approximately 350 milligrams and constituted a treatment. The Lloyd's reagent holds the nicotine as long as the mixture is in an acid medium, liberating it when it becomes alkaline. The small intestine is slightly acid at its anterior end but becomes rapidly alkaline at about the point where the intestinal worms are present in the greatest numbers. Thus the nicotine is liberated at the desired point for the maximum effect on these worms. Rectal injections of nicotine sulfate (40 per cent. nicotine) diluted at the rate of 1 cc. to 200 cc. of distilled water and administered in 10 cc. injections remove approximately 85 per cent. of the cecum worms. Stronger concentrations are decidedly toxic, a 1 per cent. mixture administered in the same manner causing an immediate paresis and death in about ten minutes.

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TO DEMONSTRATE PROTEIN GRAINS

ONE of the most effective ways to demonstrate the presence of protein grains in the cellular tissue of a seed is by making a free-hand razor section of the meat of a Brazil nut. Place the section on a glass slide, and flood it several times with ether. If enough ether is used to cause it to flow over the edges of the slide the dissolved fat will collect on the under side of the slide where it is easily wiped off. After treating with ether flood with absolute alcohol; replace the alcohol with xylol and mount in xylol, or if a permanent mount is required mount in balsam. The Brazil nut is rich in its peculiar kind of protein, and by this method several of the grains may be seen in nearly every cell.

E. R. SPENCER

AMEBOID BODIES ASSOCIATED WITH HIPPEASTRUM MOSAIC

IN a recent publication[1] the writer described and pictured certain bodies in the cells of corn plants suffering from mosaic disease. Since the bodies are confined to diseased portions of the plant, it was suggested that they might be of etiological significance.

[1] Bul. Exp. Sta., H. S. P. A., 3: 44-58 (1921).

Those who are working on the mosaic disease problem will be interested to know that similar bodies have now been found in the light green portions of mosaic leaves of *Hippeástrum equéstre* Herb. This plant belongs in the Amaryllidaceae and is not closely related to corn. Its leaves which are thick and soft are well suited for cytological studies. The mosaic pattern shown by *Hippeástrum* is quite different from that of corn. The intracellular bodies associated with this disease will be described in detail in a future paper.

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SCIENTIFIC BOOKS

Laboratory Manual of Colloid Chemistry. HARRY N. HOLMES. John Wiley & Sons, Inc. XII + 127 pp.

THIS volume was written at the suggestion of the Colloid Committee of the National Research Council. Colloid chemistry is growing rapidly and this book is a welcome addition to the colloidal literature. There are 186 experiments, from which the student is expected to select the ones suited to his particular needs.

There are first of all methods of preparation and purification followed by illustrative examples of peptization and coagulation, of protective colloids and solvated colloids. The measurement of surface tension and viscosity are treated in brief chapters. In a chapter on adsorption several experiments are given on silica gel. The use of the ultra-microscope receives two pages. Experiments on hydrogen ion concentration and osmotic pressure and Donnan equilibrium are not included. Descriptive matter preliminary to the experiments makes the work easy reading and stimulates the use of the author's bibliography.

In classical chemistry we have used quantitative measurements to the greatest advantage, melting point, boiling point, solubility, percentage composition and molecular weight and they give the firmest sort of a foundation upon which to build a science. Colloid chemistry can hardly be called an exact science until it can offer similar quantitative measurements and