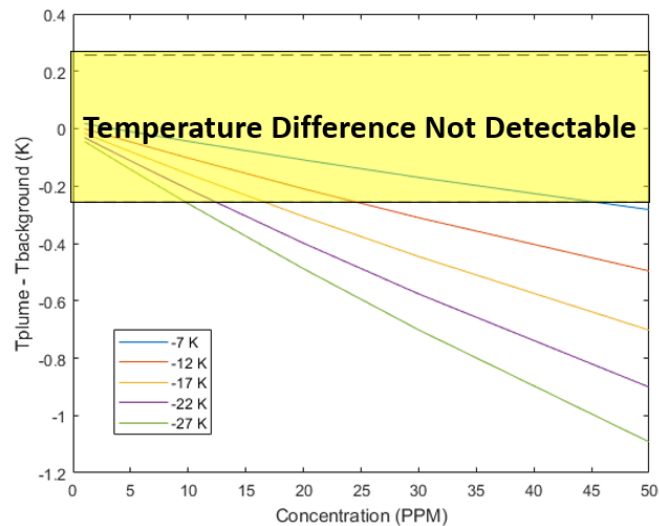


# Supplemental Materials

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**SM- 1.** Recreation of Figure 5. Describes NEdT comparison study using temperature difference between the plume and the surface.

**ST- 1.** Area Under MURI Matched Filter ROC Curves (Figure 6)

| Concentration PPM # | Line Color | Area |
|---------------------|------------|------|
| 20                  | Black      | 0.97 |
| 15                  | Red        | 0.94 |
| 10                  | Blue       | 0.86 |
| 5                   | Pink       | 0.71 |
| 1                   | Cyan       | 0.55 |

**ST- 2.** Area Under MURI NDMI Band 1 and 2 ROC Curves (Figures 7)

| Concentration PPM # | Line Color | Area |
|---------------------|------------|------|
| 20                  | Black      | 0.86 |
| 15                  | Red        | 0.8  |
| 10                  | Blue       | 0.72 |
| 5                   | Pink       | 0.62 |
| 1                   | Cyan       | 0.52 |

**ST- 3.** Area Under MURI NDMI Band 1 and Band 6 ROC Curves (Figure 8)

| Concentration PPM # | Line Color | Area |
|---------------------|------------|------|
| 20                  | Black      | 0.98 |
| 15                  | Red        | 0.95 |
| 10                  | Blue       | 0.89 |
| 5                   | Pink       | 0.74 |
| 1                   | Cyan       | 0.55 |