SCIENCE

VOL. 97 FRIDAY, JANUARY 15, 1943 NO. 2507

SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. MCKEEN CATTELL and published every Friday by

THE SCIENCE PRESS

Lancaster, Pennsylvania

Annual Subscription, $6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary in the Smithsonian Institution Building, Washington, D. C.

THE MISSION OF THE LAND-GRANT COLLEGES IN PROMOTING OUR GOOD NEIGHBOR POLICIES AMONG THE LATIN AMERICAN REPUBLICS[1]

By E. J. KYLE

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WHEN the Morrill Act was passed by our United States Congress and approved by Abraham Lincoln in 1862, it brought into the world the first truly democratic program of higher education. It announced to the world that the people of this country believed that the son of the farmer, the son of the mechanic and the son of the shopkeeper were just as much entitled to an education in an institution of higher learning as the son of the independent rich. It also brought into the world for the first time the idea that the state and federal governments should help finance any form of higher education.

The masses of the people of the United States have never fully understood the mission or the work of the land-grant colleges, and, not understanding them, our people have never fully appreciated their accomplishments.

In this terrible and tragic world situation, when the forces of evil are striving with all their might to destroy completely the democratic peoples of the world

[1] An address delivered before the general session, Association of Land-Grant Colleges, Chicago, October 28, 1942.

containing 1 mg of merthiolate per ml, the final pH being about 7.2. The proteins dissolve readily in the buffer solution, yielding clear solutions at protein concentrations greater than 10 per cent. It is the practice here to dissolve the precipitated proteins in a volume of buffer equal to one quarter of the original serum volume. By this means, sufficiently high concentrations have always been obtained. The solution may be further clarified by recentrifugation at high speed or by filtration through a fine sinter-glass filter. The proteins precipitated under the above conditions comprise about 10 to 15 per cent. of the total serum proteins and contains from 90 to 100 per cent. of the isoagglutinating activity originally present in the pooled serums.

The separated and concentrated material lends itself well for blood-grouping purposes. It is not as viscous as whole serum, but possesses sufficient surface tension to form well-rounded droplets on a glass slide. The addition of merthiolate to a final concentration of 1:1000 does not appear to interfere with the interactions of the isoagglutinins with the red cells and further eliminates the necessity for filtering out bacteria. The isoagglutinating activity of the separated globulines stored at room temperature (25° C) remained unimpaired for four weeks.

Employing the macroscopic slide technique, the concentration of this material can be adjusted so that agglutination with incompatible erythrocytes occurs visibly in 5 seconds time, with complete agglutination occurring in 60 seconds.

Studies are now in progress on the physico-chemical and immunological properties of the separated and concentrated proteins, and attempts are being made to further purify the isoagglutinins from this material. The details of this study will be reported later.

LOUIS PILLEMER,
First Lieutenant, Sanitary Corps

A SIMPLE PROCEDURE FOR THE RECOVERY OF AGAR

RECENTLY, there was published a notice[1] of the War Production Board's request that agar be conserved. It was suggested that work be done on developing methods whereby agar may be recovered from culture media and re-used.

In this connection, therefore, attention is called to the common practice in the manufacture of agar of dissolving it in hot water and then removing the water by freezing.

A satisfactory procedure for the recovery of agar, based on the freezing method, has been employed in this laboratory. Discarded culture media containing agar is kept in separate waste pans from liquid media. This used media is autoclaved as usual for the purpose of sterilizing, and while still in the fluid state is filtered through cheese-cloth to remove coagulated proteins, *i.e.,* blood and serum. It is then poured into trays from the freezing compartment of a refrigerator and allowed to cool. The trays are returned to the freezing compartment and left overnight.

The following morning the frozen material is rapidly melted in warm alcohol. The aqueous alcohol, containing the particles of agar, is filtered, with cheese-cloth again being used instead of paper in order to speed the filtration. The agar thus collected is washed repeatedly with distilled water.

Dehydration of the agar is secured by washing with alcohol. We have found it convenient, following the washing with water, to gather the corners of the cheese-cloth together to form a sack. This sack is immersed in 95 per cent. alcohol and compressed to remove the water. The shreds of agar thus obtained are spread out in a porcelain evaporating dish and dried by placing in a 37° C. incubator or in a desiccator.

Agar recovered in this manner is as satisfactory as the fresh commercial product. The quantity recovered depends largely on the care taken in handling the material throughout the above procedure.

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THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA

[1] *News Letter of the Society of American Bacteriologists,* Vol. 8: No. 2, p. 3, Office of the Secretary-Treasurer, April, 1942.

BOOKS RECEIVED

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Bibliography of Oklahoma Oil and Gas Pools. Compiled by ALAN G. SKELTON and MARTHA B. SKELTON. Bulletin No. 63 of Oklahoma Geological Survey. Pp. 230.

COOLEY, JOHN C. *A Primer of Formal Logic.* Pp. xi + 378. Macmillan. $3.00.

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Sex Hormones. Edited by F. C. KOCH and PHILIP E. SMITH. Volume IX of Biological Symposia. Pp. x + 146. Jaques Cattell Press. $2.50.

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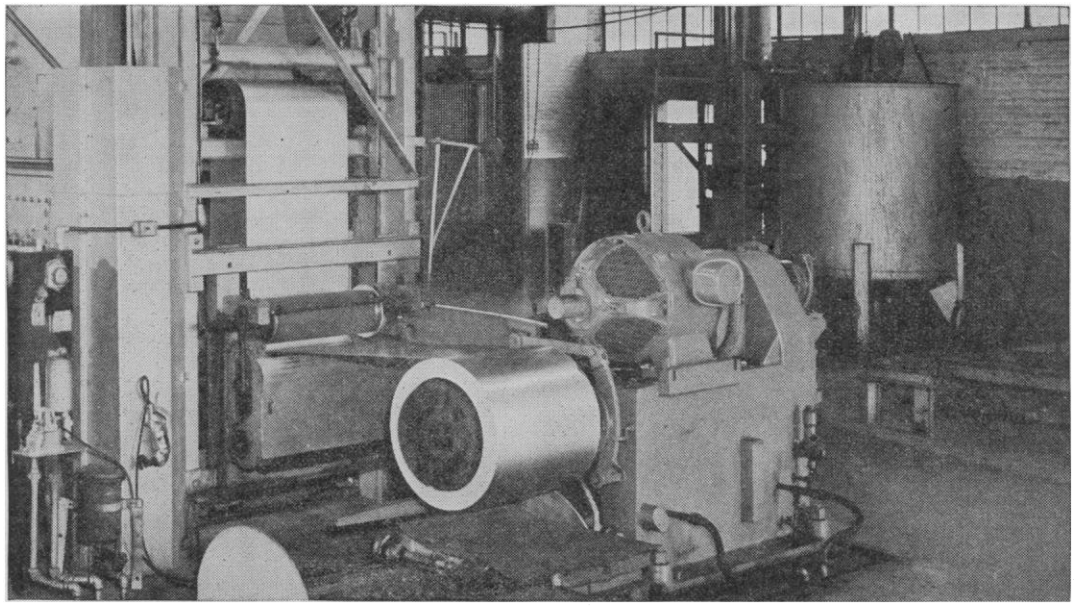

Photo courtesy of the Crown Cork & Seal Company

The best news about tin since we went to war

WHEN THE JAPS overran Malaya and the East Indies, they thought they had dealt a staggering blow to America.

For, overnight, tin became a most critical raw material, because America relies upon this bright metal for tin plate, bearing alloys, solder, collapsible tubes... *but mostly tin plate.*

However, Uncle Sam had an ace in the hole . . . *electrolytic tin plate.* In this process tin is deposited electrolytically on steel strip. And only *one third* the tin used in the old hot-dipped process is required.

Unfortunately, electrolytic tin plate is far from perfect as it comes from the plating baths. It is porous and does not provide a good protective coating.

Right here Westinghouse stepped into the picture.

Engineers in the Westinghouse Research Laboratories decided that the porous tin coating could be *fused* . . . through the magic of electronics . . . to give the tin plate the desired protective coating.

These scientists built a high-frequency coil, using radio broadcasting oscillator tubes for their power source. Through this coil they passed electrolytic tin plate. The inductive heating effect melted the tin coating . . . refining it and giving it the necessary corrosion-resistant properties.

The new Westinghouse tin flowing process is now in actual use, turning out gleaming ribbons of tin plate at better than 500 feet per minute. It will help save thousands of tons of tin every year.

Another example of *electronics at work* . . . through Westinghouse "know how"!

Westinghouse Electric & Manufacturing Company, Pittsburgh, Pennsylvania.

Westinghouse

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