



**ANOTHER ANGLE**—Image of a drop of water as seen through goniometer eyepiece. Cross hair measures contact angle of the edge of the drop as it stands on an oil-protected surface of steel.

MEDICINE

## Vitamin E for Purpura

► **SUCCESS** IN vitamin E treatment of purpura is reported by Drs. Floyd Skelton, Evan Shute, H. G. Skinner and R. A. Waud, of the University of Western Ontario.

Purpura is a relatively rare and sometimes fatal disorder in which purple patches appear on the skin because of hemorrhage and accumulation of blood under the skin. A tendency to bleed easily is another symptom, though the disease is not identical with hemophilia. The cause in most cases is unknown, though one form of purpura may come from certain drug intoxications. For some patients, removal of the spleen has brought about recovery.

Among the five patients helped by the vitamin E treatment, one had already had the spleen removed without being helped by this surgical measure. Besides these five, the doctors report great clinical improvement in one man in the last stages of purpura and aplastic anemia associated with advanced lymphosarcoma, a cancerous disease.

Three women who bruised easily and suffered from excessive uterine bleeding were also helped.

The effect of the vitamin E treatment appeared within one to two weeks, but the treatment must be continued for long

periods, if not indefinitely.

The report of this work, appearing in the American scientific publication *Science* (June 28), follows closely a report in the British publication, *Nature* (June 8), of Dr. Shute and associates of success with vitamin E in treatment of one form of heart disease.

This vitamin has been popularly known as an anti-sterility or fertility vitamin because in rats, at least, it is essential for reproduction.

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CHEMISTRY

## Steel-Protecting Oils Tested With Water Drop

► **THE ANGLE** made by the edge of a drop of water, on a surface protected against rusting by oil, is being used to determine the value of the coating as a rust preventive, scientists of the Shell Oil Company state.

The method was devised by them, and they claim it to be a quick and reliable way to determine the effectiveness of rust protection oils.

When a drop of water is put on an oil-coated metal surface, it may remain nearly spherical flattened only on the under side, or it may flatten out broadly.

Laboratory tests, the scientists say, show that it flattens out more on a coating of good rust-preventive oil than it does on oil coatings of poor protection.

The more the drop of water flattens the smaller is the angle made by its upper surface with the base on which it rests. An angle of five to ten degrees means that the coating will probably give protection four times as long as when the angle is from 50 to 55 degrees.

To measure the angle, a special microscope is used. There are other factors in rust-protection oils that must be taken into consideration. This method, however, is a rapid simple control test in the formulation of oil protective coatings.

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ORDNANCE

## Silent "Machine-Gun" Built in Laboratory

► A **SILENT** "machine-gun" built from electronic apparatus used in radios aided wartime research on the temperatures of gun barrels during firing.

The electronic device which simulated a machine-gun and fired over long ranges without noise was fitted with simple electrical meters to record the temperatures at different rates of firing.

Precise information to allow longer life and greater firing accuracy for actual machine-guns was obtained by using the device, Dean M. P. O'Brien of the College of Engineering, University of California, reported.

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MEDICINE

## Penicillin To Save Unborn Babies From Syphilis

► **BABIES** THAT get syphilis before they are born will be cured before they are born by means of penicillin, if expectations of Dr. John H. E. Woltz and Miss Marjorie M. Wiley, of the University of Pennsylvania School of Medicine, are fulfilled.

Penicillin given to the mother reaches the unborn baby with its syphilis-healing power as early as the tenth week after conception, these scientists report in the *Journal of the American Medical Association* (July 27).

Arsenical drugs previously used to treat syphilis in adults and in babies before birth does not, so far as is known, reach the unborn baby's body before the latter half of pregnancy. Even then not enough of the drug may reach the baby to cure syphilis.

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