

## LETTER TO THE EDITOR

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300 A2=0: A1=1
310 K3=A1+(A2-A1)/2
320 AB=K2/(K3-K1):GK=EXP(-K3*AT):AC=K2/(K3-K2)
330 F1=S3*AA*AB*(EK-GK)-83*AA*AC*(FK-GK)+SL*AC*(FK-GK)+SO*GK
340 C3=C3+1:IF C3-50=0 THEN 350 ELSE 360
350 PRINT"K3 WILL NOT CONVERGE":GOTO 40
360 D1=F1-FO
370 IF ABS(D1)-.0001 <=0 THEN 410 ELSE 380
380 IF D1<0 THEN 390 ELSE 400
390 A1=K3:GOTO 310
400 A2=K3:GOTO 310
410 PRINT"K3=";K3:PRINT
420 GOTO 600
430 ' CALCULATE K2 IF NO LINOLENIC PRESENT
435 K1=0
440 K2=-LOG(FL/SL)/AT
450 PRINT "K2=";K2:PRINT
460 'CALCULATE K3 IF NO LINOLENIC
470 C2=0
480 A2=0 :A1=2.0
490 K3=A1+(A2-A1)/2
500 AA=K2/(K3-K2): FK=EXP(-K3*AT):EK=EXP(-K2*AT)
510 AO=SL*AA*(EK-FK)+SO*FK
520 OD=AO-FO
530 IF ABS(OD)-.0001<=0 THEN 590
540 C2=C2+1:IF C2-50=0 THEN 550 ELSE 560
550 PRINT"K3 WILL NOT CONVERGE":GOTO 40
560 IF OD<0 THEN 570 ELSE 580
570 A1=K3:GOTO 490
580 A2=K3:GOTO 490
590 PRINT "K3=";K3:PRINT
600 SV=2.616*S3+1.732*SL+.8601*SO
610 FV=2.616*F3+1.732*FL+.8601*FO
620 IV=SV-FV
630 'PRINT STATEMENTS
640 PRINT#-2,"SAMPLE #";I
650 PRINT#-2,"K1="K1;" K2=";K2;" K3=";K3
660 PRINT#-2,""
670 PRINT#-2," Sl=";K2/K3;" Sln=";K1/K2
680 PRINT#-2
690 PRINT#-2,"START IV=";SV;" FINAL IV =";FV
700 PRINT#-2," IV DROP PER MIN. IS";IV/AT
710 PRINT#-2:PRINT#-2:PRINT#-2
1000 DATA 1,44.74,33.45,0.57,5,17.95,0,16.5
1001 DATA 2,24.99,52.01,6.8,68.42,14.29,.53,43
1999 GOTO 40
2000 END

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SAMPLE # 1  
K1= 0 K2= .0377249498 K3= 3.19504738E-03  
Sl= 11.8073209 Sln= 0

START IV= 96.416274 FINAL IV = 80.54515  
IV DROP PER MIN. IS .961886301

SAMPLE # 2  
K1= .0593442066 K2= .034371376 K3= 2.53677368E-04  
Sl= 135.492481 Sln= 1.72655894

START IV= 129.364019 FINAL IV = 84.984802  
IV DROP PER MIN. IS 1.03207481

## ERRATUM

In the article "The Freeze Fracture Ultrastructure of Peanut Oil and Other Natural and Synthetic Triacylglycerol Droplets" appearing in the July issue of *JAOCS* (Rigler, Roth, Kritchevsky and Patton 60:1291 [1983]), a number of freeze fracture electron micrographs were included among the figures. To show the micrographs in greater detail, they are reproduced, larger, on the following pages.

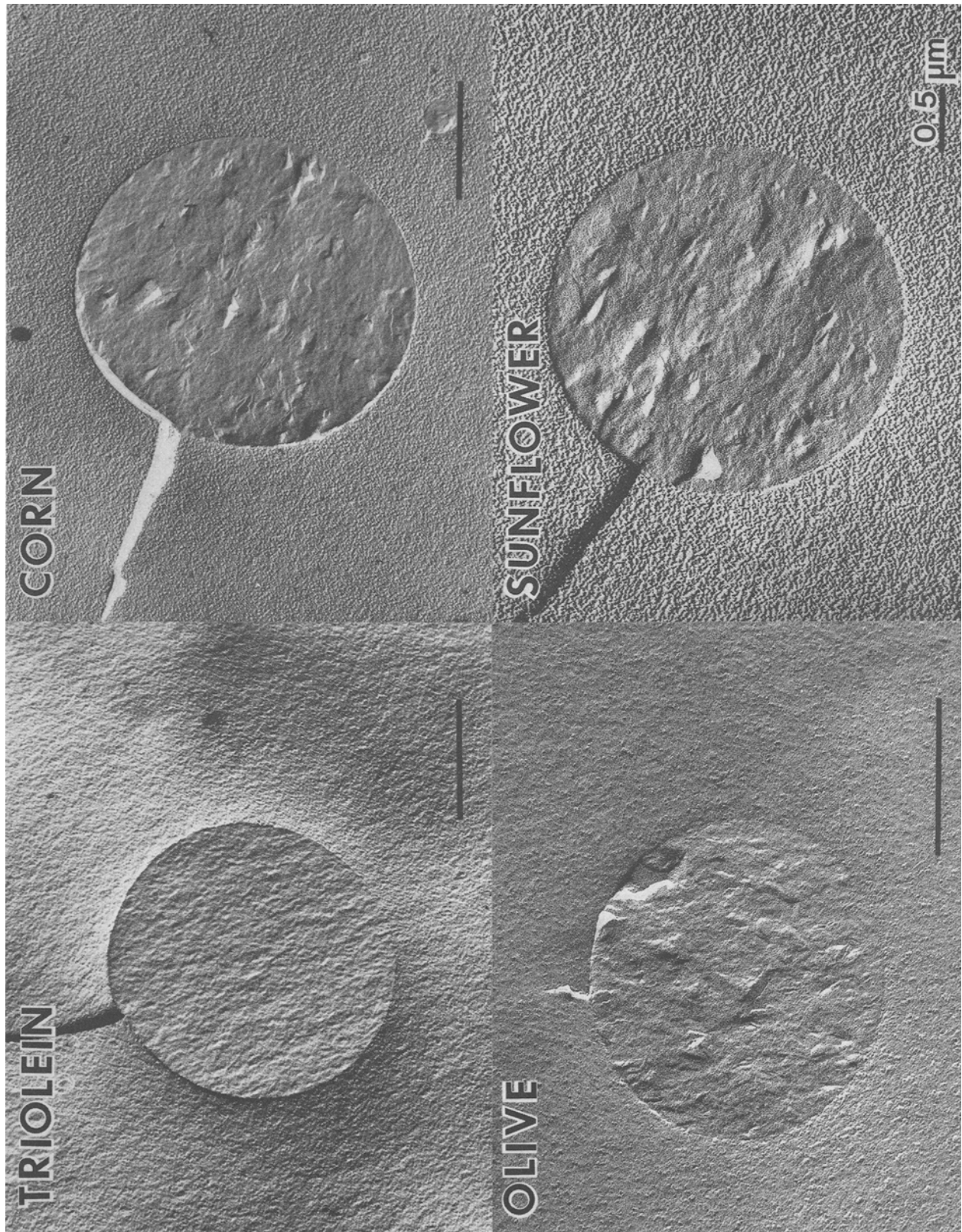


FIG. 2. Cross-sections of oil droplets frozen by immersion, composed primarily of esters of 18 carbon fatty acids arranged according to increasing degree of morphological complexity. Triolein, corn, olive, sunflower seed.

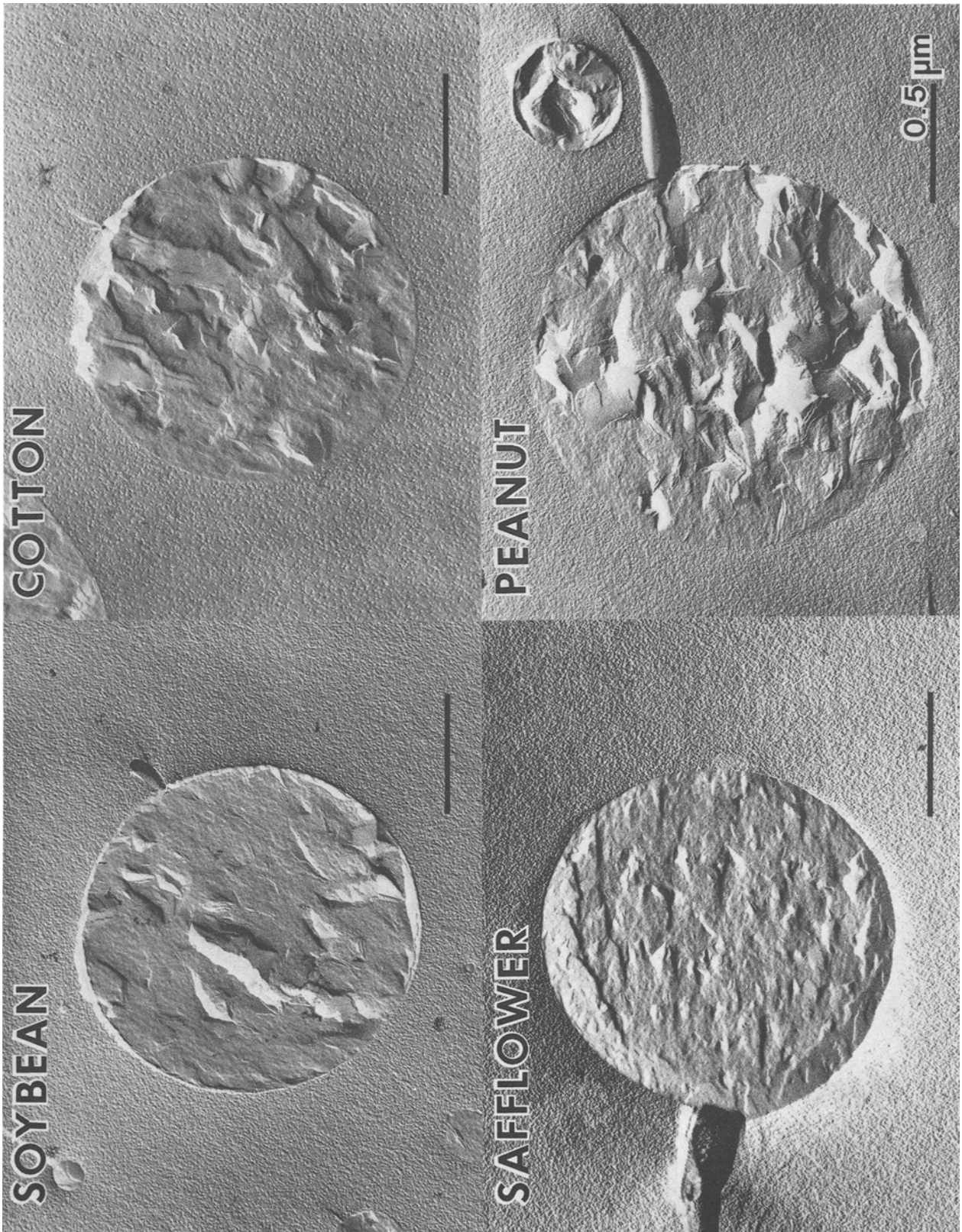


FIG. 3. Cross-sections of oil droplets frozen by immersion, composed primarily of esters of 18 carbon fatty acids arranged according to increasing degree of morphological complexity. Soybean, cottonseed, safflower seed and peanut oil.

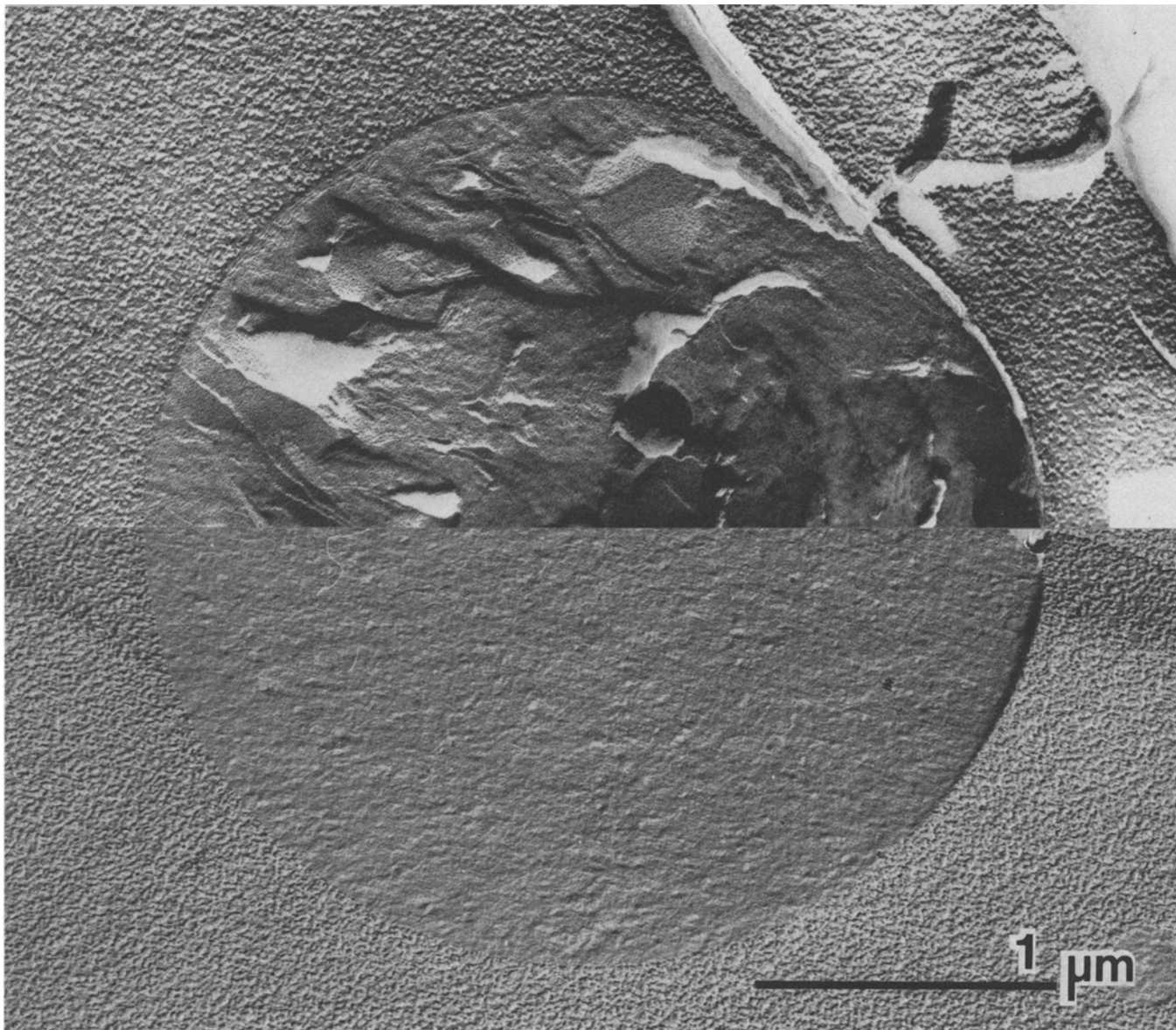


FIG. 4. The effects of immersion freezing and jet freezing on triglyceride morphology. The composite shows a droplet of highly structured peanut oil (upper half of micrograph) after immersion freezing. All structure is lost when droplets are frozen in a jet of liquid propane (lower half).

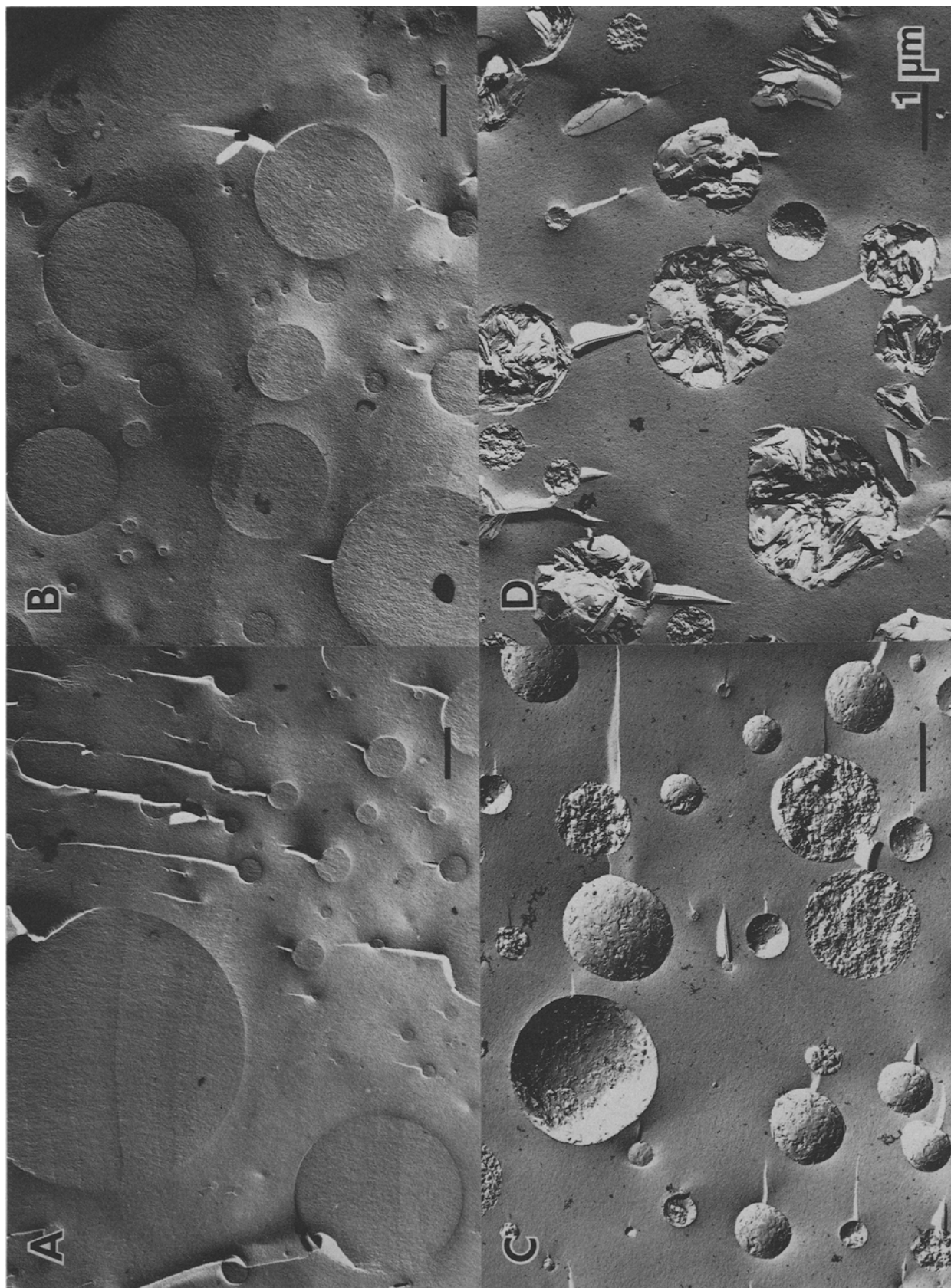


FIG. 5. The effect of a saturated short-chain triglyceride on the morphology of slow cooled-immersion frozen unsaturated trioleoylglycerol. (A) 2% Trilaurin (12:0). (B) 4% Trilaurin rapidly frozen by immersion in Freon. (C) 2% Trilaurin. (D) 4% Trilaurin cooled to  $-10^{\circ}\text{C}$  for 1 hr then immersed in melted Freon 22.

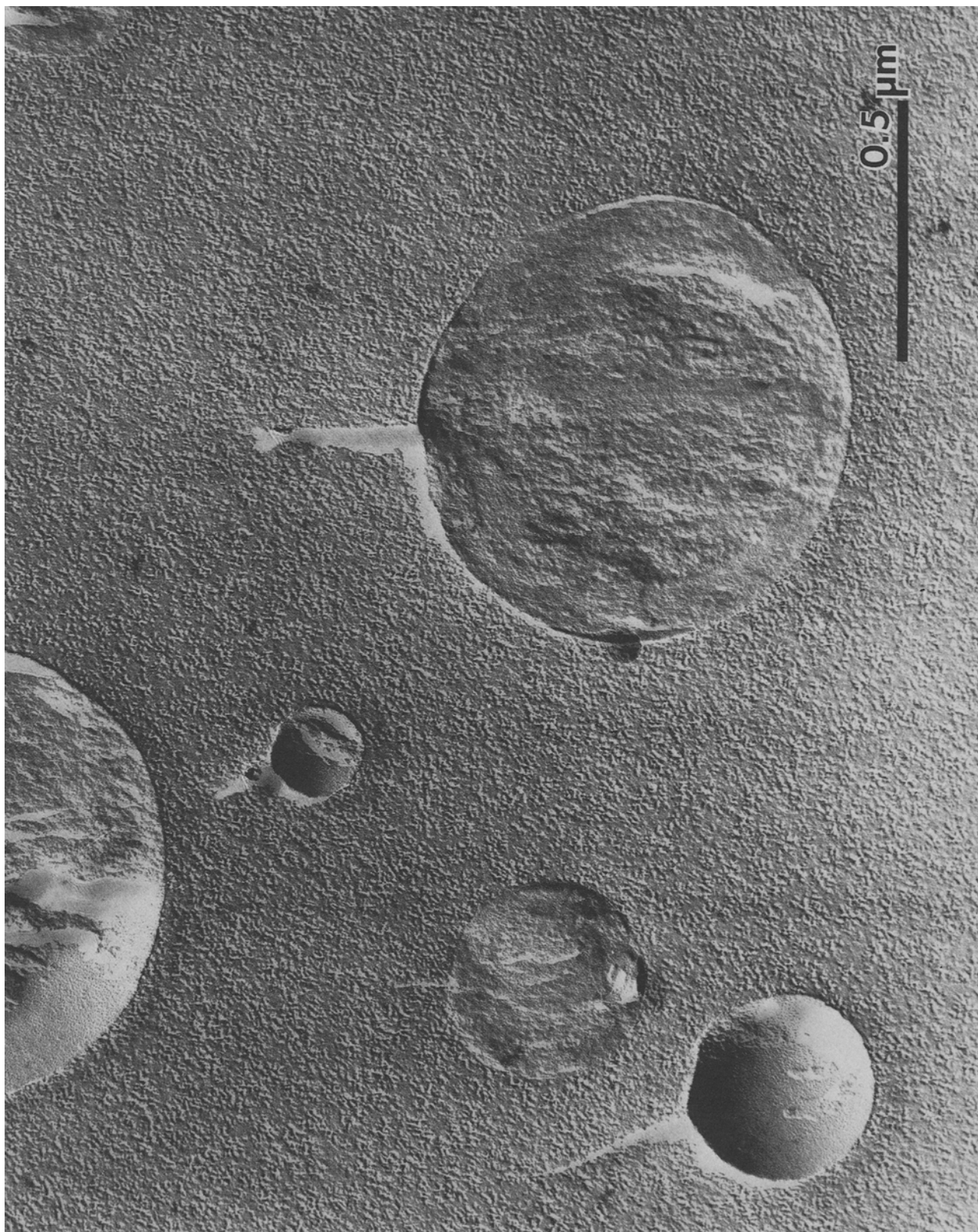


FIG. 6. Immersion frozen droplets of coconut oil composed primarily of saturated triglycerides (92.1%).

ERRATUM

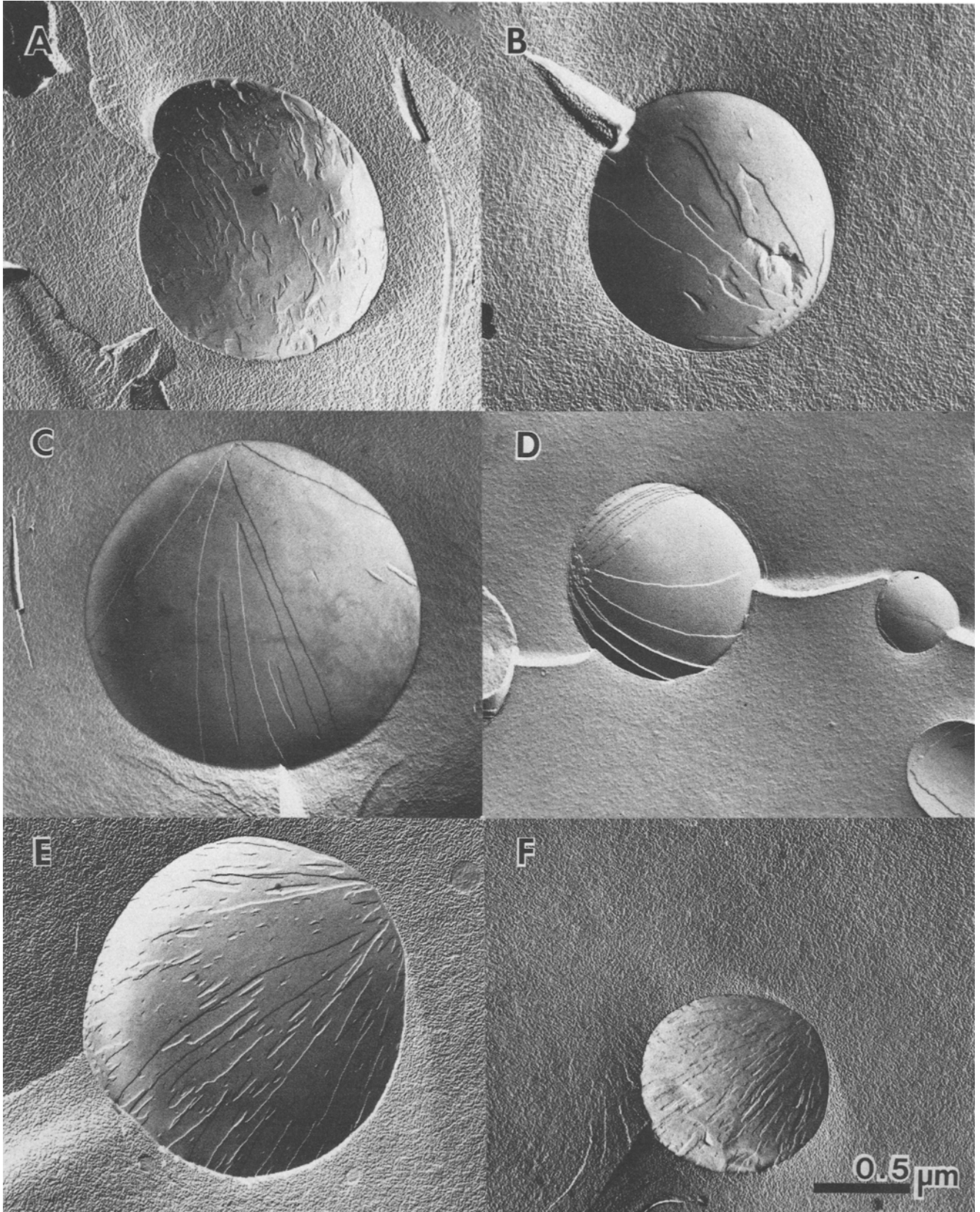


FIG. 7. Six types of immersion frozen peanut oil arranged in order of increasing degree of surface laminations. A-F African, randomized, cold-pressed, North American, PGFR and South American.

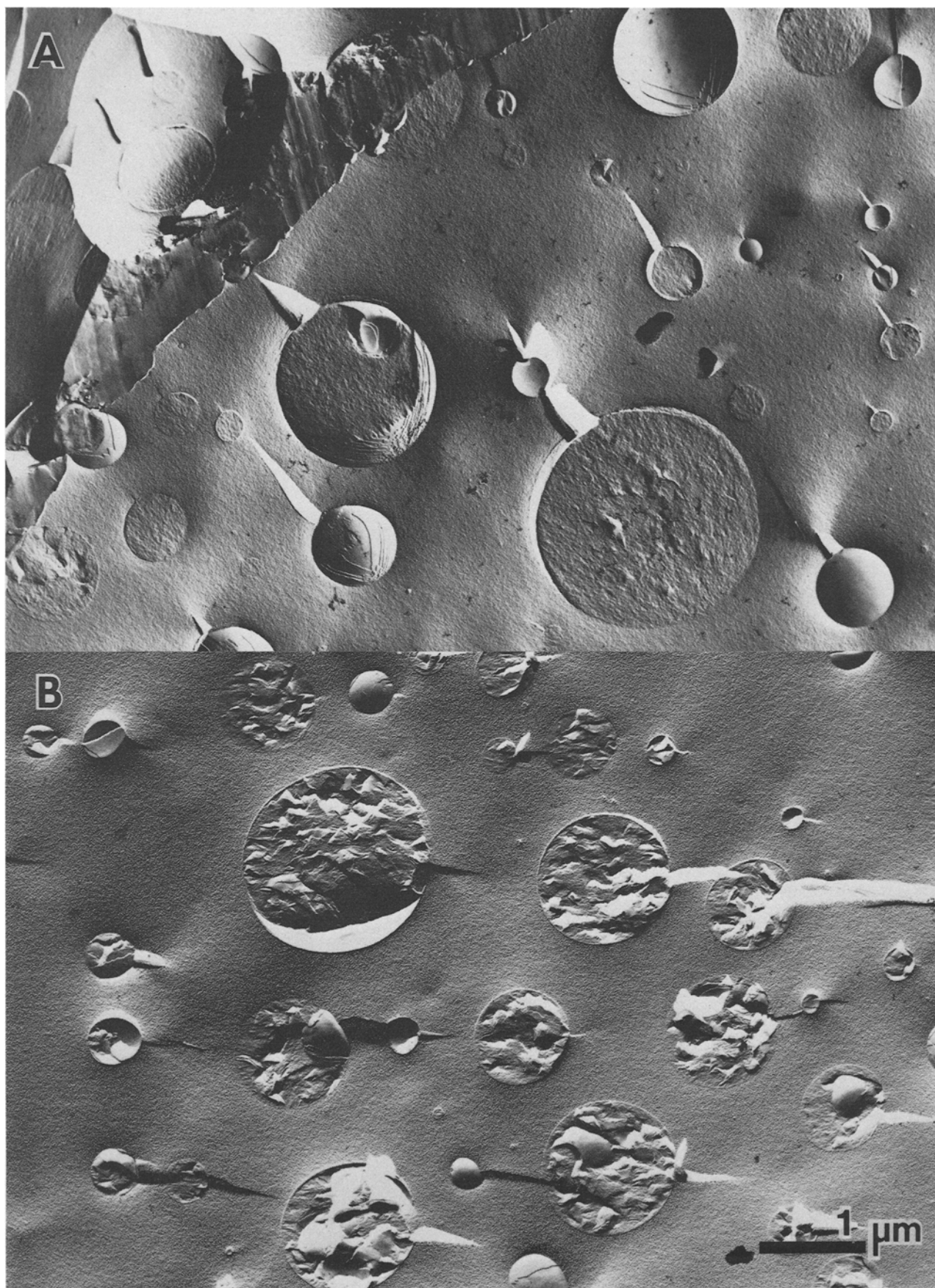


FIG. 8. Fractionally crystallized peanut oil droplets frozen by immersion. A shows droplets produced from the opaque phase exhibiting numerous surface laminations and smooth cores. B shows droplets produced from the clear phase with the opposite characteristics, smooth surfaces and rough cores.