The unsaponifable (4·1 g) was extracted with isopropylether, and chromatographed on silica gel. On elution with C_6H_6, 282 mg of triacontane were separated, m.m.p., IR, NMR. $CHCl_3$ eluted 235 mg of colorless plates, recrystallized from hexane–MeOH, and shown to be clerosterol m.p. 146–147°. $C_{29}H_{48}O$, M^+ 412, $[\alpha]_{589}$ − 40·0°; $[\alpha]_{578}$ − 40·7°; $[\alpha]_{546}$ − 48·4°; $[\alpha]_{436}$ − 86·7°; $[\alpha]_{365}$ − 152·3°. ν, 3400 (OH), 3010, 2900, 1620, 1459, 1360, 1040, 960, 885, (CH_2), 790 (C–CH_2/cm^{-1}. The most important signals in NMR, δ 5·30 (*m*, 1H), 4·75 (*m*, 2H), 1·75 (*s*, 3H). *Clerosterilacetate*, m.p. 142–143°, $C_{31}H_{50}O_2$, M^+ 454, soln chl. $[\alpha]_{589}$ − 41·4°; $[\alpha]_{578}$ − 42·7°; $[\alpha]_{546}$ − 48·9°; $[\alpha]_{436}$ − 83·4°; $[\alpha]_{365}$ − 134·4°. ν, 3010, 2900, 1720, 1620, 1450, 1360, 1250, 1040, 960, 885 cm^{-1}. The fragmentation of both mass spectra was as expected for clerosterol ($\Delta^{5,25}$-stigmastadien-3β-ol).[4–6]

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LIPID CLASSES AND TOTAL FATTY ACIDS PATTERN OF *CICER ARIETINUM*

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Key Word Index—*Cicer arietinum*; Leguminosae; linoleic acid; essential fatty acids.

Plant. Cicer arietinum L. *Uses.* Food. *Source of tested seeds.* (a) North of India. Trivial name: Bengal Gram, Chana, Chola. (b) South of Italy. Trivial name: Cece.

Total lipids were extracted and purified from 2 g of powdered dry seeds: the amounts of phospholipids, triglycerides, cholesterol, free fatty acids and total fatty acids (by GLC) were determined (Table 1).[1–4]

Although Bengal Gram and Cece have different weights and sizes, their lipid contents were nearly similar (Table 1). The total fatty acids showed different contents of linoleic acid (18:2) (higher in Bengal Gram) and of myristic acid (14:0) (lower in Bengal Gram),

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while differences in contents of the other fatty acids noted were small or non-significant. Mathur[5–8] has demonstrated a hypocholesterolaemic effect of Bengal Gram which may

TABLE 1. LIPID COMPOSITION OF DRY SEEDS OF *Cicer arietinum* FROM NORTH OF INDIA AND SOUTH OF ITALY

Lipid classes (mg/100 g of seeds)	Source*	
	Italy	India
Phospholipids	1190	967
Free cholesterol	12	13
Esterified cholesterol	78	111
Triglycerides	4880	4630
Free fatty acids	136	121
% Composition of total fatty acids		
14:0	10·22	6·85
15:0	1·19	0·39
16:0	10·94	11·14
16:1	0·42	0·44
17:0	0·23	0·17
17:1	0·60	0·43
18:0	3·60	3·01
18:1	27·13	22·81
18:2	38·23	46·45
18:3	4·29	5·18
18:4	0·62	0·77
20:0	1·04	0·76
22:0	0·52	0·26
23:0	0·96	1·33

* The seeds from Italy weighed 483 ± 21 mg and were 9·8 mm in length; those from India were 175 ± 6 mg and 7·7 mm.

be due to the high content of essential fatty acids in the seeds, particularly linoleic acid (18:2) and linolenic acid (18:3).

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