Supplementary Materials

In this file, AirGriadient is denoted as AG, and AtmoCube is denoted as AC.

Table S1. AutoML model training statistics

Model Subset	Rank	Model_ID	Algorithm	Train_RMSE	Train_MAE	Train_R2	Test_RMSE	Test_MAE	Test_R^2
Low	1	StackedEnsemble_BestOfFamily_1_AutoML_1_20250610_145404	stackedensemble	3.761	1.413	0.707	3.716	1.765	0.501
Low	2	GBM_3_AutoML_1_20250610_145404	gbm	3.532	1.161	0.741	3.644	1.66	0.52
Low	3	GLM_1_AutoML_1_20250610_145404	glm	4.912	2.016	0.5	3.967	2.117	0.431
Low	4	GBM_4_AutoML_1_20250610_145404	gbm	3.055	1.066	0.807	3.698	1.723	0.506
Low	5	StackedEnsemble_AllModels_1_AutoML_1_20250610_145404	stackedensemble	3.693	1.344	0.717	3.692	1.749	0.507
Low	6	GBM_2_AutoML_1_20250610_145404	gbm	3.323	1.182	0.771	3.782	1.778	0.483
Low	7	DRF_1_AutoML_1_20250610_145404	drf	2.022	0.617	0.915	3.65	1.416	0.519
Low	8	GBM_1_AutoML_1_20250610_145404	gbm	5.526	2.356	0.367	4.401	2.261	0.3

High	1	StackedEnsemble_BestOfFamily_1_AutoML_2_20250610_145416	stackedensemble	52.148	41.036	0.937	77.166	56.322	0.781
High	2	GBM_2_AutoML_2_20250610_145416	gbm	62.369	46.585	0.91	93.287	67.984	0.68
High	3	StackedEnsemble_AllModels_1_AutoML_2_20250610_145416	stackedensemble	53.736	42.055	0.933	75.723	54.957	0.789
High	4	GBM_3_AutoML_2_20250610_145416	gbm	62.098	47.317	0.911	89.101	65.993	0.708
High	5	DRF_1_AutoML_2_20250610_145416	drf	41.918	34.41	0.959	98.004	76.504	0.647
High	6	GBM_4_AutoML_2_20250610_145416	gbm	63.819	49.497	0.906	95.615	70.418	0.664
High	7	XRT_1_AutoML_2_20250610_145416	drf	45.777	35.079	0.952	93.189	75.894	0.681
High	8	GLM_1_AutoML_2_20250610_145416	glm	148.445	124.161	0.491	124.027	109.346	0.434

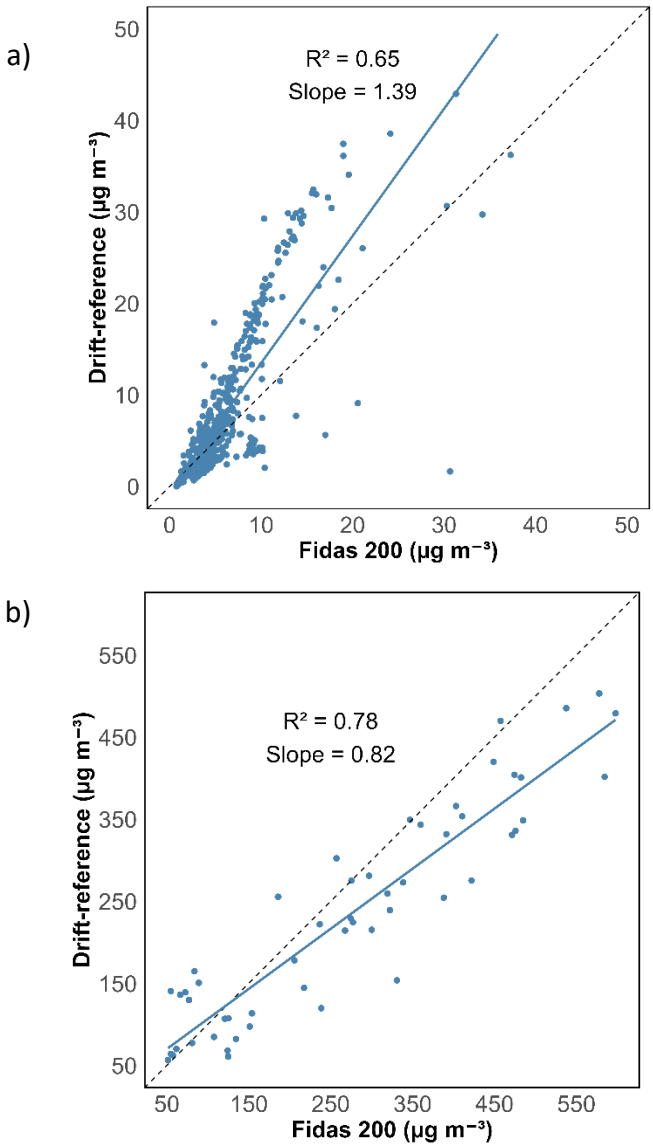

Figure S1. Relationship between all drift-reference sensors average concentration and Fidas 200, a) below 50 µg m^{-3}, b) above 50 µg m^{-3}.

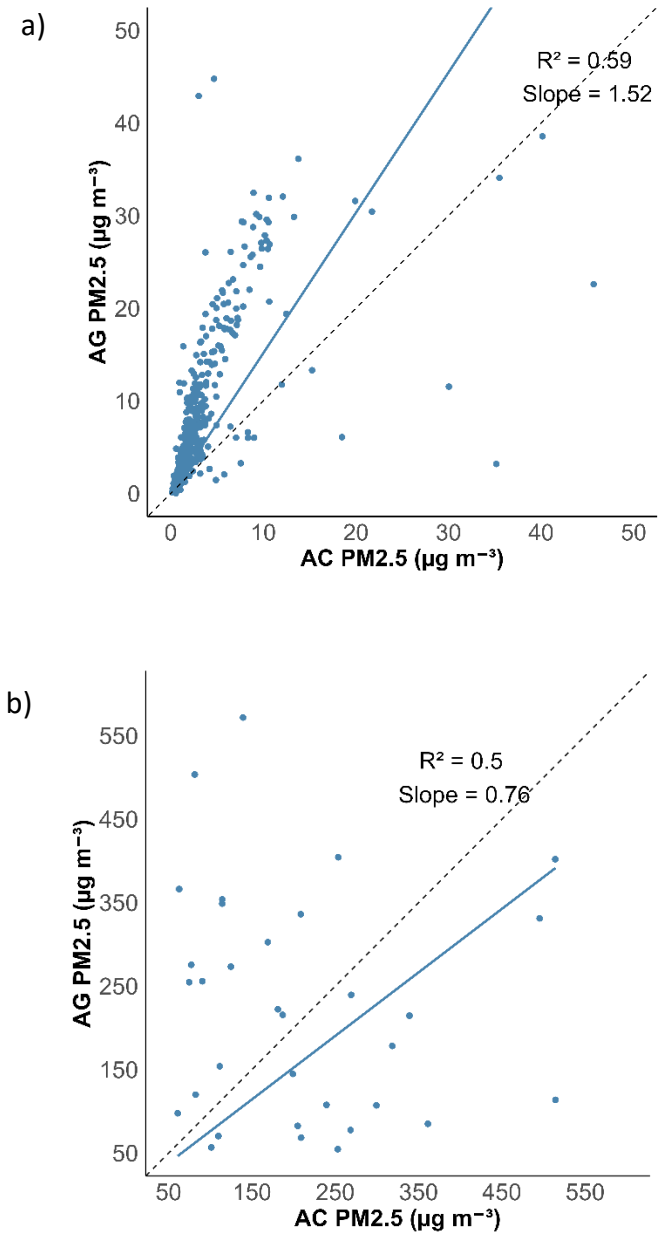

Figure S2. Inter-relationships between AG and AC sensors, a) below 50 µg m^{-3}, b) above 50 µg m^{-3}.

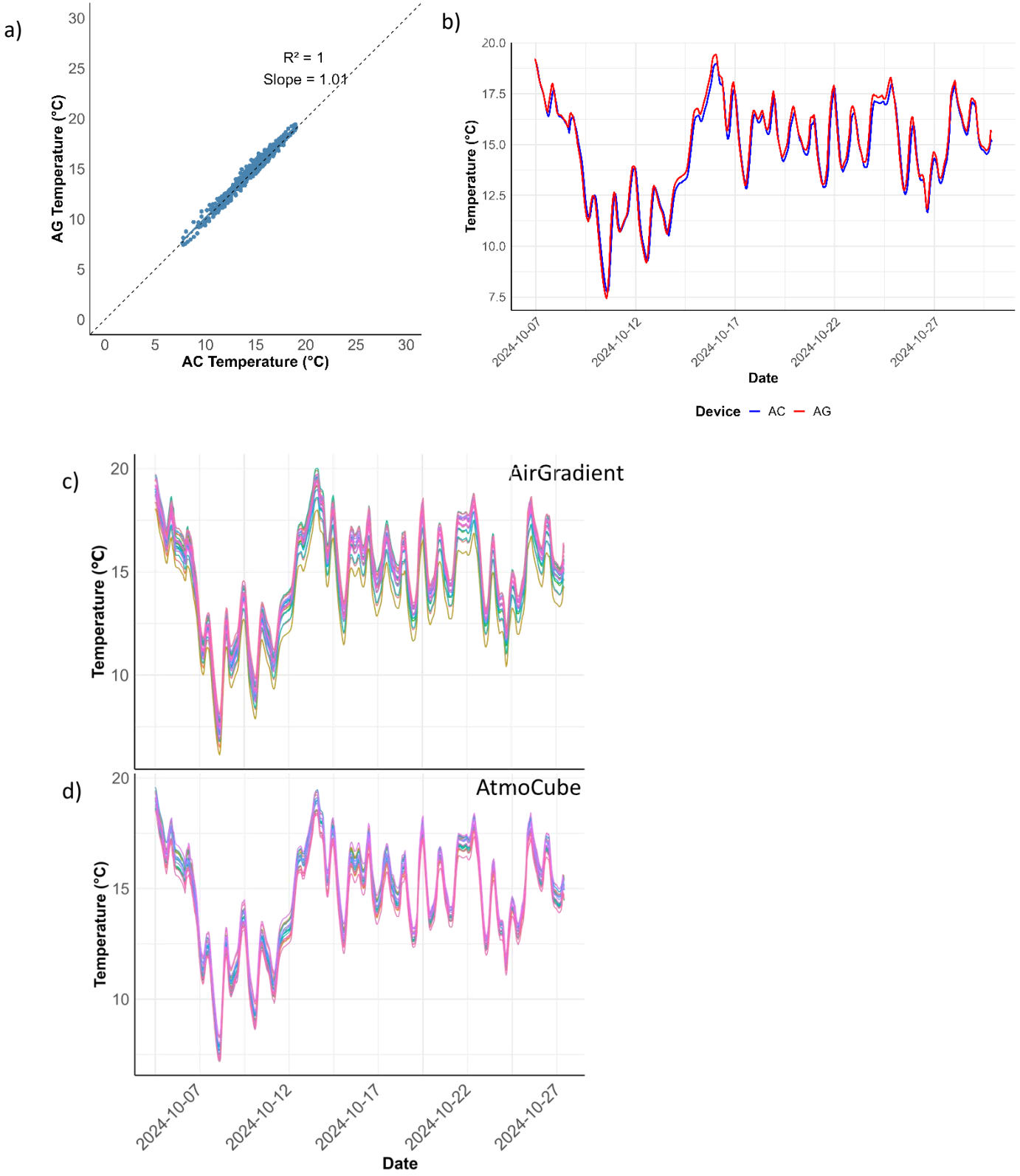

Figure S3. Inter-relationship of measured temperature of AC and AG, a) scatter plot, b)

timeseries, c) timeseries of AG temperature measurements, d) timeseries of AC temperature measurements

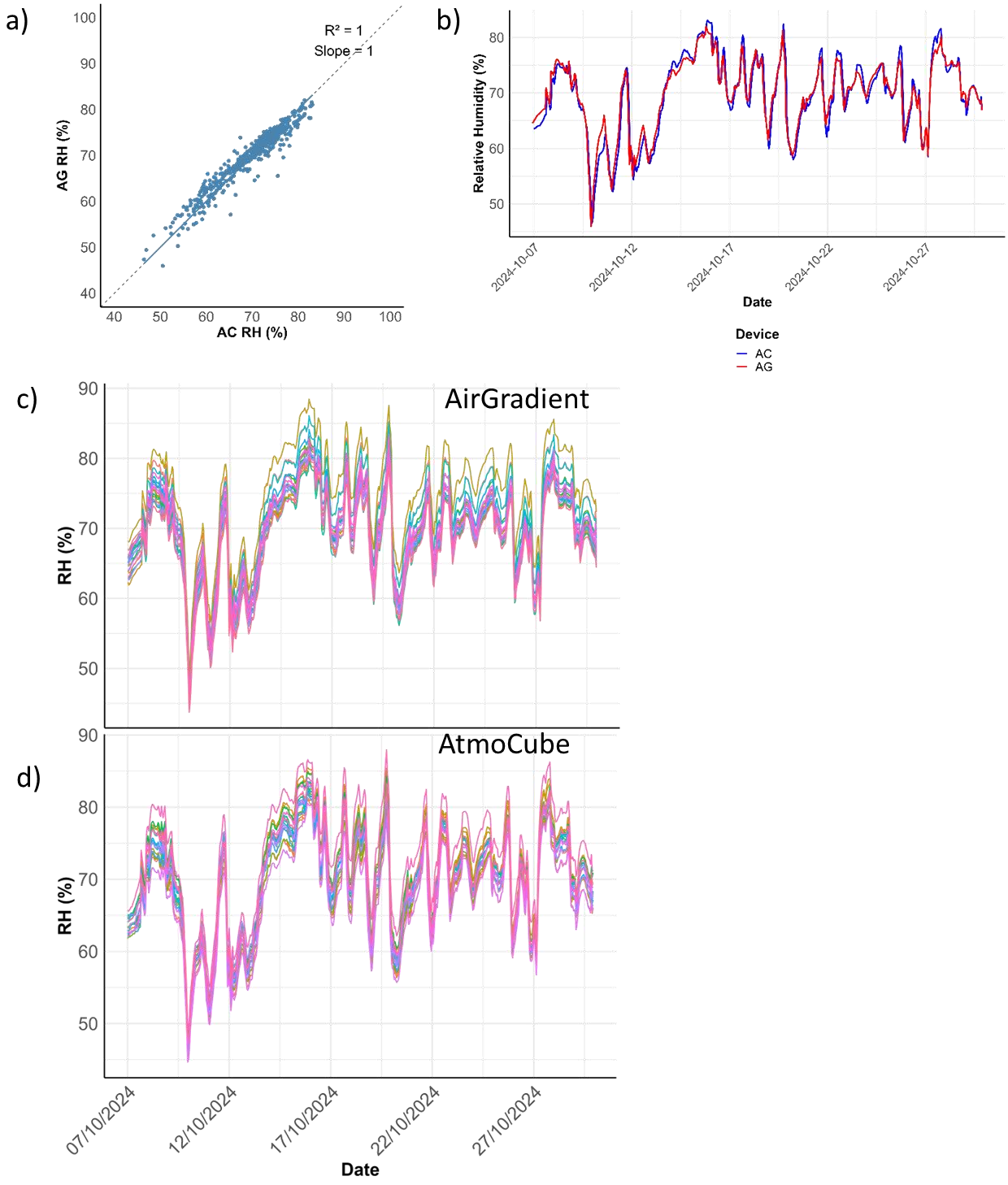

Figure S4. Inter-relationship of measured relative humidity of AC and AG, a) scatter plot, b) timeseries, c) timeseries of AG relative humidity measurements, d) timeseries of AC relative humidity measurements

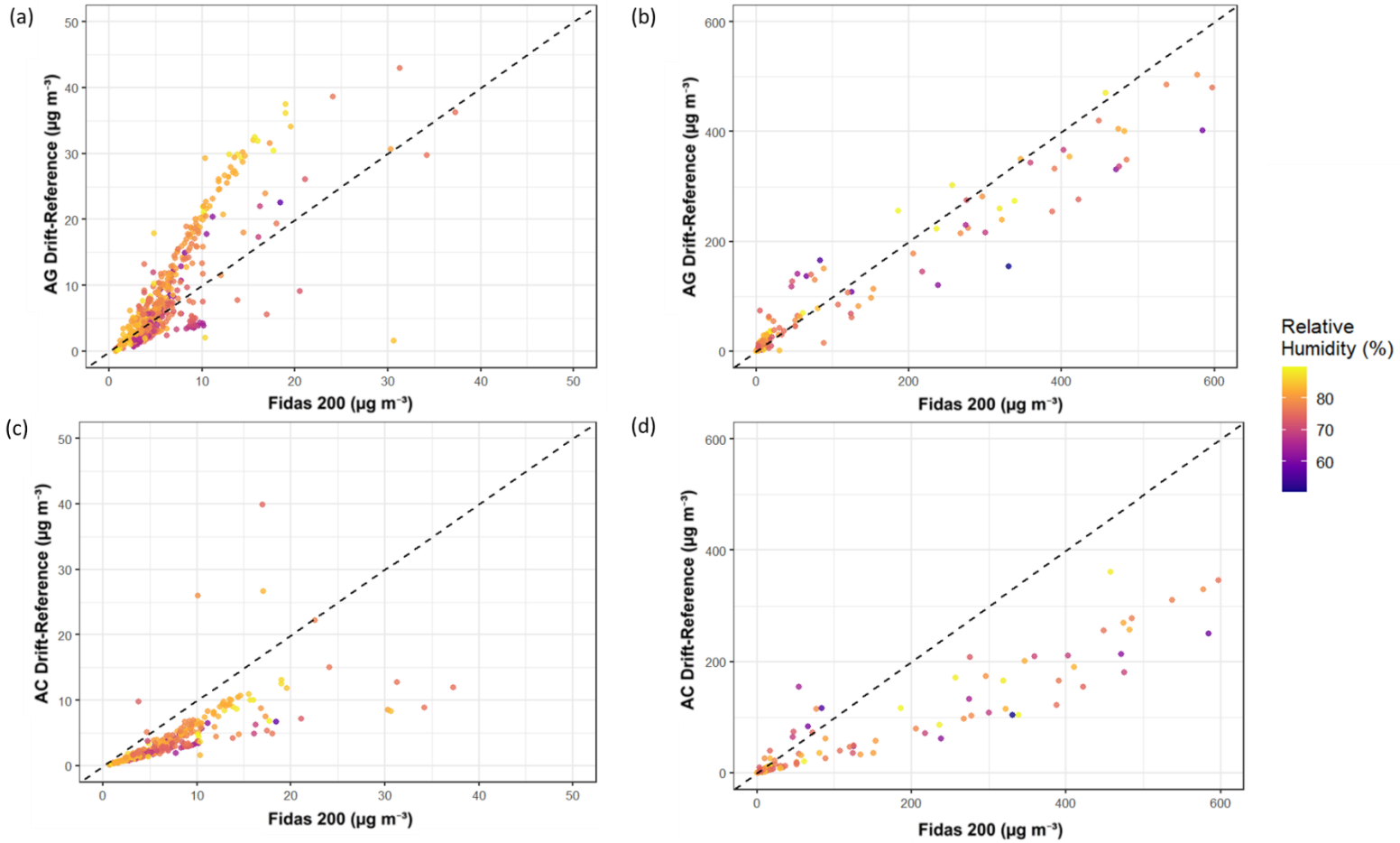

Figure S5. Pre-calibration $PM_{2.5}$ readings with relative humidity levels, a) AG below 50 µg m^{-3}, b) AG above 50 µg m^{-3}, c) AC below 50 µg m^{-3}, and d) AC above 50 µg m^{-3}.

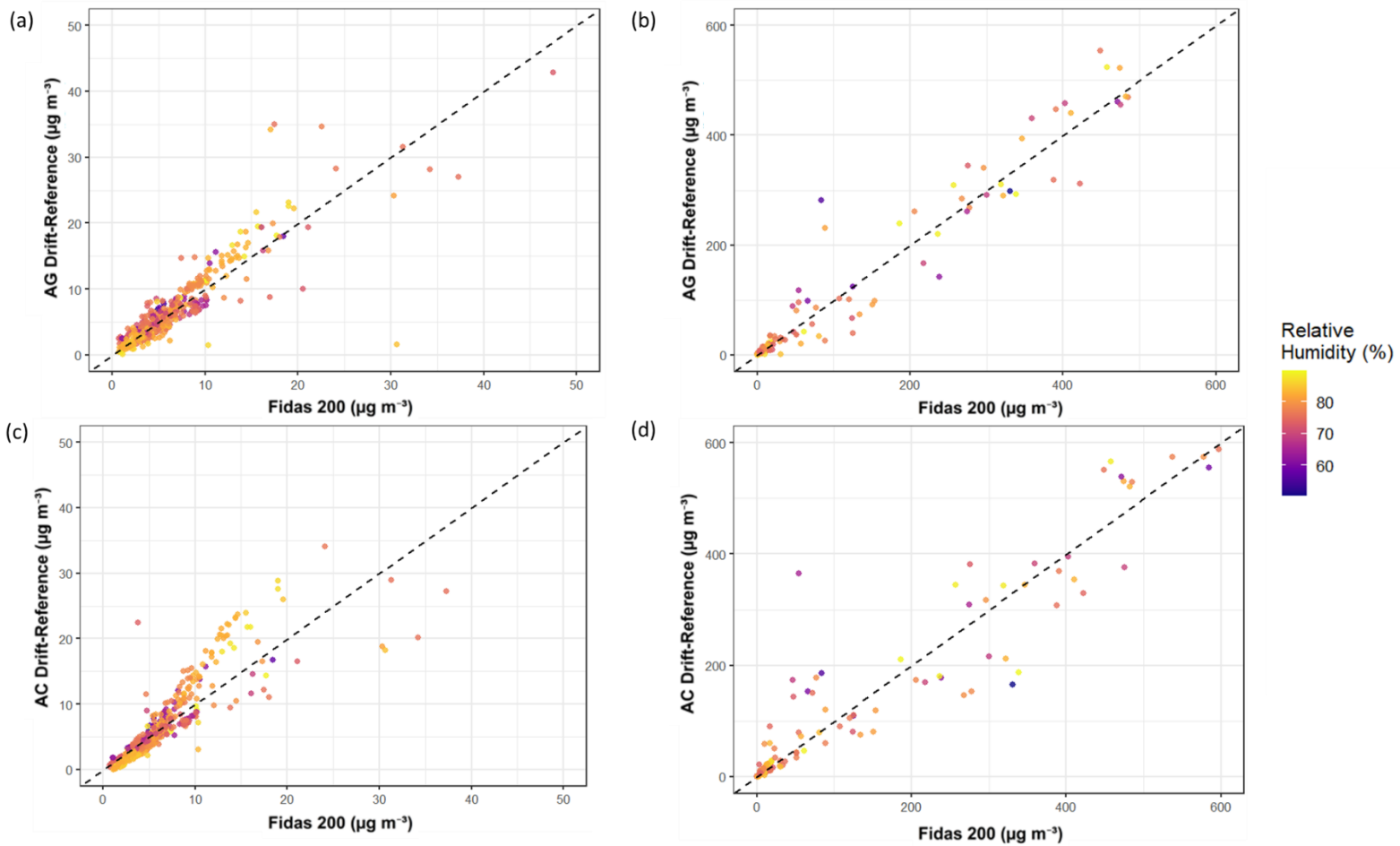

Figure S6. Post-calibration $PM_{2.5}$ readings with relative humidity levels, a) AG below 50 µg m^{-3}, b) AG above 50 µg m^{-3}, c) AC below 50 µg m^{-3}, and d) AC above 50 µg m^{-3}.

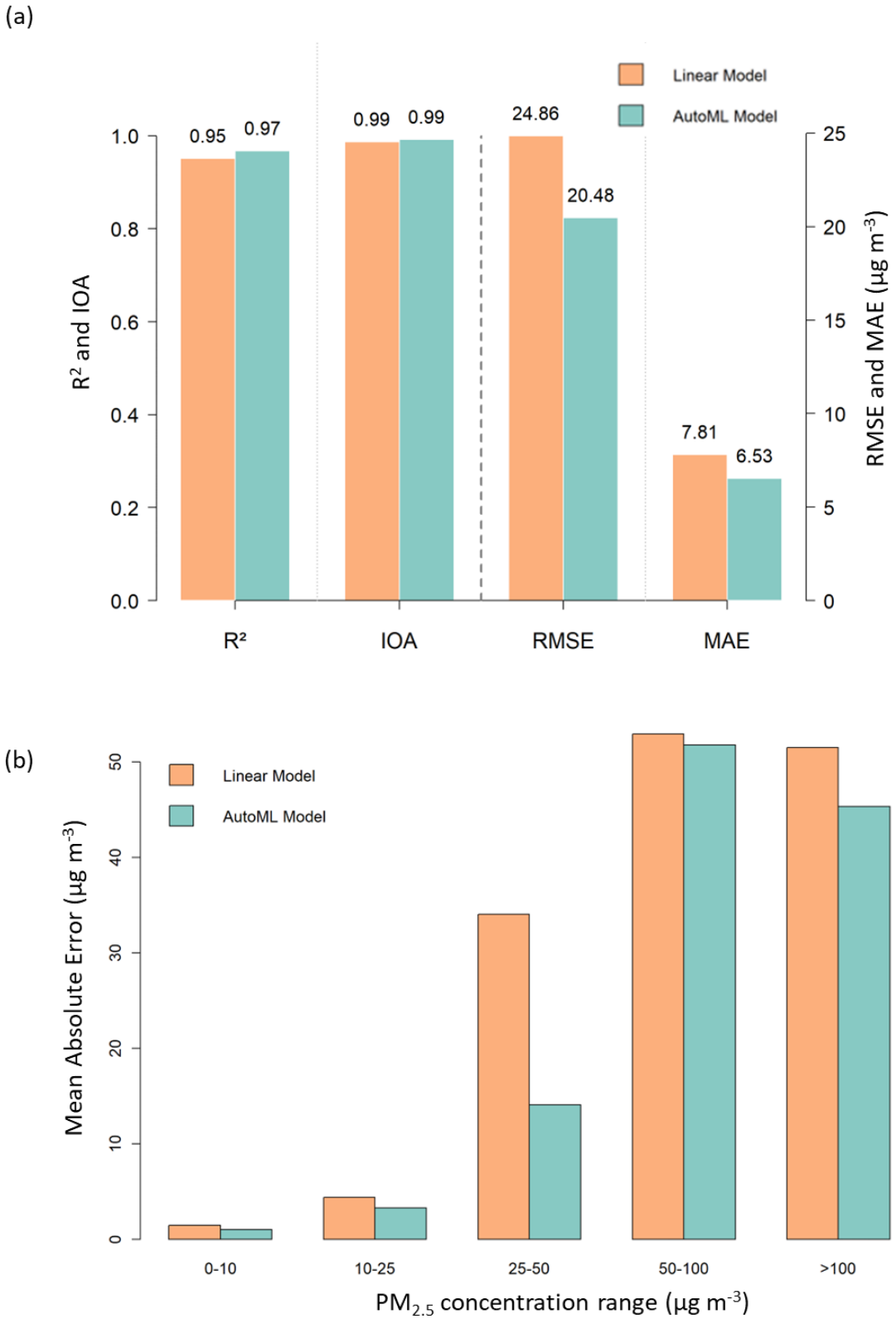

Figure S7. Comparison of AutoML model and the multivariate linear regression model, a) performance metrics, and b) error by concentration range.