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IN RE: ABRAMS November 1992

influence of numerous factors responsible for the amplitude of the error in each method. The reflectometric method shows less variability but it is recommended to complete the quantitative estimation of suspended particulate matter with another determination of a more qualitative character. -- APCA Absts.

482 Measurement of Diesel Engine Emissions. H. C. McKee, J. M. Clark and R. J. Wheeler. J. Air Poll. Control Assn. 12, 516-521, 546 (Nov. 1962).

Experiments were made to obtain the approximate level of atmospheric emissions from diesel engines and to evaluate some of the advantages and limitations of the different analytical methods available. Tests were made on several engines to determine the concentration of hydrocarbons in the exhaust and blowby streams. In diesel engine exhaust and blowby the hydrocarbon concentration is very low compared to that from conventional automobile engines. The values for ethylene and acetylene indicate that the light hydrocarbon gases may constitute a larger proportion of the total hydrocarbon constituents than with automobile exhaust. The flame ionization detector gives the best results as it measures total hydrocarbon content and is better suited to continuous operation at low concentrations. Condensation of hydrocarbons in the sampling system may represent a source of error in measuring diesel exhaust emissions. Dilution with hot nitrogen does not prevent this loss, although better results might be obtained if the diluted stream could be maintained at an elevated temperature through the flame ionization detector or other type of instrument. -- Cond. from APCA Absts.

483 Engineering the Chronic Exposure of Animals to Laboratory-Produced Automobile Exhaust. R. G. Hinners. J. Air Poll. Control Assn. 12, 527-530 (Nov. 1962).

The laboratory facility was established to initiate studies utilizing automobile emissions tailored to simulate realistically the conditions and daily changes of city air. An automobile engine is coupled to a dynamometer unit designed to produce exhaust and blowby according to an established "driving" pattern. The emissions are proportionally diluted with cleaned conditioned air and fed to 4 dynamic flow irradiation chambers. Four separate sets of conditions are maintained in the chambers, the variables of concentration, rate of flow, duration and intensity of light being subject to decision. These atmospheres are monitored with continuous recording instruments for CO, NO, NO_2, hydrocarbons, and ozone on a rotational schedule. -- Public Health Eng. Absts.

484 Source and Atmospheric Analyses for Formaldehyde by Chromotropic Acid Procedures. A. P. Altshuller, L. J. Leng and A. F. Wartburg. Intern. J. Air and Water Poll. 6, 381-385 (Sept.-Oct. 1962).

In investigations of pilot plant experimental and municipal incinerators, sampling for formaldehyde was done by both the acid and aqueous procedures. The results are discussed on the use of aqueous and acid collection procedures to synthetic vapor mixtures of formalin in air, incinerator effluents, auto exhaust, diesel exhaust, synthetic smogs, and urban atmospheres. The acid collection procedure is satisfactory for use in determining formaldehyde in auto exhaust. Analysis of raw auto exhaust has also been discussed. The chromotropic acid in sulfuric acid procedure should not be used in analyzing for formaldehyde in raw auto exhaust. -- APCA Absts.

PREVENTIVE ENGINEERING

485 How to Handle Ventilation for Benzene Control. H. Bavley and L. D. Pagnotto. Air Eng. 4, 18-22, 29, 50 (Dec. 1962).

In rubber coating plants utilizing petroleum naphthas containing 3% by weight or less benzene content, general ventilation as specified may be relied upon to keep the work room

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