A Practitioner's Laboratory

Henry Bonnes

Iowa State University

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Veterinary practitioners often fail to set up a laboratory because of an apparent lack of knowledge as to what equipment and media is available and because the venture appears too complex. This past summer I had the opportunity to work for Dr. Clifford Nelson, ISU '39 and Dr. Robert Ahrens, ISU '50 at Jewell, Iowa.

In their laboratory, Doctors Nelson and Ahrens do a lot of culture work, sensitivity testing, fecal flotation and a slight amount of hematologic work. The laboratory equipment is inexpensive but adequate. The most expensive item is the microscope which should have at least three objectives and be equipped for oil immersion. The incubator was made from a discarded refrigerator (see Fig. 1). The refrigeration unit was removed and a wafer thermostat from an old chick brooder was installed and wired in circuit with a 100 watt light bulb which supplies the heat. The bulb was placed at the back, on the bottom of the incubator. A small motor driven centrifuge would be advantageous but is not necessary. A twelve-quart size pressure
cooker served as an autoclave and an apartment size gas stove was used for dry sterilization and heating the pressure cooker.

All media used was purchased in a dehydrated form. It was reconstituted into usable form merely by dissolving in distilled water and sterilizing. The main item of equipment needed for the reconstitution was a balance to weigh the media (see Fig. 2). All media preparation was handled by technicians as was a large part of the manipulations such as streaking plates, transferring cultures and Gram staining. The following reconstituted medias were kept on hand: tryptose agar, brilliant green agar, selenite, Sabarouds, Kligler's Iron agar, and five sugars (dextrose, lactose, sucrose, mannitol and maltose) (see Fig. 3). Many other special media were available in dehydrated form.

Many of the clients of Drs. Nelson and Ahrens brought animals to the post mortem room (see Fig. 4) for necropsy and
bacteriological culturing. However, it was not uncommon to bring tissues in from a farm call for culturing. A separate charge was made for all laboratory work.

The cost of starting a laboratory of your own will depend upon the equipment that you have on hand but the minimum cost will be about $300.00. The media cost about $3.00 per $\frac{1}{2}$ lb. There are many new disposable products on the market that are very economical for the small laboratory.

Henry Bonnes, '66