the influence of air there is produced between the metallic salts and the colouring matter a reaction which determines the formation of a bluish black precipitate. To prevent as much as possible this action of the air upon the ink before it is applied to the paper, there is added, as in the case of alizarine inks, a trace of sulphuric acid designed to dissolve the precipitate which may be produced. This acidity of the ink has several disadvantages; it attacks the pens used for writing with it unless they are either of gold, platinum, or gutta-percha. Sulphate of copper or sulphate of iron may be the metallic salt used in such inks—the former is preferable. One of the best formulas for this kind of ink is the following, given in proportions for a manufacturing scale: 20 kilogrammes of extract of logwood are dissolved in 200 litres of water, and the solution clarified by subsidence and decantation. A yellowish brown liquid is thus obtained. In another vessel, 10 kilogrammes of ammonia-alum are dissolved in 20 litres of boiling water; the two solutions are mixed, there being also added 200 grammes of sulphuric acid, and finally 1½ kilogramme of sulphate of copper. The ink should be exposed to the air for a few days to give a good colour, after which it should be stored in well-corked bottles.

Boettger gives the following formula: 30 grammes of extract of logwood are dissolved in 250 grammes of water; 8 grammes of crystallized carbonate of soda and 30 grammes of glycerine of density 1·25 are added; and lastly, 1 gramme of yellow chromate of potassium and 8 grammes of gum arabic reduced to a powder and dissolved in several grammes of water. This ink does not attack pens, does not mould, and is very black.

ERGOT OF RYE.*

BY PROFESSOR DRAGENDORFF.

In association with Herr Stud. Padwissotzky I have been engaged in the chemical examination of ergot, and I believe we have succeeded in isolating the active principle. Our experiments have also yielded to us in a pure condition the coloring matter occurring in ergot. Whilst I beg leave to lay before the Pharmaceutical Society specimens of the products we have obtained, and postpone a detailed subscription of them for a German journal, I would wish to submit to the Pharmaceutical Society the following notes respecting their more important properties.

(1) Coming specially under consideration as an active constituent of ergot is (*a*) a slimy substance which goes into solution upon

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