The fact that these two native species of toads, as well as several South American toads and the frog, *Rana pipiens,* respond to the injection of urine from pregnant patients by the rapid release of spermatozoa would seem to indicate that this reaction is generalized in toads and frogs and that it offers a practical means of testing for early human pregnancy.

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Vacuum-Paraffin Infiltrator

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The need for a method which would infiltrate a whole rat brain with paraffin was the basis for development of the vacuum-paraffin infiltrator,[1] an electrical heating unit which contains a glass bottle connected to a vacuum source. The heat in the bottle is controlled by a rheostat which regulates the flow of current into the heating unit.

The procedure followed in developing the infiltrator was first to select a suitable glass bottle. A copper cup was formed into which the bottle was placed so that there was a close sliding fit between bottle and cup. A thin sheet of asbestos paper was wrapped around the metal cup to form a base upon which the high resistant wire was wound. The wire used was 24 gauge chromel "A" asbestos-covered wire. Care must be taken in winding the wire to reduce the hazard of short circuit. A piece of copper tubing was fitted over the coils, and holes were drilled into the tubing so that dissipation of excess heat would be more effective, thereby preventing the contents of the glass bottle from becoming overheated. The wire coil of the heating unit was attached to two contact poles which were incorporated into a wood base facilitating use of a plug to connect the rheostat.

The rheostat, similar to ready-made ones, was designed to be more adaptable to control of the heating unit. Buttons on the control dial of the rheostat were connected at various points of the resistance wire, thereby cutting in or cutting out more or less resistance. A small Christmas tree light was added to the rheostat. It lights up when the switch is on, and dims or brightens as the control knob of the rheostat is turned from button to button; the brighter the light, the higher the temperature in the heating unit. This feature is a valuable aid in indicating whether the circuit is operating properly. If the heating unit wire develops a break, the light will not dim or brighten to the same degree when the control knob is passed over the buttons of the rheostat.

[1] The author extends his appreciation to E. Ehrlich, Sr. for technical assistance in producing this model.

The vacuum source is a conventional water aspirator which is attached to a water faucet. A two-holed rubber stopper is used in the bottle of this model, one hole containing the glass tubing for the vacuum connection and the other containing a thermometer which is used to make an occasional check on the temperature of the paraffin.

The advantage of this vacuum-paraffin infiltrator is that it can be set into operation and left without need for constant attention. It has also been found that resulting paraffin tissue blocks are more compact, due to the low air content of the paraffin. If the clearing agent is a comparatively volatile substance, its removal is expedited by this method. By keeping the paraffin free of the clearing agent, the necessity of having two or three changes of paraffin is eliminated.

The Effect of Supervoltage Cathode Rays on the Nonenzymatic Browning Reaction of Dried Fruits and on Chemical Compounds Pertaining Thereto

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It has been demonstrated previously that ionizing radiations have a lethal action on bacteria and thus may offer a potential means of processing foods (*1, 3*). To determine the feasibility of using these radiations in the preservation of foods, the effects of the radiations on the nutrients in foods, on color components, and on flavor are under investigation in these laboratories.

The experiments described herein relate to some observations made on the effects of high voltage cathode rays, electrostatically produced, on color in dried fruits, extracts thereof, and compounds pertaining thereto. The cathode rays utilized in this work were obtained from a Trump Generator (*6, 7*) operating at 3,000 kv.[1]

Dried prunes were exposed to cathode ray irradiation for dosages up to 10 million roentgen-equivalents-physical (rep). A definite bleaching of the flesh was observed in prunes that were examined immediately after irradiation, but no color changes in the skin were noted. The amount of bleaching increased with greater dosages of radiation. After the prunes had been at room temperature (70°–80° F) for two weeks, the color of the flesh appeared to have returned to normal. No noticeable change was observed in the flavor of the prunes immediately after irradiation or two weeks later.

A similar experiment was carried out with Thompson Seedless Raisins. With raisins, however, bleaching occurred in the skin as well as in the flesh, and a definite off-taste was noted. As in the case of the prunes, the

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