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EU-Program "Particulates"

PARTICULATES

- Characterisation of Exhaust Particulate Emissions from Road Vehicles -

European Commission DG TREN Project within the 5th Framework Programme

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Background

- Inhaled particulate matter has been associated with *adverse health effects*

- *Air quality standards* are amended accordingly to set maximum ambient levels of particulates in terms of concentrations and size.

- *Information* on the size and other characteristics from particlulate emitting sources, including automotive vehicles, is *limited*.

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Crucial Automotive PM Related Issues

- Development of a standard test method including both defined sampling and measurement techniques to provide comparable results

- Simulation of "Real-world conditions" by test method

- Which PM characteristics to measure?
  - e.g. mass concentration, number concentration, size distribution, morphology, surface, composition

- Are volatile and solid particles of the same importance?

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DG TREN Particulate Consortium

- Started April 2000,

- Will run for 3 years

- Work conducted by experts from 21 participating members including
  - Universities
  - Laboratories
  - Industries

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Main Objectives

- To define the exhaust aerosol properties which will be examined and evaluated

- To select adequate measurement instruments / techniques

- To develop a harmonised sampling and measurement methodology

- To apply the protocol to investigate particle emissions from current and future vehicle technology (incl. after-treatment) and fuel matrices (conventional, alternative fuels)

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"Products"

- A detailed framework for a future vehicle particulate sampling and measurement methodology.

- Input to emissions modelling tools, in relation to existing knowledge, in terms of usable emission characteristics.

- Assessment of the effectiveness of the technical measures for reducing particulate emissions.

- Useful input to atmospheric and medical studies.

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