

making a color with the vitamin, since they are all dehydrating agents of various degrees. In the case of this reagent the dehydration takes place on the surface of the particles because they have an adsorbed layer of sulfuric acid as a result of the leaching process used in their manufacture. Attempts at elution with solvents such as acetone destroy the blue color but yield an orange oil which has a different absorption spectrum from the vitamin.

Complex formation between the reagent (adsorbed sulfuric acid) and the anhydro compound appears to be the most probable explanation of the phenomenon. That such a complex is possible is indicated by the fact that carotene also makes a color even though it is a hydrocarbon.

Interesting possibilities are suggested by the principle of this assay. Not infrequently it is desirable, either for synthetic or analytic purposes, to react two substances which can not be brought into solution in a common solvent. Carrying one substance into contact with another by means of an inert adsorbent might solve such problems.

ARNOLD LOWMAN

CALIFORNIA PACKING CORPORATION,  
SAN FRANCISCO, CALIF.

#### A MODIFIED PETRI DISH FOR CONTINUOUS TEMPERATURE OBSERVATION

IN investigations upon free-living and parasitic Protozoa, I have found that greater accuracy could be obtained in using a modified Pyrex Petri dish for

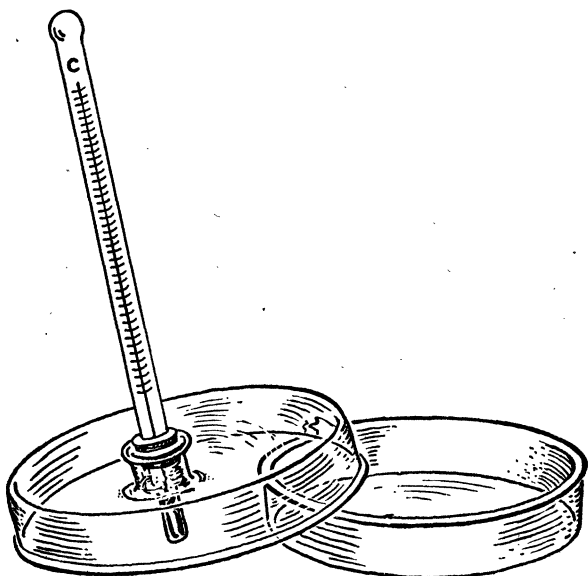


FIG. 1.

controlling and maintaining constant temperatures of culture fluids, stains and various fixing reagents.

The dish (Fig. 1) is a regulation stock four-inch

Pyrex Petri dish (bottom and lid) in which a hole measuring approximately one centimeter in diameter is made close to the rim of the lid. A piece of glass tubing slightly larger than the diameter of the hole is then fused over it so that a collar is formed about one centimeter high. A piece of rubber tubing about six millimeters in length is inserted in the glass collar. Then a small clinical-type thermometer is inserted into the rubber-cushioned collar so that the bulb of the thermometer which should be immersed in the fluid comes to rest slightly above the bottom of the dish. Direct temperature readings may now be made of the contents of the dish without removing the lid.

Many investigators in protozoology and parasitology make smeared preparations directly on cover-slips which are then dropped into the heated fixing fluid. With this dish, it is possible to kill and fix the organisms at a definite temperature and still be able to maintain the correct temperature over a given period of time with the lid covered. In staining, it has proved to be extremely useful, especially in the Feulgen test for thymonucleic acid where a given temperature must be maintained for a definite period of time.

The dish should prove to be convenient and useful for protozoologists, parasitologists and those working with small animals where greater accuracy is desired in this phase of technical work. Entomologists may find the dish useful by simply using it as a cover with a stoppered opening through which fluids may be added to developing embryos without removing the lid thereby lessening the possibility of contamination.

It seems likely that with greater emphasis being placed upon research in parasitology and tropical medicine, there will be considerable usage for a dish of this nature.

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RALPH WICHTERMAN

TEMPLE UNIVERSITY

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