

NOTE

A Modified Pirani Gage for Use in Corrosive Systems.—In studying reactions in gaseous systems at low pressures, frequent use has been made of the Pirani gage or some modification of it. If one of the gases involved is corrosive or if there is possibility of the reaction rate being affected by catalysis at a metal surface, the ordinary type of gage using a metal wire is unsatisfactory. In this Laboratory these difficulties have been eliminated by using a thin-walled glass capillary filled with mercury as the hot filament. The capillaries are drawn from ordinary 6-mm. Pyrex glass tubing and are usually made about 20 cm. long. These are then ring-sealed into a tube of about 1 cm. internal diameter. The resistance of such a gage varies from about 10 to 30 ohms depending on the size of the capillary.

The most satisfactory way to use this type of gage is to measure the current necessary to keep the temperature of the mercury thread constant. At low pressures the relation between the pressure and the heating current is linear, but at higher pressures the rate of increase of the current with increasing pressure falls off rapidly. These gages have been used with hydrogen and carbon monoxide and found to be quite satisfactory. The response to changes in pressure is so rapid that it does not cause any delay in taking readings. The maximum pressure readable with these gages varies with the accuracy of the current measurement. Using a milliammeter the practical upper limit is about 2 mm. of mercury, but by using a potentiometer this can be increased to several millimeters.

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[CONTRIBUTION FROM THE CHEMICAL RESEARCH LABORATORY OF HYNSON, WESTCOTT AND DUNNING]

SOME MERCURY DERIVATIVES OF HALOGEN COMPOUNDS OF RESORCINSULFONEPHTHALEIN

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For several years this Laboratory has been interested in the preparation of mercury derivatives of pht haleins and sulfonepht haleins and a study of their properties as therapeutic agents. In the course of this research we have had occasion to produce mercury derivatives of halogenated resorcinsulfonepht haleins. As many of the parent resorcinsulfonepht haleins, particularly those with halogen atoms present in the *o*-sulfobenzoic acid residue of the molecule, are unknown, we thought it advisable to make a brief report on the preparation of these compounds.