

**STANDARD METHODS  
FOR THE EXAMINATION  
OF WATER AND SEWAGE**

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**AMERICAN PUBLIC HEALTH ASSOCIATION**

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FOR THE EXAMINATION  
OF WATER AND SEWAGE**



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## PREFACE TO FOURTH EDITION.

The Committee on Standard Methods of Bacteriological Water Analysis was reorganized in 1918 with the following membership: F. P. Gorham, chairman, L. A. Rogers, W. G. Bissell, H. E. Hasseltine, H. W. Redfield, with M. Levine as adjunct member. This committee made a report in 1918 which was not acted on by the Laboratory Section, and in 1919 made a revised report, recommending certain changes in Standard Methods, which were adopted by the section and which are now incorporated in this present fourth edition.

Following are the more important changes:

New brands of peptone authorized.

Phenol Red Method of Hydrogen-ion Concentration.

Five-tenths per cent of sugar specified for broths instead of 1 per cent.

Sterilization of sugar in media specified in greater detail.

Preparation of Endo Medium.

Synthetic Medium for the Methyl Red Test.

There are no changes in the chemical methods in this edition.

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# AMERICAN PUBLIC HEALTH ASSOCIATION.

## LABORATORY SECTION.

### STANDARD METHODS FOR THE EXAMINATION OF WATER AND SEWAGE.

Compiled and revised by committees of the American Public Health Association and the American Chemical Society and referees of the Association of Official Agricultural Chemists.

#### COLLECTION OF SAMPLES.

##### QUANTITY REQUIRED FOR ANALYSIS.

The minimum quantity necessary for making the ordinary physical, chemical, and microscopical analyses of water or sewage is 2 liters; for the bacteriological examination, 100 cc. In special analyses larger quantities may be required.

##### BOTTLES.

The bottles for the collection of samples shall have glass stoppers, except when physical, mineral, or microscopical examinations only are to be made. Jugs or metal containers shall not be used.

Sample bottles shall be carefully cleansed each time before using. This may be done by treating with sulfuric acid and potassium bichromate, or with alkaline permanganate, followed by a mixture of oxalic and sulfuric acids, and by thoroughly rinsing with water and draining. The stoppers and necks of the bottles shall be protected from dirt by tying cloth, thick paper or tin foil over them.

For shipment bottles shall be packed in cases with a separate compartment for each bottle. Wooden boxes may be lined with corrugated fibre paper, felt, or similar substance, or provided with spring corner strips, to prevent breakage. Lined wicker baskets also may be used.