Environmental Pollution and Related Hazards at Agbara Industrial Area, Ogun State (2018)

Table 1. Air pollutant concentrations at the various sampling points in Agbara industrial area. SP1- Industrial Roadside, SP2- Lagos Badagry express way, SP3-Market area, SP4-Banking district, SP5-Residential area, Di erent super scripts (alphabets) in the same column indicate signi cant di erence at p <0.05 according to Duncan Multiple Range Test.

Location codes	CO_2 (%)	CO (ppm)	NO (ppm)	NO_X (ppm)	H_2S (ppm)	VOC (ppm)	SO_2 (ppm)	NH_3 (ppm)	$PM_{2.5}$ (mg/m^3)	PM_{10} (mg/m^3)
SP1	2.20 ±1.03^{a}	5.50 ±2.32^{a}	0.60 ±0.52^{a}	0.70 ±0.48^{a}	<0.01	<0.01	<0.01	<0.01	0.0000	0.30 ±0.48^{a}
SP2	2.10 ±1.00^{a}	4.10 ±2.88^{a}	0.30 ±0.48^{a}	0.90 ±0.32^{a}	<0.01	<0.01	<0.01	<0.01	0.20 ±0.42^{a}	0.40 ±0.52^{a}
SP3	2.00 ±1.49^{a}	1.90 ±1.45^{bc}	0.40 ±0.52^{a}	0.60 ±0.52^{a}	<0.01	<0.01	<0.01	<0.01	0.01	0.20 ±0.42^{a}
SP4	3.00 ±2.05^{a}	3.90 ±3.11^{ab}	0.50 ±0.53^{a}	0.80 ±0.63^{a}	<0.01	<0.01	<0.01	<0.01	0.01	0.10 ±0.32^{a}
SP5	2.20 ±1.23^{a}	1.10 ±0.88^{c}	0.20 ±0.42^{a}	0.67 ±0.50^{a}	<0.01	<0.01	<0.01	<0.01	0.01	0.20 ±0.42^{a}
FEPA (1991) Standards	0.1	10	0.06	0.06	0.008	3	0.2	0.28	80	
WHO (1990)				0.08						25

Source: https://www.nature.com/articles/s41598-018-24810-4

The Influence of House Plants on Indoor CO_2 (2017)

Table 1: Effect of CO amount by the plants having different leaf surfaces under 20,000 lux light depending on temperature.

	20,000 lux light on species								
		Ficus		*Dieffenbachia*		*Spathiphyllum*			*Yucca*
	Leaf	Average*		Leaf	Average*	Leaf	Average*	Leaf	Average*
Temperature	Surface	(reduction of		Surface	(reduction of	Surface	(reduction of	Surface	(reduction of
	(m_2)	CO_2 per hour)		(m_2)	CO_2 per hour)	(m_2)	CO_2 per hour)	(m_2)	CO_2 per hour)
	0.185	-7.8		0.192	-6	0.336	-9.8	0.1395	-1.2
	0.403	-15.2		0.384	-10.5	0.426	-15.9	0.298	-1.6
15°C	0.514	-21.1		0.469	-12.5	0.516	-13.8	0.509	-3.5
	0.726	-28.9		0.628	-16.3	0.712	-20.9	0.745	-3.8
	0.806	-40.2		0.747	-25.6	1.038	-40	0.837	-6
	0.185	-75.9		0.192	-56.8	0.336	-75.9	0.1395	-22
	0.403	-163.4		0.384	-109.3	0.426	-110.3	0.298	-56.7
20°C	0.514	-212.4		0.469	-116.3	0.516	-112.6	0.509	-71.7
	0.726	-299.9		0.628	-179.3	0.712	-129.3	0.745	-154.8
	0.806	**-321**		0.747	-187.9	1.038	**-228.7**	0.837	-120
	0.185	-87.8		0.192	-61.6	0.336	-146.9	0.1395	-15.5
	0.403	-192.9		0.384	-125.6	0.426	-191.2	0.298	-33.2
25°C	0.514	-250.1		0.469	-152.5	0.516	-193.3	0.509	-38.9
	0.726	-332.5		0.628	-197.3	0.712	-254.1	0.745	-74
	0.806	**-407.6**		0.747	-216.5	1.038	**-361.2**	0.837	-61
	0.185	-43.7		0.192	-15.5	0.336	-54.6	0.1395	-7.1
	0.403	-94.6		0.384	-31.6	0.426	-54.5	0.298	-15.5
30°C	0.514	-132.8		0.469	-40.3	0.516	-55.3	0.509	-24.2
	0.726	-183.8		0.628	-48.6	0.712	-62.5	0.745	-37.8
	0.806	-197.5		0.747	-58.3	1.038	-139.1	0.837	-46.2
	0.185	-40		0.192	**0.7**	0.336	-2.9	0.1395	-3.3
	0.403	-87.4		0.384	**1.5**	0.426	-7	0.298	-6.8
35°C	0.514	-112.8		0.469	**3.1**	0.516	-7.6	0.509	-11.1
	0.726	-157.4		0.628	**3.6**	0.712	-5.2	0.745	-17.7
	0.806	-172.4		0.747	**3.3**	1.038	-5.6	0.837	-17.1

*Mean average is reduction of CO_2 per hour

Table 2: Influences of the species on CO amount in the dark depending on leaf surface and temperature.

	in the dark								
		Ficus		*Dieffenbachia*		*Spathiphyllum*		*Yucca*	
Temperature	Leaf Surface (m^2)	Average* (reduction of CO_2 per hour)	Leaf Surface (m^2)	Average* (reduction of CO_2 per hour)	Leaf Surface (m^2)	Average* (reduction of CO_2 per hour)	Leaf Surface (m^2)	*Average** (reduction of CO_2 per hour)	
	0.185	7	0.192	0.7	0.336	12.4	0.1395	2.4	
	0.403	15.3	0.384	3.3	0.426	28.2	0.298	5.8	
15ºC	0.514	20.8	0.469	4.5	0.516	31.7	0.509	9	
	0.726	27.6	0.628	4.1	0.712	44	0.745	15.9	
	0.806	31.5	0.747	5.1	1.038	63.6	0.837	14	
	0.185	8.4	0.192	2.7	0.336	24.3	0.1395	5.1	
	0.403	18.3	0.384	6.8	0.426	26.9	0.298	10.4	
20ºC	0.514	25.4	0.469	7.9	0.516	39.7	0.509	18.4	
	0.726	35	0.628	10.4	0.712	45.7	0.745	26	
	0.806	40.6	0.747	10.8	1.038	78.9	0.837	31	
	0.185	6.2	0.192	1.8	0.336	54	0.1395	7.3	
	0.403	12.7	0.384	2.9	0.426	64.3	0.298	15.4	
25ºC	0.514	14.1	0.469	3.8	0.516	63.5	0.509	22.9	
	0.726	21.5	0.628	5.1	0.712	67.5	0.745	40.6	
	0.806	34.1	0.747	8	1.038	122.5	0.837	41.1	
	0.185	11.1	0.192	2.9	0.336	22.3	0.1395	4	
	0.403	23.3	0.384	4.4	0.426	30.6	0.298	9.7	
30ºC	0.514	31.8	0.469	4.3	0.516	31.4	0.509	15	
	0.726	43.4	0.628	6.7	0.712	41.7	0.745	27.6	
	0.806	46.4	0.747	7.5	1.038	70.6	0.837	22.8	
	0.185	18.7	0.192	2.1			0.1395	1.9	
	0.403	40.9	0.384	2.9			0.298	4.4	
35ºC	0.514	51.7	0.469	2.9			0.509	11.2	
	0.726	70.8	0.628	4.7			0.745	14	
	0.806	87.8	0.747	6			0.837	16.3	

*Mean average is reduction of CO_2 per hour

Source: https://www.researchgate.net/publication/317681226_The_Influence_of_House_Plants_on_Indoor_CO_2