

CHEMISTRY

Recognize Chemist's Aid

➤ "SUZIE Q," chemist's aid, has been officially recognized. In a reversal of the Patent Examiner's stand, the U. S. Patent Office Board of Appeals recently allowed claims in an application concerning a "Method of Determining the End Point of a Titration," developed by Dr. Fred W. Jensen, head of the chemistry department at Texas A. and M. College, College Station, Texas.

The device, popularly called the "Suzie Q," is a high-frequency analysis aid which gives a highly sensitive reading of molecular change when a known chemical is added to an unknown solution.

Using a magnetic field coil, the "Suzie Q" frees the scientist from the necessity of actually touching the solution to be analyzed, thereby greatly increasing simplicity, accuracy and range of usage.

A test-tube or continuous conductor for the test solution is thrust into or through the oscillator coil which sets up a molecular orientation and ionic motion within the solution. This orientation and the power it uses are calibrated on a scale.

Then a known chemical is added to the unknown, changing its chemical nature and altering the magnetic field. This change affects the magnetic field and alters the power requirement, which in turn is registered on the calibrated scale.

So sensitive is the mechanism that it can be adapted to show clearly the difference in impurity content of two batches of double-distilled water.

At the other end of the scale of uses, it could be adjusted to select undamaged fruit from that which has suffered frost damage. It is now being used for maintenance of purity standards of production chemicals and as a method for determining proper saturation in a mixing tank.

Dr. Jensen received help and encouragement in his development of the "Suzie Q" from Dr. A. L. Parrack of the college staff, the Texas Engineering Experiment Station and the Texas A. and M. Research Foundation. The Foundation also helped him in securing acceptance of claims in the patent office.

Science News Letter, March 21, 1953

MEDICINE

Advice During Pregnancy

➤ YOUNG WOMEN who have heart disease can safely have babies in most cases. But they, more even than other women, must consult a doctor early in pregnancy and follow his instructions carefully.

Women with heart disease who get into serious trouble during pregnancy are usually those who postpone going to doctor or clinic until the pregnancy is nearly over.

"Don't wait until you are in trouble before getting help," warns the American Heart Association in its booklet, Heart Disease and Pregnancy.

Many women with heart disease worry about whether they will have heart failure while giving birth to their babies. This is not likely to happen, the heart association says. By the ninth month of pregnancy the heart has usually adjusted itself to the demands the body makes on it and can carry safely through delivery of the baby.

Four dangers the pregnant woman with heart disease should guard against are: 1. Overfatigue. 2. Overweight. 3. Infection. 4. Tight clothing.

Most of the rules for pregnant women with heart disease are the common sense rules that apply to all pregnant women, but the woman with heart disease needs to follow them more carefully. And she needs to see her doctor oftener, so that he can detect the earliest sign of any trouble and take steps to correct it. He probably will want to see her every two weeks and in some cases every week instead of once a month during the pregnancy.

Women with heart trouble must also plan for more rest after the baby is born as well as before. They will need to go on watching their weight and diet and to take care of any illness even if it does not seem to be a serious one.

Heart disease is almost never inherited, so there is no need to worry about the baby having it just because mother does. But the child's doctor should know if mother has had rheumatic heart disease, so he can advise about protecting the child.

Science News Letter, March 21, 1953

ASTRONOMY

New Asteroid Found In Northeastern Sky

➤ A NEW stellar object with an unusual orbit, probably an asteroid, has been spotted in the northeastern sky.

Moving very rapidly, the object was first located in the constellation of Ursa Major, the larger bear, of which the familiar Big Dipper is a part. Its extremely fast motion brought it into Canes Venatici, or the hunting dogs, by March 12.

The object is of the ninth magnitude, too faint to be seen with the unaided eye. It was first observed at 3:34 a.m. EST on March 9 by Dr. Albert G. Wilson of the California Institute of Technology and Mt. Wilson and Palomar Observatories. He found it on photographic plates taken as part of the sky survey being sponsored by

Palomar Observatory and the National Geographic Society.

When discovered, the object's position was: right ascension, 11 hours, 14.7 minutes; declination, plus 37 degrees, 12 minutes. It was then about 30 degrees north of the ecliptic, which represents the sun's apparent annual path on the celestial sphere.

Its daily motion at the time it was found was: plus 17 minutes, 12 seconds in right ascension; plus 3 degrees, 16 minutes in declination.

Dr. Wilson has previously spotted other objects in the sky, including the first comet to be found last year, Comet 1952a.

Science News Letter, March 21, 1953

SCIENCE NEWS LETTER

VOL. 63 MARCH 21, 1953 No. 12

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington 6, D. C., NORih 7-2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

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Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C., under the act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283), authorized February 28, 1950. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to Periodical Literature, Abridged Guide, and the Engineering Index.

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 393 7th Ave., N.Y.C., Pennsylvania 6-5566, and 360 N. Michigan Ave., Chicago, State 2-4822.

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