

SUPPLEMENTARY DATA

Table 1: Chlorophyll Contents in Smog-Exposed and Control Plants

Group	Chlorophyll a (mg/g)	Chlorophyll b (mg/g)
Control	1.20 ± 0.05	0.50 ± 0.02
Smog-Exposed	0.75 ± 0.03	0.30 ± 0.02
p-value	0.015	0.019

Table 2: Oxidative Stress Markers in Smog-Exposed and Control Plants

Group	MDA (nmol/g)	H ₂ O ₂ (μmol/g)	SOD Activity (U/mg protein)
Control	0.75 ± 0.04	2.70 ± 0.08	15.2 ± 1.37
Smog-Exposed	1.45 ± 0.10	4.50 ± 0.12	21.6 ± 1.53
p-value	0.023	0.022	.017

Table 3: Hormonal Regulation During Smog Exposure

Hormone	Control (ng/g FW)	Smog-Exposed (ng/g FW)	p-value
Abscisic Acid (ABA)	50.33±2.52	85.79±3.11	0.012
Cytokinins	75.45±3.24	40.63±2.91	0.018
Gibberellins (GA)	60.27±2.83	45.89±2.42	0.021
Auxins (IAA)	90.11±3.42	72.54±3.21	0.017

Table 4: Guard Cell Ion Concentration During Smog Exposure

Ion	Control (mM)	Smog-Exposed (mM)	p-value
Potassium (K ⁺)	120.55±4.21	85.32±6.77	0.013
Chloride (Cl ⁻)	95.66±3.88	70.27±6.91	0.019
Calcium (Ca ²⁺)	30.44±1.55	45.17±2.58	0.016
Hydrogen (H ⁺)	0.0085±0.0003	0.0156±0.0019	0.022

Table 5: Chlorophyllase Activity in Smog-Exposed and Control Plants



Group	Chlorophyllase Activity ($\mu\text{mol/g/h}$)	p-value
Control	0.15 ± 0.01	0.001
Smog-Exposed	0.30 ± 0.02	0.004

Table 6: Reactive Oxygen Species (ROS) Levels as Measured by DCFH-DA Assay in Smog-Exposed and Control Plants

Group	ROS Fluorescence Intensity (AU)	p-value
Control	150.02 ± 12.14	0.017
Smog-Exposed	280.22 ± 18.33	0.003

Table 7: Correlation Matrix for Chlorophyll Content, Oxidative Stress Markers, and Antioxidant Activity

Parameter	Chlorophyll a	Chlorophyll b	MDA (nmol/g)	H ₂ O ₂ ($\mu\text{mol/g}$)	SOD Activity (U/mg protein)
Chlorophyll a	1.00	0.85**	-0.91**	-0.88**	0.78**
Chlorophyll b	0.85**	1.00	-0.87**	-0.85**	0.80**
MDA (nmol/g)	-0.91**	-0.87**	1.00	0.95**	-0.75**
H ₂ O ₂ ($\mu\text{mol/g}$)	-0.88**	-0.85**	0.95**	1.00	-0.77**
SOD Activity (U/mg protein)	0.78**	0.80**	-0.75**	-0.77**	1.00

Table 8: Regression Coefficients for Chlorophyll a and b

Variable	Chlorophyll a Coefficient	Chlorophyll b Coefficient	Intercept
MDA	-0.1203	-0.0242	1.9611
H ₂ O ₂	-0.1256	-0.0280	0.9088
SOD Activity	-0.0218	-0.0207	0.9088