

3. *Pasteurisation*.—By heating the milk for twenty minutes at a temperature of 155° F., the micro-organisms are destroyed, but not their spores. This method has the advantage of not killing the Vitamines.

The following precautions can be taken to prevent water becoming infected:—

1. The water supplied to a district should be selected from a source as little liable to pollution as possible. If there is the slightest chance that it may have become contaminated in any form, filtration and purification should be carried out before distribution. In addition to this, the consumer may, if he so desires, add to this public filtration purification by domestic filters at home. Filtration, if efficient, besides removing various organic substances, also removes micro-organisms. Public filtration is carried out in sand filter beds, to which are connected the mouths of the outlet pipes. These pipes conduct the water on to the surface of the filter beds to a suitable depth, and it then percolates slowly down. The micro-organisms are removed by means of a gelatinous film which forms on the surface of the sand, and consists of the suspended organic materials and masses of bacteria. If proper precautions as to aëration, rate of filtration and cleansing of the sand are carried out, these sand filters remove bacteria from the water in large numbers.

2. Domestic purification may be carried out by—

(a) *Distillation*.—This renders the water insipid, owing to deficient aëration.

(b) *Boiling*.—This method also destroys micro-organisms and leaves the water insipid.

(c) *Domestic Filters*.—These must be regularly cleaned, for if the organic matter is not removed it accumulates, and forms an excellent breeding ground for bacteria. The best known domestic filters are the Pasteur, Chamberlain, and Berkefeld.

Poisoning from metals, particularly lead, may arise from the metallic constituents of the water pipes. Water which has been found to act on lead may be treated by filters composed of sand and limestone; it is also possible to avoid the use of lead pipes where the water is known to act on this metal. It is calculated that one-tenth of a grain of lead in a gallon of water may give rise to lead poisoning.

HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss Henrietta Ballard, Miss Mary Douglas, Miss Eliza Noble, Miss P. Thomson.

QUESTION FOR NEXT WEEK.

What is the cause of scabies? Describe the symptoms. How may it be treated?

NURSING ECHOES.

Both the General Nursing Councils for Scotland and Ireland have adopted their Seals. Both are very appropriate. Scotland has chosen the Cross of St. Andrew in the centre of a circle, surrounded by the title of the Council, and Ireland has in the centre of the Seal the figure of Hygeia with a leaf of shamrock in each corner, and the title of the Council in the surround.

Professor M. Adelaide Nutting, of Teachers' College, New York, has been in London for a few days on her way to Sicily, where she intends to enjoy three months' rest in that glorious climate, of which she is in need. In a delightful two hours "crack," Miss Nutting told us of the numerous experiments in nursing education and organisation "evolving" in the States, which has necessitated very arduous work in her Department of Nursing and Health, many of them serious problems which cannot be solved without regard to the relations of nursing to the whole scheme of social development throughout an immense continent. No wonder those in high places are working at top speed. Thus the question of national health at Teachers' College becomes more and more absorbing, and Miss Annie Goodrich is devoting her enthusiasm and talents to the closest study of this question. There is now a national organisation for Public Health Nursing, and a United States Public Health Service Nurse Corps, and many of the best brains in the nursing profession in America prefer this branch of work to any other.

Miss Nutting reports great progress in support of the Nursing and Health curricula at Teachers' College. Beginning with some 20 pupils, in a few years the number has risen to 500.

Miss Lavinia Dock is now busy writing up the history of the American Red Cross, with special reference to its activities during the war. We hope she lays special stress on its splendidly organised Department of Nursing, with its headquarters at Washington. A Red Cross Nurse in America signifies a well trained graduate nurse, whereas in Britain it signifies an amateur with a smattering of book instruction, wearing nurses' uniform and given powers and privileges to which, in our opinion, she has no right. The sooner we study and adopt the American system the better. No doubt Miss Dock's book will help us to realise the use and abuse of the recent Red Cross system. Its

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