

A NEW METHOD FOR THE DETECTION AND ESTIMATION OF SMALL QUANTITIES OF NITROUS ACID.

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THIS method is a colorimetric one, and depends on the formation of paranitrosodimethylaniline, when a solution of dimethylaniline hydrochloride is added to an acidulated solution containing nitrous acid. A yellow colour is developed immediately, unless the nitrous acid solution is very weak, in which case the colour develops on standing.

The following process is recommended for carrying out the estimation: A solution of dimethylaniline hydrochloride is required, containing 8 grms. of dimethylaniline and 4 grms. of hydrochloric acid per 100 c.c., and a standard solution of sodium nitrite containing 1 part of nitrous acid per 100,000. The estimation is performed in Nessler cylinders, or a colorimeter. Fifty c.c. of the solution under examination are introduced into a cylinder, and acidulated with 1 drop of concentrated hydrochloric acid, and 3 drops of the dimethylaniline solution added, and allowed to stand fifteen minutes. If the solution is very weak, it may be necessary to allow it to stand for thirty minutes, or longer, for the complete development of the colour. The colour is then matched in the usual manner against the standard solution, which is acidulated with 1 drop of concentrated hydrochloric acid, and 3 drops of the dimethylaniline solution added. The method is very sensitive, and will detect with ease 1 part of nitrous acid per 1,000,000. The presence of nitrates does not interfere with the estimation. The great advantages of the method are its sensitiveness and simplicity.

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