

N-FRM Comparability Results

The ARA N-FRM ("Near" FRM) is a portable, rapidly deployable, battery-powered particulate sampling and monitoring device. It delivers Federal Reference Method (FRM) level of performance with a more affordable and compact design.

Between June 2015 and March 2017, Lane Regional Air Pollution Agency (LRAPA) conducted a 55-day comparison study between the N-FRM Sampler and an EPA certified Federal Reference Method (FRM) Sampler. The results are summarized below and the complete data set is available upon request.

Summary

By: Lane Regional Air Protection Agency
Length: 55 days
FRM Sampler: R&P Partisol 2025
Test Sites: LRAPA Lab (Springfield, OR);
Willamette Activity Ctr (Oakridge, OR)

Results

Least Squares Linear Curve Fit:

$$N\text{-FRM}_{\text{conc}} = m(\text{FRM}_{\text{conc}}) + b$$

Slope (m): 0.989

Intercept (b): 0.003

Correlation (r): 0.99955

Relative Precision: 3.1%

