

## Research Paper

## STUDY OF DUST POLLUTION AND VEHICULAR POLLUTION IN CITY NANDED, MAHARASHTRA

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### ABSTRACT

*Pollution means an undesirable change in physical, chemical or biological characteristic of air, land and water that may or will harmful affect the human being, animal and plant life. Pollution causes serious problem all over the world. The present study was taken up to measure dust pollution and vehicular pollution in city Nanded. The analytical work is carried out on calorimeter.*

**Key words** : Dust pollution, Vehicular pollution.

#### Introduction :

The pollution in Nanded city is on increased vehicles being a major contributed to air pollution. There is a need for measuring as well as identifying the chemicals polluting the air for the further generation. The legal provision need to be implemented effectively for improving the quality of air and health of residents of Nanded.

#### Material and Methods :

For calculation of air born dust in atmosphere following method is employed. Two 12 cm. x 12.5.cm. size and butter paper with same weight are taken. These two butter papers are placed in two different place that is one is kept at Dadara (Nanded city) and another is kept at Shrinagar road (Nanded city). Before keeping they are weighted. Then they are exposed to for 24 hrs. papers are kept at ground level. After 24 hrs. butter papers are again weighted. The dust fall on the paper is calculated by following formula.

$W =$  Weight of dust

Dust fall for unit area  $x = W/A$  .....gm/cm<sup>2</sup>

Dust fall rate  $x/t =$  .....gm/cm<sup>2</sup>/hr.

Where  $t =$  time of exposure.

Observation : Butter paper placed at Dadara

Weight of dust = 0.2 gms

Dust fall for unit area ( $x$ )

$x = W/A$

$= 0.2/12 * 12.5$

$= 0.00133$  gms/cm<sup>2</sup>

Dust fall rate  $= x/t = 0.00133/24 = 0.00005$  gms/cm<sup>2</sup>/hr.

Butter paper placed at Shrinagar

$W = 0.1$  gms

Dust fall for unit area  $x = W/A$

$0.1/12 * 12.5 = 0.1/150$

$= 0.00066$

Dust fall rate  $= 0.00066/24 = 0.000027$  gms/cm<sup>2</sup>/hr.

Dust collected at Dadara site is more than the dust collected at Shrinagar.

**VEHICULAR POLLUTION :** The single most importance factor responsible for the deterioration of air quality in Nanded is the exponential increase in petrol and diesel fuelled vehicles.

#### Material and Methods :

For getting the data about the various vehicles operating in Nanded contacted to RTO Nanded who provides the latest data about vehicles registered in Nanded.

Motor vehicles on road as on 31<sup>st</sup> march 1980-2000 Nanded.

1980	1985	1990	1995	1996	1997	1998	1999	2000
5353	10908	23549	36084	40970	44939	52116	57803	63803

#### Result and Discussion :

In Nanded the transport system is over saturated. Because there are only a few good roads and few side roads. The traffic is there fore concentrated on this road only. Vehicular pollution is also serious problem in Nanded as in other cities. Vehicular pollution adversely effects human health in Nanded an else where alarming rise in the incidence of asthma and related respiratory ailment and vehicular exhausts are the main cause. The legal provision need to be implemented effectively for improving the quality of air and health of residents of Nanded. Hence it is suggested that a strong campaign we launched against vehicular pollution and its harmful effect on road users and residence. Ways minimize pollution be advertised through media. Traffic regulation can be greatly improved.

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