

for the solutions of morphia used for subcutaneous injection. To obtain a clear solution, without excess of acid, is not very speedily effected; and he thinks it would be a convenience to the practitioner to be able to purchase a carefully prepared solution of standard strength. Mr. Vachell proposes the following formula:—

Acetate of morphia . . . 1 drachm.
Distilled water 12 drachms.
Acetic acid As much as is sufficient.

He states that one-twelfth of a grain of acetate of morphia would be contained in a minimum of such a solution; the dose would, therefore, be from two to four minims. Some such formula, he thinks, might be inserted in the next edition of the *British Pharmacopœia*.

Dr. WHITE has since pointed out (*Lancet*, Dec. 20) that no allowance is made in the foregoing for the increase of bulk by the addition of the solid, and that a minim would contain not one-twelfth, but one-thirteenth. He says that he makes his solution as follows:—

Acetate of morphia 1 scruple.
Distilled water 140 minims.
Acetic acid, B. P. 5 minims.

Dissolve with gentle heat in a test tube. The solution measures exactly 160 minims, consequently 8 minims would contain one grain of acetate of morphia. As a standard solution he suggests one-half the strength of the above. The hydrochlorate is used by Mr. White (*Lancet*, Jan. 3) in the proportion of two grains to one drachm of hot water. This he has found to form a solution that does not deposit on cooling, and which he thinks preferable to solutions made up with free acids. In the discussion that has taken place the *British Pharmacopœia* solution of the acetate has also been recommended and objected to because of its bulkiness, and suggestions have been made for the use of a standard syringe as well as a standard solution.

Messrs. T. and H. SMITH (*Pharm. Journ.*, vol. iv., p. 436) state that, by using meconic acid instead of acetic acid, a neutral and stable solution of one in twelve, or much stronger, may be prepared. They consider that a neutral solution of meconate of morphia is pre-eminently adapted for hypodermic treatment.—*London Med. Record*, April 8, 1874.

A TEST FOR PUS.

Dr. Day, of Australia, has made some interesting observations on pus which we quote from the *Medical Times and Gazette*, London:

"In 1868," he observes, "I had the good fortune to discover a very delicate test for pus, and have since been in the almost daily habit of applying it in conjunction with other tests as aids to diagnosis. In this way I have learnt some very interesting facts regarding the properties of pus. For instance, I have found that healthy pus, when dried, becomes

chemically inactive, although when moistened with water it again resumes its chemical activity than pus derived from healthy persons, and that the pus from persons suffering from diseases allied to erysipelas possesses unusual activity, which it is capable of retaining for years.

"On this paper are two spots of pus which had been allowed to dry by exposure to the air. To one has been added the pus-test alone with, as you may see, a negative result, dry pus being devoid of chemical activity. To the other a drop of water is added and then a drop or two of pus-test, with the result, which always follows the application of this test to moist pus—namely, a bright-blue reaction.

"I mentioned just now that pus secreted by persons suffering from diseases allied to erysipelas is more active in its chemical properties than healthy pus. On this piece of glass is some pus taken from a large carbuncle on the neck of an elderly gentleman two years and three months ago. He was suffering from symptoms of blood-poisoning at the time. This pus, as you will see, although it has been freely exposed to the air during the whole time, and sometimes to great heat, still retains its power of acting chemically on the pus-test, and it does so even when dry, thus showing that it possesses greater chemical activity than ordinary pus.

"You will perceive that, in the explanation I have attempted regarding the influence of moist and dry air over the propagation of erysipelas and its allied diseases, I have assumed that when the chemical activity of pus is suspended its power to act as a poison on the system is also suspended.

"I will trespass on your time by bringing one other experiment under your notice, as it may help to explain the *modus operandi* of Prof. LISTER's antiseptic treatment of wounds.

"I have found that carbolic acid possesses the property of entirely and permanently destroying the chemical activity of pus, whether derived from healthy or unhealthy persons. On this paper is some pus which had been moistened with water, to give it chemical activity. A few drops of watery solution of carbolic acid were then poured over it, and after a lapse of a quarter of an hour, the pus-test was applied, with as you may see, a perfectly negative result."

Dr. Day's pus-test is so simple in the mode of appliance, and apparently so certain in its revelations, that we have little doubt that it will soon come into daily use as an aid to diagnosis. He prepared his test-fluid by exposing a saturated alcoholic solution of guaiacum to the air until it has absorbed a sufficient quantity of oxygen to give it the property of turning green when placed in contact with iodide of potassium. On moistening the most minute quantity of pus with water, and pouring a drop or two of the test-fluid over it, a clear blue color is produced.

MEASLES.

Dr. W. B. Atkinson remarked that he had been recently treating a large number of cases of measles, and had also encountered a few cases of scarlet fever.