

in glacial acetic acid and in acetic anhydride were slowly heated to boiling, but there was no such vigorous reaction as that observed when the quinazoline was present, while bromination of the quinazoline in absence of acetic anhydride proceeded but slowly.

After brominating the quinazoline in acetic anhydride solution, as above described, the bromine compound which precipitated was filtered out and the mother liquor distilled. Considerable gas (hydrogen bromide, &c.) was evolved and a fuming liquid collected in the receiver, while towards the close of the distillation a white soapy solid gathered in the condenser. This latter proved to be monobromacetic acid. To the liquid in the receiver alcohol was added, when there arose such a fiery, peppery, irritating vapor, that we had to vacate that part of the laboratory temporarily and further work with it was abandoned. The evidence all pointed to the formation of bromacetic compounds, probably bromoacetyl bromides, in the bromination.

Dr. Seil in carrying out the bromination used an open beaker, which he held as usual between the thumb and forefinger just along under the lip. He is positive that no liquid came in contact with his fingers at any time during the operation and that it could only have been the vapor that caused the trouble. At the time he had no intimation whatever that he had been poisoned, but three days afterwards sharp pains commenced to shoot through the ends of the thumb and forefinger and not only these fingers, but the whole hand as far as the wrist, became terribly swollen. Two deep white blisters developed on the upper side of the first joint of the forefinger and one on the end of the thumb. On cutting away the skin and baring the deeper tissues it was found that the flesh had been completely killed nearly to the bone, and after all this dead matter had sloughed away the wounds slowly healed; but even today he complains of more or less numbness where these wounds were. The case seems the more remarkable in that there was no external evidence of any injury at the time, the thick callous skin on the forefinger and thumb appeared just the same as usual, and yet the destructive action of the poison, whatever it was, had penetrated almost to the bone.

The writer has heard of somewhat similar cases, where deep destruction of tissue has resulted from contact with chloroacetic acid, but nothing quite like the case reported above.

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Correction: Solubility of Potassium Permanganate.—In a recent paper upon the solubility of potassium permanganate,¹ work upon this subject

¹ Baxter, Boylston and Hubbard, *This Journal*, 28, 1336 (1906).

by Patterson,¹ Herz and Knoch,² and Voerman³ was unfortunately overlooked. Patterson's results, with one exception, and Herz and Knoch's single determination cannot be compared with ours, since they are referred to unit volume of the saturated solution, while ours are referred to unit weight of solution. Patterson's value at 15° falls exactly on our curve. Voerman's results, which were obtained by titration of the saturated solutions with oxalic acid, include the eutectic point and ice line. At temperatures where comparisons may be made, his values are in all but one case lower than our averages by amounts appreciably larger than the difference between our extremes, and in every case are lower than our lowest result. Since we employed three different methods of analysis, one of which was identical with his, and since in our experiments saturation was approached both from above and below, it is probable that Voerman's values are slightly too low.

GREGORY P. BAXTER.

A Device for Filling Bottles from Carboys.—We have found it such a nuisance to fill acid bottles from carboys that until recently we have purchased all our acids and ammonia in bottles. Last year, however, we succeeded in devising a form of stopper which enables one to fill acid and ammonia bottles readily from carboys by the use of a simple glass suction pump. This has been improved in form until now it is indispensable in this laboratory and other chemists may be interested in it.

The device consists of a rubber stopper with a soft concave lower surface, a central hole through which a large glass delivery tube may pass, and a small lateral hole passing out from the junction of the large hole and the concave surface. In this latter hole a glass tube is fitted and it is connected with the suction pump. A large glass tube 12 to 15 mm. in diameter is so bent that one arm reaches to the bottom of a carboy and the other arm, about 15 cm. long, is vertical. This short arm is passed through the large hole in the bottle filling device, so that it projects through about 5 cm., or enough to extend through the neck of an ordinary acid bottle. On turning on the suction pump, and placing the device firmly on top of a bottle, a partial vacuum is at once formed and the acid flows over to fill the bottle. When the bottle is filled, a slight pressure

¹ Thesis, Johns Hopkins University, 1900, p. 20. "The reduction of Permanganic Acid by Hydrogen and Ethylene and a Study of some of its Salts." Since the publication of our paper, these results have been reprinted in *This Journal*, 28, 1734 (1906),

² *Z. anorg. Chem.*, 41, 317 (1904). "Über Löslichkeiten in Lösungsmittelgemengen."

³ *Chem. Weekblad.*, 2, 766 (1905). Also, *Chem. Centralb.*, 1906, I., 124, and *Phys. Chem. Tabellen*, Landolt-Börnstein-Meyerhoffer, Nachtrag, 857.