

NOTE.

*A Convenient Method for Maintaining Reduction of Ferrous Solutions*¹.—My reasons for calling attention to this method for maintaining reduction in ferrous solutions are, that it is economical, convenient, and effective, and so far as I have been able to ascertain, new, in this particular application.

Various methods have been used to keep ferrous solutions reduced, such as the introduction of zinc and sulphuric acid, and the addition of sirups, gums, sulphurous acid, or sulphuric acid. These are either unnecessarily expensive, or ineffective, as they may interfere with the uses of pure ferrous solutions, and I have not been able to obtain as satisfactory and permanent results with them, as with the method which I have made the subject of this note; namely, the addition of ten per cent. of concentrated sulphuric acid and a suitable amount of iron in the form of small wrought iron nails, to a ten per cent. solution of ferrous sulphate. The acid under these conditions liberates hydrogen very slowly, and yet fast enough to nullify the oxidizing action of the air, even when the solution is exposed in an open beaker.

I have found that ferrous solutions thus made up will keep for more than a month in a practically unchanged condition, while solutions made up with sirups, gums, or with free acids and similarly exposed, were very largely ferric at the end of the period, and acidified ferrous ammonium sulphate, $\text{FeSO}_4 \cdot (\text{NH}_4)_2 \cdot \text{SO}_4 + 6\text{H}_2\text{O}$, was in very little better condition.

When one requires a large amount of ferrous sulphate for qualitative classroom work, for example, an open beaker full of the reagent always in good condition, is very useful in saving time, and is of great convenience, and in these respects has been so satisfactory to me, that I venture to present the method to the members of the society.

WILLIAM S. MYERS.

Rutgers College, June 3, 1898.

NEW BOOKS.

ELEMENTS OF GENERAL CHEMISTRY WITH EXPERIMENTS. By JOHN H. LONG, M.S., Sc.D. Chicago: E. H. Colegrove. 1898. Price, \$2.00.

This is a compact text-book, filling only 408 pages, underta-

¹ Read before the New York Section, June 3, 1898.