The whole assembly is driven by an a.c. motor (1/10 HP, 110-220V, 0.09 KW, and with 1,340 r.p.m. Mez Mohelnke, Checoeslovakia). The rotation of the motor shaft (a) is transmitted to the hollow shaft (b), in the water chamber (c) by means of a rubber-steel couple (d) in order to soften the rotation movement. A brass axle-box (e) below the couple supports the water chamber. The water flows through the water inlet (f) into the water chamber which is sealed above and below with hermetical pieces of rubber (g), avoiding leaks of the inflowing water. Several holes (h) are drilled in the proximal portion of the hollow shaft. The water goes through the hollow shaft and flows out at the water outlets (i) drilled among the turns of the steel brush (j) fixed to the spiral furrow on the surface of the washing shaft by means of a copper wire.

In order to shield the operator from splashing, an acrylic plastic container available commercially for refrigeration storage (k) is fixed by screws (l) to a circular aluminum plate (m) in the base of the apparatus. The washing shaft goes through a circular hole made in the bottom of the plastic container. The steel brush is limited to the upper part of the washing shaft, in order to remove the wastes and pupas accumulated in the neck of the bottle. An additional cleaning additment is adapted to the distal end of the shaft, inserting pieces of latex or rubber tubing cut to make stripes (n) as shown in the photograph. The centrifugal force given by the high speed of the rotating shaft lifts up the bottle cleaning it thoroughly.

An interchangeable washing shaft for vials is adapted by means of a screw (o). It has cut tubing with free ends of proper length. The water flows out from the distal end of the hollow shaft, thus helping to eject the medium and wastes out of the vial.

The whole assembly is mounted on the wall, above a washstand; the collected water with the ejected medium is disposed directly through the cesspool. The temperature of the water is regulated by mixing with a metallic T-shape tubing connector the hot and cold water flowing from the faucets of the washstand. Rubber gloves may be used to protect the operator's hands, however, the few defective vials which may break during the washing operation offer no danger due to the softness of the rotating latex stripes and to the protection offered by the shielding acrylic plastic container.

Wattiaux, J.M. Medical School, Facultés Universitaires N.D. de la Paix, Namur, Belgium. Squash preparation of nurse cells for Feulgen photometry and autoradiography.

Since they are highly polyploid and involved in vitellogenesis, nurse cells prove a very interesting material for histophotometry and autoradiography work. The ovaries are labelled either by injection or by incubation. Schneider medium or even buffer I devised by Ristow and Arends (1968) turn out to be quite satisfactory. Buffer I is made from tris buffer (0.01M pH 7.0), 3 mM $MgCl_2$ and 0.22 M sucrose. We used Schneider medium only for incubation. Afterwards, the ovaries are fixed for 20 to 30 mins. in formalin (4%, pH 7 in M/15 phosphate buffer) and rinsed overnight in hypertonic sucrose (refrigerator). They are rinsed in buffer I and incubated in a solution of 0.1% of pronase (in buffer I) during 15 mins. at 37°. Mature eggs are then easily removed with dissecting needles and the ovaries are squashed very gently on albumized slides - spreading should be checked with a binocular. After cooling in dry ice (10 to 15 mins.), coverslips are quickly removed and the slides dried in warm air. They are ready for the regular autoradiography processing: removal of unincorporated labeled precursor by immersion in a cold solution, stripping or coating, exposure and development.

For grain counting nuclei have to be examined in phase contrast and mapped to allow further investigation.

For histophotometry the gelatin of the autoradiography preparations has to be removed. This will be best performed during the first stage of the Feulgen processing, by 5 N HCl treatment at 25° during 60 mins. Silver grains are then either removed or completely dispersed and do not interfere at all with the cytophotometric measurement. The slides are rinsed immediately in ice cold SO_2 and dipped during 60 mins. in Schiff reagent at pH 2.6 (room temperature). They are afterwards rinsed again in SO_2 saturated water (2 x 30 mins.) dehydrated in ascending alcohols and mounted in Harleco resin. The preparations are then ready for histophotometrical measurement. Follicle cells might be used quite conveniently as a standard to determine the relative amount of ploidy since most of them are either diploid or tetraploid.

Reference: Ristow, H., and S. Arends. A system in vitro for the synthesis of RNA and protein by isolated salivary glands and nuclei from Chironomus larvae. BBA, 157: 178-186 (1968).