personnel. I reassert that many members of the Reserve were glad to accept inactive duty pay as long as they could stay safely at home. Many of these same individuals did everything under the sun to get out of the Reserve and to obtain extensive delays in reporting for active duty during processing. I agree with Bard that recall to active duty does result in appreciable financial loss. I certainly agree that every effort should be made to place reservists who are scientifically trained in appropriate military positions. The individual reservists are, in many instances at fault for being misplaced. Many reserve scientists wanted to stay in combat units in order to collect inactive duty pay. At the same time, they could have been transferred to research and development units had they so requested. These latter units, however, had their inactive duty training without pay.

It should be pointed out to Anthony O. Mirarchi that most government laboratories seemed to have a rather adequate supply of scientific help. One would anticipate that a critical shortage of scientists would show itself in the service laboratories. By this I do not mean that we have a tremendous oversupply of scientists, but in any time of national mobilization, we do not have an oversupply of punch-press operators, iron, steel, and other resources.

The final paragraph in Mirarchi's letter suggests that a careful study or survey should be made, possibly by the AAAS or the American Chemical Society, to ascertain just what the facts are. On the basis of these facts, it would then be possible to avoid serious wastage and misassignment of trained men. With this latter point of view, there can be no argument, but until we have valid facts available for study, I still feel that the original criticism published in SCIENCE is unwarranted, and I base these conclusions on a rather good knowledge of the Reserve program as it involves the reserve scientist.

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A Simple Pipetting Device

THERE is a need in any laboratory working with radioisotopes for a simple, safe, versatile, and inexpensive device that will permit accurate delivery of solutions from a pipette. For the pipetting of solutions of soft β-emitters a device used in this laboratory meets these requirements, but it does not appear to be used elsewhere.

It consists of a three-way glass stopcock with an outlet through the bottom of the stopper. (Stopcock 7460 Catalog LP28 of the Corning Glass works. The smaller size is preferred.) The side arms are cut off, leaving convenient lengths. To one side arm a short length of thick-walled gum-rubber tubing is fitted for attachment to the pipette. To the outlet through the stopper a rubber bulb of convenient capacity is attached. It is expedient to provide a spring-clip or an elastic band to keep the stopper well-seated.

In use, a pipette is attached as indicated above. The stopper is turned so as to connect the rubber bulb with the pipette, and liquid is drawn up into the pipette. The tip of the index finger is applied to the end of the free side arm, and the stopper is turned to connect the two side arms of the stopcock. Delivery of the liquid is now controlled with the tip of the finger in the usual manner. The device may be used in the hand, or it may be held in a clamp that can be raised or lowered.

In the event that some liquid is inadvertently sucked into the rubber bulb, no harm is done to the operator or the apparatus. The latter may be easily decontaminated.

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Distilled Water from Boiler Steam

ALTHOUGH distilled water is steam condensate, condensed boiler steam cannot ordinarily be considered distilled water, because boiler steam is usually a mixture of liquid and, frequently, solid base dispersed in small proportions in the vapor phase.

The availability of the "Liqui-jector," a device for trapping entrained liquid in compressed air lines, led me to investigate the possibility of stripping entrained boiler water and solid matter from process steam to improve the quality of the resulting condensate. A unit was very kindly supplied me by George W. Jordan, Jr., of the Selas Corp. of America, Philadelphia. This was connected to a steam line, and the steam passed through it. Condensing this steam provided water with a reading varying between 0.1 and 0.3 ppm on a Solu-Bridge conductivity meter. The water was pyrogen-free, showed a negligible residue on evaporation, and otherwise met the requirements of water for injection, USP. The steam line involved was from a vertical boiler operating on full load, in which the evaporating surface was very small for the quantity of water evaporated; and the steam carried much entrained feed water.

A full-scale condensing unit was assembled and has been in continuous operation since May 1950, providing Courtland Laboratories of Los Angeles with water for biological and pharmaceutical products, directly from boiler steam. Very little attention is required; care must be taken to prevent flooding the Liqui-jector with line condensate, and the water-repellent element in the Liqui-jector must be replaced from time to time.

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