

COLORIMETRIC DETERMINATION OF SMALL QUANTITIES OF DIPHENYLAMINE IN AIR. B. V. PONOMARENKO, Zavodskaya Lab. **13:937**, 1947.

The determination of $(C_6H_5)_2NH$ is based on its reaction with diazosulfanilic acid in an acid solution. The reaction product is violet-red. $(C_6H_5)_2NH$ in air is best absorbed in 50 per cent H_2SO_4 .

M. HOSEH [CHEM. ABST.].

RAPID DETERMINATION OF ANILINE IN INDUSTRIAL ESTABLISHMENTS. A. I. BULYCHEVA, Zavodskaya Lab. **14:1208**, 1948.

The method is based on colorimetry of the reaction of $PhNH_2$ with chloramine-T in alkaline solution in the presence of $PhOH$ (use of 3 per cent $PhOH$ in 2 per cent $NaOH$ is recommended). The blue color builds up in 15 to 20 minutes and is stable two to three days. The determination is done visually with a calibration set of standards. Determination of $PhNH_2$ in the atmosphere is readily done by aspiration into a H_2O trap; 92 to 100 per cent recovery and determination is possible with samples containing as little as 0.01 to 0.2 mg./l.

G. M. KOSOLAPOFF [CHEM. ABST.].

SEPARATE DETERMINATION OF FLUORIDES AS GASES OR AEROSOLS. G. S. LUZINA, Zavodskaya Lab. **16:623**, 1950.

In air analysis the aerosol is separated by means of an electric precipitator with 13,000 volts. The gaseous fluorides are absorbed by a liquid absorbant.

CHEM. ABST.

AEROSOL INDICATOR FOR RAPID TEST OF THE DUST CONTENT OF AIR. GUSTAF LJUNGGREN and TORSTEN WILNER, Tek. tid. **80:551-552**, 1950.

With the aerosol indicator (I) dust particles suspended in the air less than 0.5 micron can still be observed in a simple way. In this apparatus I functions as a small ultramicroscope, through which the air is driven by an electric blower. The suspended particles are illuminated from the side by a very strong light and appear luminous against a dark background. By this dark field illumination the particles which are too small to appear under an ordinary microscope become noticeable. The apparatus is very easy to handle. Additional batteries are carried in a bag and the test can be carried out easily and quickly at any place. The construction of I is described in detail with the help of a schematic section.

CHEM. ABST.

GAS TESTER. TORSTEN WILNER, Tek. tid. **80:553-554**, 1950.

An apparatus originally designed for the detection of very small amounts of combat gas is used for detection of halogen-substituted substances in the air in industry, such as carbon tetrachloride, trichloroethylene, chlorobenzene, and cooling agents of the freon® type. A small electric fan drives the air to be tested through a small catalyst tube containing an electrically heated platinum spiral, where the substance to be detected or determined is decomposed. The acid decomposition products cause a very distinct red color change on a specially impregnated test paper. The power consumption is 0.3 amp. at 5 v. The test paper is applied dry and is best kept in a container with a drying agent. For most tests a moisture content of the paper in equilibrium with the room atmosphere is sufficient. The color change fades away rather fast after completion of the test. Weak acids do not react with the paper. This eliminates the sensitivity to a whole series of substances which could otherwise have a disturbing effect. Chlorine-containing compounds can be detected in amounts as small as 1 mg. per cubic centimeter of air. The color change occurs on passage of 10^{-7} - 10^{-8} Gm. through the catalyst tube. The sensitiveness is lower for halogen-free S compounds, whose decomposition products are not effectively absorbed by the test paper. The construction of the apparatus is described in detail.

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