
| Flow | 0.68 - 0.72 | 0.69 |

* Note Ambient - sample pressure should be 20 - 50 Torr

Voltages

| | | |
|------------------|---------------|-------|
| Ref. Voltage | 2.25 - 2.75 | 2.5 |
| High Voltage | 698 - 716 | 708.2 |
| Analog Supply | 11.93 - 12.05 | 12.0 |
| Digital Supply | 4.90 - 4.97 | 4.9 |
| -12 V Supply | | -12.0 |
| Firmware Version | 219.0001 | |

Pots

| | | |
|----------------|-----------|-----|
| Input Pot | 128 | 128 |
| Measure Zero | 102 - 135 | 115 |
| Reference Zero | 0 | 128 |
| Reference Gain | 12 - 90 | 80 |

| | | |
|------------------|---|-----|
| Instrument Units | 5 | ppb |
|------------------|---|-----|

Single Point Calibration

| | |
|------------------------------|--------|
| Initial Span Instrument Gain | 25.600 |
| Initial SO2 Offset (ppb) | 0 |

| | |
|------------------|-----|
| Full Scale (ppb) | 500 |
|------------------|-----|

Precalibration Check

| Calibration Point | Zero flow (sccm) | Span flow (sccm) | Calculated SO2 (ppb) | Measured SO2 (ppb) | Error (%FS) |
|-------------------|------------------|------------------|----------------------|--------------------|-------------|
| Zero | 3000 | 0 | 0 | 0.48 | 0.1% |
| 80% FS | 2975 | 22.2 | 400.0 | 406.6 | 1.3% |

Note: Pre calibration check shall be within 5% of FS value for SO2 span
Zero values should be within 2% of Full Scale

| | |
|------------|------|
| PASS/ FAIL | PASS |
|------------|------|

Complete Filter change and perform leak check

Post-calibration Check

| | | | | | |
|--------|------|------|-------|-------|------|
| 80% FS | 2975 | 22.2 | 400.0 | 401.7 | 0.3% |
| Zero | 3000 | 0 | 0 | 0.4 | 0.1% |

Note: Do not fill in shaded cells

Note: Post calibration check shall be within 1% of FS value for both SO2 span and all zeros

| | |
|----------------------------|--------|
| Final Span Instrument Gain | 24.200 |
| Final SO2 Offset (ppb) | 0 |

| | |
|------------|------|
| PASS/ FAIL | PASS |
|------------|------|

| | | | |
|----------------------|--|------|----------|
| Technician Signature | | Date | 8/Jan/24 |
|----------------------|--|------|----------|