holding-time upon the percentage of solid removed. The behavior of crude peanut oil is very similar to that of the refined oil in the same solvent except that a slightly lower chilling temperature is required and that the crystals tend to form a little more slowly and do not settle out as readily. The advantage of winterizing hexane-extracted peanut oils before refining is discussed.

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Letter to the Editor

Effect of X-ray Irradiation on Seasamum Seeds

JACOB and his group (1) are carrying out extensive studies on the effect of X-ray irradiation on seasamum seeds with the idea of getting an active mutant strain which will have earlier flowering time with greater yield of fruit. We have analyzed some of these X-ray irradiated seeds for their oil content as well as the lipase and esterase activities, and we wish to record the results in this note.

Seasamum Indicum control T12, T12.140 (irradiated with 140 m.a.H.), T16 control T16.36 (irradiated with 36 m.a.H.), T.16.50 (irradiated with 50 m.a.H.) were used for the experiments. The oil was extracted from these seeds, using the soxhlet ether extraction method, and analyzed. Crude powder possessing lipase and esterase activities was prepared by the usual method, and the lipase and esterase activities were determined, using fresh peanut oil as the substrate in the former case and ethyl butyrate as substrate in the latter case (2). The results are given in Table I.

TABLE I

Type	Free acid,%	Saponification value	Iodine value	Peroxide value	Oil obtained, %	Difference in cc. of N/10NaOH between the sample and blank	
						Lipase activity	Esterase activity
T.12.control	0.08	185.6	106.1	5.04	37.0	1.1	1.0
T.12.140.m.a.H	0.20	186.6	105.7	5.90	35.0	0.7	1.3
T.16.control	0.05	187.1	103.6	5.86	36.0	0.7	1.0
T.16.36.m.a.H	0.05	185.8	105.0	5.78	36.0	0.7	1.0
T.16.50.m.a.H	0.05	186.3	105.2	2.05	36.0	0.9	1.0

From Table I it appears that oil extracted from T.16.50.m.a.H. has low peroxide value. The field experiments showed that seeds T.16.50.m.a.H. have earlier flowering time and yield more fruit.

It is found that in the case of T.12.140.m.a.H., the lipase activity is less and the esterase activity is more, which indicates the possibility that by studying the irradiation process in greater detail a strain devoid of one of these enzymes may be secured and this would help us to separate these two groups of enzymes.

A detailed study of this problem may yield interesting results.

The authors wish to thank the government of West Bengal for having kindly supplied the control seeds; M. Chakravarthy, lecturer in oil technology, University of Calcutta, for analyzing the oil samples; and D. M. Bose, director, for the keen interest he has shown in the problem.

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ABSTRACTS . . . . . E. S. Lutton, Editor

• Oils and Fats

Ralph W. Planck, Abstractor
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Characterization of selectivity of the process of fat hydrogenation. B. N. Tyutyunnikov and B. Fraĭer (Kharkov Polytech. Inst.). *Masloboĭno Zhirovaya Prom.* 18(2), 14-18(1953). It is suggested that the index for the determination of selectivity of hydrogenation be the amount of H utilized under specified conditions for saturation of 1 double bond in linoleic, or generally highly unsaturated acid; this amount is expressed as a percentage of total consumption of H needed for saturation of the oil or fat specimen. At fully selective conditions all H (100%) is utilized for saturation of a particular acid. (*C. A.* 47, 7233)

A method of examining oils. A specific reaction of rapeseed oil. Jean Vizern and Leon Guillot. *Compt. rend.* 236, 813-4(1953). Methods are given for detecting additions of other oils to peanut oil. Copra oil can be detected by examining the traces of fatty acids on the surface of the distillate in the determination of volatile soluble and insoluble acids; in the absence of copra oil these acids crystallize at 22°, and in the presence of 2.5% or more copra oil crystallization does not occur at 22°. The K salts from various samples of peanut oil yield approx. the same quantity of precipitate in acetone containing 10% water