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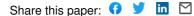
Constants of chicken and turkey fats — Source link ☑

Raymond Ross, Joseph Race

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ROSS AND RACE: "CONSTANTS OF CHICKEN AND TURKEY FATS" 213

"CONSTANTS OF CHICKEN AND TURKEY FATS."

BY RAYMOND ROSS, F.I.C., AND JOSEPH RACE, F.I.C.

(Read at the Meeting, April 5, 1911.)

In the following table a number of constants for chicken fat and turkey fat are given:

	Fat.					Fatty Acids.		
Sp. gr., 100° F		Chicken. 0.9065	 	Turkey. 0.9090		Chicken. 0.8866		Turkey. 0.8990
Koettstorfer		204.6		191.6		208.3		195.0
Molecular weight					•••	270.0		287.0
Iodine value (Wijs)		71.5		66.4		7 3.6		70.7
Reichert Meissl		1.8		3.8				
Polenske number	• • •	$2 \cdot 1$	•••	1.6	•••		•••	
Acetyl value			• • •			25.4	•••	18.4
(Ricinoleic acid, per cent.)					•••	13.7	•••	9·9
Hehner value		94·6		$95 \cdot 1$	•••		•••	
Melting-point, °C.		23 to 27	•••	31 to 32	• • •	27 to 30	•••	37 to 38
Zeiss at 50° C		47.5	•••	46·0		36.5		$32 \cdot 5$
Refractive Index, 50° C.:								
Nd 1.45760			1.44854					
Nc 1.45503			1.44592					
Nf 1.46359				1.45433				
Ng 1·46862				1.45952				

The fats were optically inactive.

An examination of the fat from fowls which had died of overfeeding invariably showed a higher Zeiss number and iodine value than the normal values given above. This result is generally brought about by the use of too much heating food.

The formulæ used for calculating ricinoleic acid and triricinolein were respectively as under :

Ricinoleic acid in fatty acids = $\frac{100 \text{ A}}{\text{A} (165 - \text{A}) \frac{340}{298}}$. Triricinolein in oil = $\frac{100 \text{ A}}{\text{A} (159 \cdot 1 - \text{A}) \frac{1058}{932}}$. A = Acetyl value.

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