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Gas Decomposition Test

Supplied material:

Tiles coated with TiO2 photocatalysis. They were dried at a room temperature after coating.

Malodorous substances:

- NH3 (ammonia)
- (CH3)3N (trimethylamine)
- H2S (hydrogen sulfide)

Measurement method:

Infused malodorous substances with an initial concentration of 30ppm into four "five liter" containers in which the photocatalyst tiles were installed. Two fluorescent lights placed 150cm from tiles were used in each container. The residual concentration was measured after ten minutes, half hour, one, two and five hours using the gas detector tube"Kitagawa model".

Test Results

Time		Hydrogen Sulfide (H_2S)	Ammonia (NH_3)	Trimethylamine $(CH_3)_3N$
Immediately after illuminating	Residual Concentration (ppm)	30.0	30.0	30.0
10 minutes later	Residual Concentration (ppm)	27.5	3.5	4.4
	Adsorptive Rate (%)	8.3	88.3	85.3
30 minutes later	Residual Concentration (ppm)	27.4	2.5	2.7
	Adsorptive Rate (%)	8.7	91.7	91.0
1 hours later	Residual Concentration (ppm)	27.1	1.9	2.6
	Adsorptive Rate (%)	9.7	93.7	91.3
2 hours later	Residual Concentration (ppm)	25.0	1.9	2.0
	Adsorptive Rate (%)	16.7	93.7	93.3
5 hours later	Residual Concentration (ppm)	18.9	1.9	2.0
	Adsorptive Rate (%)	37.0	93.7	93.3