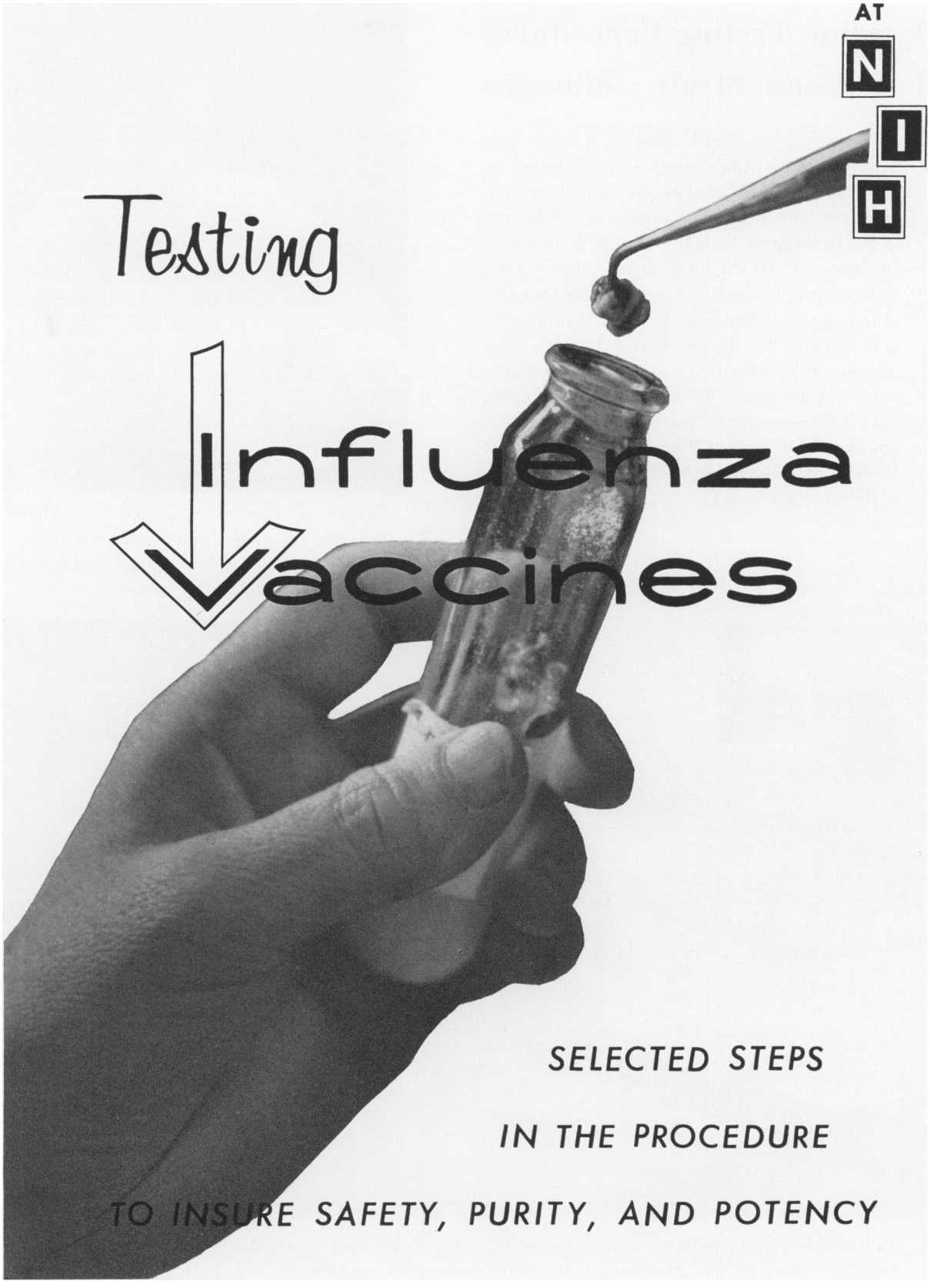
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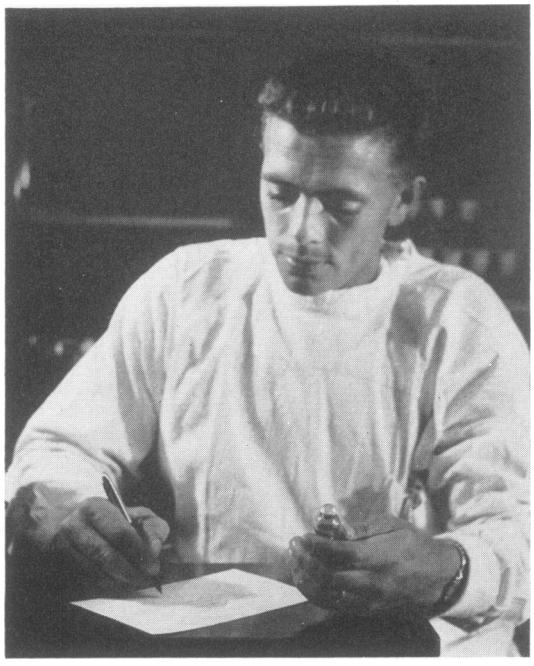
Testing
Influenza
Vaccines
SELECTED STEPS
IN THE PROCEDURE
TO INSURE SAFETY, PURITY, AND POTENCY

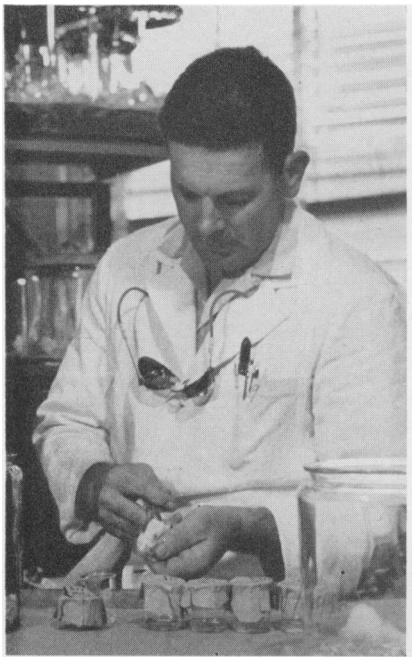
Vaccine Testing Procedures For Asian Strain Influenza

Commercially produced influenza vaccine prepared from the Asian strain virus is tested by the Public Health Service to determine conformance with prescribed standards. Scientists at the Division of Biologics Standards, National Institutes of Health, test samples from each manufacturer to insure safety, purity, and potency of the vaccine. The first lots of the new vaccine were released for use on August 12, 1957, 2½ months after 6 licensed vaccine manufacturers were sent isolations of the Asian strain virus. Some of the procedures used in testing these lots are illustrated here. (*Material presented by the Division of Biologics Standards and the Division of Research Services.*)

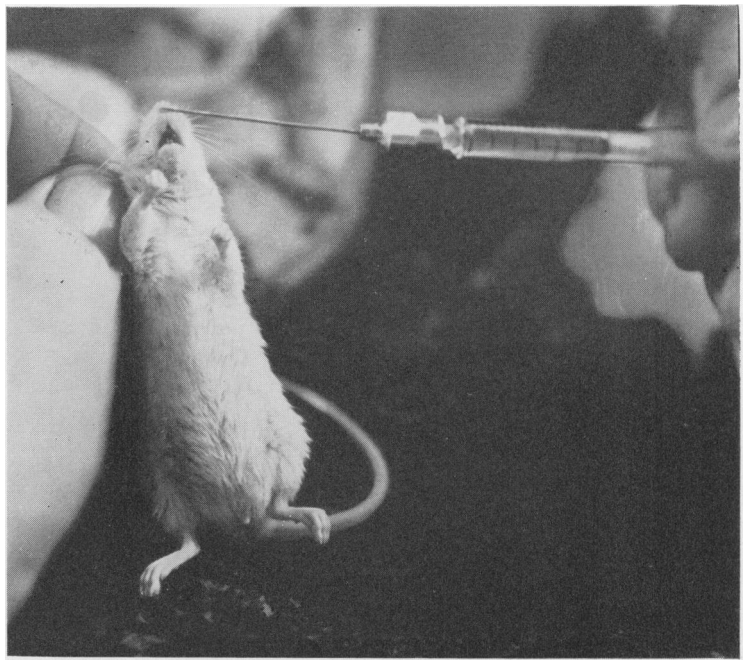


Sample of vaccine is logged in. After it is unpacked, the manufacturer's name, vaccine lot number, and other information are recorded, and testing proceeds.

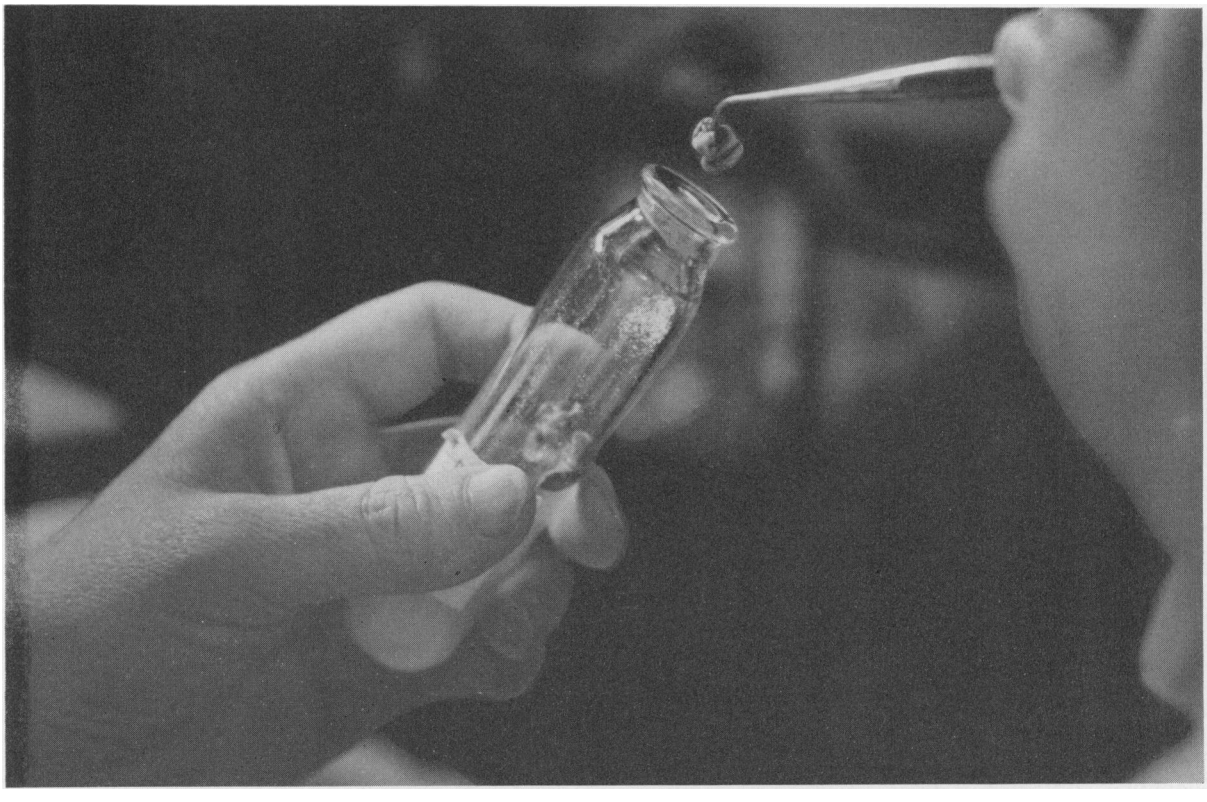
In an early step of potency tests, various dilutions of the vaccine are made. Ratios of vaccine to saline solutions are indicated on the top of each of the containers.



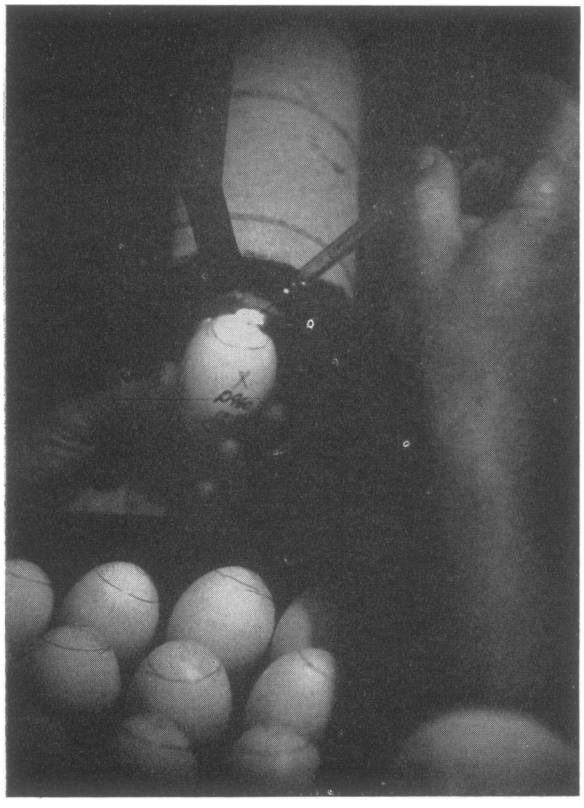
Mice are immunized with vaccine dilutions. Two weeks later, their blood serum is tested for antibodies.



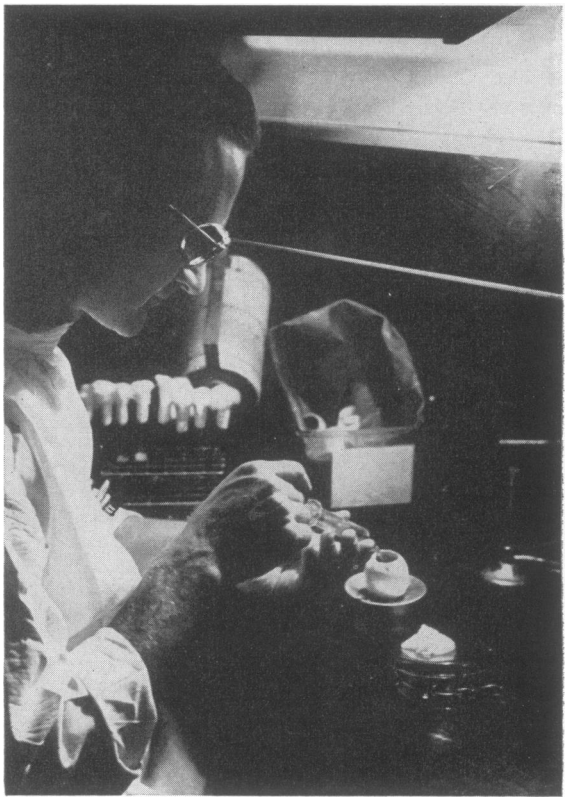
Mouse receives intranasal drops containing influenza virus and antiserum. A 10-day survival indicates that the antiserum is effective and that the vaccine used in its production meets potency requirements.



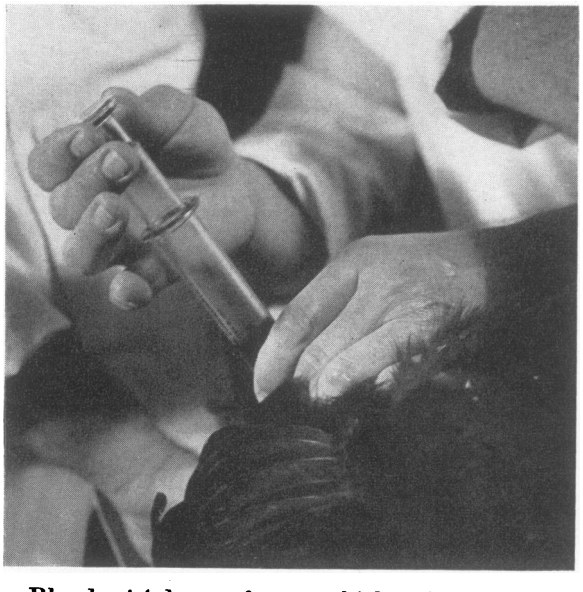
Lungs of a mouse infected with influenza virus are dropped into a test tube containing alundum, a sandlike substance, to be ground for preparation of a virus suspension used in tests.



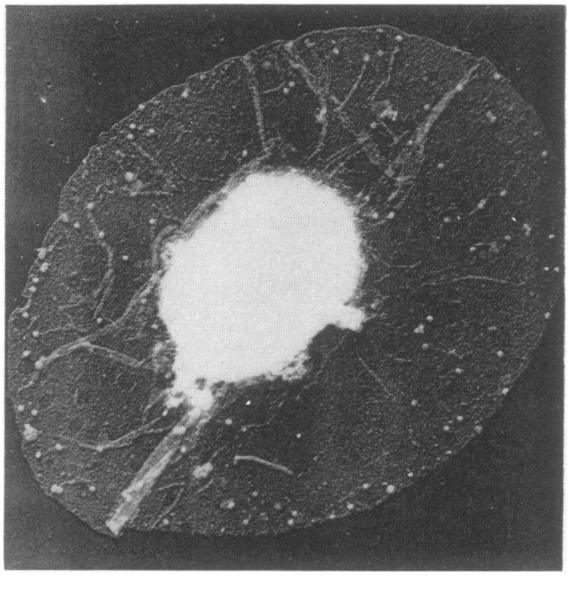
Eggs are injected with influenza virus. This is the first step in preparing larger amounts of virus suspensions to be used in various laboratory tests.



Extra-embryonic fluid containing influenza virus is withdrawn from a hen's egg for study. Ultraviolet light prevents contamination with other viruses or bacteria.



Blood withdrawn from a chicken immunized against influenza is used to prepare serum. The serum serves in a variety of tests concerned with control of the vaccine.



Electron micrograph of a red blood cell (greatly magnified) of a chicken with influenza virus. Small woolly spots around the nontransparent nucleus are the virus.