In a further attempt to effect dechlorination 40 g. of methyl dichlorostearate and 20 g. of zinc dust were sealed inside a glass tube (after evacuating). The sealed tube was placed inside a 1-in. pipe capped at both ends and heated at 250°C. After heating for approximately 10 min. the sealed tube shattered inside the pipe and was removed after cooling. The organic material was dissolved in benzene and separated from glass and zinc by filtration. The benzene solution was washed with dilute HCl and distilled water and dried. Benzene was removed under reduced pressure, leaving a yellow-brown oil, N_D^{25} 1.4612, iodine number 32.6. A repetition of the treatment produced further change to yield 24 g. of brown oil: N_D^{25} 1.469, iodine number 57.8, and 1.8% chlorine. This material had a neutral equivalent of 710.

Ethyl Tetrachlorostearate. Ethyl linoleate[4] chlorinated at —20°C. by the above procedure produced quantitative yields of ethyl tetrachlorostearate. A portion of the product was saponified and acidified to obtain the corresponding acid. The properties of the various chlorinated compounds prepared are listed in Table III.

TABLE III

Properties of Products of Chlorine Addition

Compound	Melting Range	N_D^{25}	% Chlorine	
			found	theory
	°*C.*			
Methyl dichlorostearate....	10 – 11	1.4648	19.14	19.30
Dichlorostearic acid.........	35 – 36	1.4722	19.99	20.07
Ethyl tetrachlorostearate.	76.0– 76.4	....	31.31	31.36
Tetrachlorostearic acid....	126.2–126.6	....	33.36	33.42

Summary

Methyl oleate, oleic acid, and ethyl linoleate were chlorinated with elemental chlorine at temperatures near —20°C. Approximately quantitative yields of the addition products were obtained, with little or no concurrent substitution. The products prepared in this manner had not previously been reported in the pure state. Two new compounds, ethyl tetrachlorostearate and tetrachlorostearic acid, were prepared.

Methyl dichlorostearate was found to distil with no apparent decomposition at 190–200°C. under pressures below 1 mm. Removal of the chlorine atoms required more drastic conditions that removal of bromine atoms from the same positions and was accompanied by complicating side reactions.

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[4] Prepared from crystalline tetrabromostearic acid and distilled before use.

Note on Oils from Seed of Two Wild Species of Arachis[1]

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A FEW PLANTS of *Arachis pusilla* Benth. and *A. villosa* Benth. var. *correntina* Burk. were grown at Experiment, Georgia, by B. B. Higgins from seed obtained from Argentina. Both have the prostrate type of vine, and both produced small pods and seed. *A. villosa* is perennial, *A. pusilla* is an annual.

As the samples were small, a more complete analysis was not possible. However the limited data given in Table I were obtained. The oils from the ground seed were extracted with Skellysolve F, which was later removed from the lipid fractions at low temperature *in vacuo.*

The analyses showed a marked similarity to those generally reported for the peanut, *Arachis hypogaea.* Oil from *A. villosa* resembled that from the Runner type of peanut while *A. pusilla* with the higher linolein and correspondingly lower olein values was somewhat similar to the oil from Spanish nuts.

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TABLE I

Analysis of *Arachis pusilla, A. villosa,* and *A. hypogaea*

Species	Moisture	Total nitrogen, oven dry	Total lipid, oven dry	Characteristics of the oil					
				Iodine No. (Wijs)	Thiocyanogen value	Calculated glycerides			$N_D^{25^\circ}$
						Olein	Linolein	Saturated	
	%	%	%			%	%	%	
A. Pusilla.........................	4.70	5.89	50.40	100.4	69.6	40.4	37.9	21.7	1.4686
A. villosa..........................	4.56	5.14	55.70	94.7	73.1	56.9	26.4	16.7	1.4677
A. hypogaea[a]									
Spanish.....................	......	......	52.93	98.9	71.1	46.1	34.2	19.7	....
Runner......................	......	......	53.02	92.2	74.2	62.9	22.0	15.1	....

[a] Fore, Sara P., Morris, Nelle J., Mack, C. H., Freeman, A. F., and Bickford, W. G., J. Am. Oil Chemists' Soc., *30*, 298–301 (1953).

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[1] Paper No. 284, Journal Series, Georgia Experiment Station.