

GENETICS

Seek P.T.C. Sweet-Tasters

➤ ALTHOUGH MOST of us agree on which foods we enjoy and which ones we dislike, there are a few people who like the foods others find distasteful or dislike those that are pleasing to most people.

There also are a few materials that taste differently to different people, and are completely tasteless to many. One of the most outstanding of these is a chemical, phenylthiocarbamide, which is familiarly called P.T.C.

A search is now under way for families that taste P.T.C. as sweet or as sour. To be useful for genetic research, an individual, both of his parents and one or more children—or at least two generations—must taste the P.T.C., and some of these must find it sweet or sour.

Industrialists and scientists, teachers and school children, and others among the 12,000 members of THINGS of science, issued by SCIENCE SERVICE, recently received in their November unit of THINGS of science samples of paper saturated with P.T.C. Those who taste it as sweet or sour are requested to try it on other members of their family and report to Dr. Albert F. Blakeslee at the Genetics Experiment Station, Smith College, Northampton, Mass. From these reports the geneticist hopes to discover whether the ability to taste P.T.C. as sweet or sour is inherited.

Until about 20 years ago it was not known that certain substances, although bitter to most people, are tasteless to some. It was Dr. Arthur L. Fox, who, working in the laboratories of Northwestern University, discovered "taste blindness." He was experimenting with P.T.C., which he considered completely tasteless.

During the experiments one of his associates complained bitterly of the taste upon inhaling some of the dust from this chemical. When others in the laboratory, to settle the ensuing argument, tasted the crystals, all found it as bitter as quinine, bitter enough to make them go around sticking out their tongues and making wry faces.

Dr. Albert F. Blakeslee, who at that time was associated with the Carnegie Institution of Washington, recognized the possibility that P.T.C. could be used in genetic research. He persuaded thousands of people to try the P.T.C. and report their reactions. In this way he found that the inability to detect the bitter taste in the crystals or weak solutions is inherited as a Mendelian recessive trait. One in three or four find it completely tasteless.

To date only a few hundred people in all have reported that P.T.C. tastes sweet or sour. It is hoped that through members of THINGS of science and their friends a much larger number will be found who taste it as sweet or sour, and that they will try the chemical on their parents and children, or grandparents.

Other specimens in the Taste Kit include the four primary tastes—sweet, sour, salt and bitter. A little magnesium sulfate, which tastes both salt and bitter, is included to demonstrate a compounded taste. Chewing gum, with its flavor due to smell as well as taste, dramatizes an aromatic taste.

One of these kits, containing seven specimens in all, can be obtained for 75 cents, or three for \$1.50. Just write SCIENCE SERVICE, 1719 N St., N.W., and ask for the Taste Kit.

Science News Letter, December 27, 1952

goods, according to trade circles. The polyoxyethylene compounds give "softness," so that if bread in the loaf is pinched, it feels like bread just out of the oven. This "softness" could be deceiving to the consumer, which is one reason why Food and Drug decided not to allow the softening compounds in bread.

Science News Letter, December 27, 1952

Halley's comet is due to brighten night skies again about 1987, but it may be thrown off schedule a couple of years by gravitational attraction of the planets the comet passes in its orbit.

SCIENCE NEWS LETTER

VOL. 62 DECEMBER 27, 1952 No. 26

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington 6, D. C., North 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.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

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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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PUBLIC HEALTH

Natural Emulsifiers Safe

➤ LATEST ROUND in the fight over our bread and what may or may not be put in it apparently goes to the side that declares the natural emulsifiers, mono- and diglycerides, are safe.

The Food and Drug Administration, of course, had already decided these chemicals were safe. After extensive hearings, FDA permitted them in shortening in bread in the bread standards which were to become official last August.

But that part of the bread standard was held up from enforcement by a court order because manufacturers of so-called softeners, polyoxyethylene compounds, objected. The polyoxyethylene compounds were not permitted in bread by the new standards.

Now Dr. G. F. Dasher of the Procter and Gamble Company, Cincinnati, announces first results of a new study of the naturally occurring emulsifiers, the mono- and diglyc-

erides. His study shows that as much or more of these chemicals would be formed in the digestion and cooking of fats as would be put into bread. His study, reported in *Science* (Dec. 12), is significant for two reasons: 1. It is apparently the first in which boundary tension relationships have been studied in systems resembling those appearing during the digestion of fats. 2. It is released just before an expected report from the National Research Council on mono- and diglycerides in bread and may be one of the studies surveyed by the Council.

The Council's report has not yet been released. Unofficial guesses are that it will okay the mono- and diglycerides. If so, that may help Food and Drug get its standard into effect.

The mono- and diglycerides give a quality called "tenderness" to bread and baked