

### Mojonnier Ether Extraction System for Fat Analysis

Measure fat content in dairy and food products

AOAC Method 989.05

#### 1 Extraction Flask

Use this flask to measure fat content in dairy and other food products. Extraction chamber has a diameter of 35 mm; top opening accepts a #0 stopper. See pages 1630–1632 for stoppers.

Catalog number	Capacity	Price
TW-34590-65	25 mL	\$83.50

#### 2 Centrifuges

Use these centrifuges to perform acid hydrolysis for your fat analysis. Small centrifuges 17360-01 and -40 hold up to eight Mojonnier extraction flasks; large centrifuge 17360-45 holds up to 12 Mojonnier extraction flasks.

Centrifuges are constructed of 319 aluminum and polished to a satin finish. All models feature sealed manual brakes and safety switch. Easily mount external motor switch up to 6 feet away. Switch is enclosed in an explosion-proof and waterproof housing.

#### Specifications

Speed: 600 rpm      Maximum RCF: 100 x g      Dimensions: 12"H x 23" dia (30.5 x 58.4 cm)

Catalog number	Number of flasks	Power	Price
TW-17360-01	8	110 VAC, 60 Hz	\$9850.00
TW-17360-40	8	220 VAC, 50 Hz	9890.00
TW-17360-45	12	220 VAC, 50 Hz	10650.00



#### REQUIRED SYSTEM Components

- 1 Extraction flask
- 2 Centrifuge
- 3 Explosion-proof hot plate, see page 788

### Gerber Method Fat Analysis System

Get results in 15 minutes—saving you time and money

Use these butyrometers to measure percent fat in dairy products. Butyrometers are precision calibrated and feature permanent graduations. Made of resistant borosilicate glass. Model 17425-10 requires stopper and stopper pusher. Model 17425-13 requires glass cup and stopper. Stoppers feature special acid-resistant rubber. Optional pipette is calibrated to deliver 11 mL of milk; complies with APHA Standard Methods for Analysis of Dairy Products and ASTM specification E1043, Type VI requirements. Pipette includes a rubber washer.

Catalog number	Application	Size	Subdivision	Sample	Price
TW-17425-10	Milk test	6%	0.1%	11 mL	\$33.00
TW-17425-13	Cheese test (Van-Gulik method)	40%	0.5%	3 g	44.50

TW-34590-63 Optional pipette, 11-mL capacity. Case of 12	\$320.00
TW-17425-15 Stopper for model 17425-10. Order stopper pusher 17425-16. Box of 100	\$934.00
TW-17425-16 Stopper pusher for stopper 17425-15. Box of 5	\$33.00
TW-17425-41 Glass cup for model 17425-13	\$30.00
TW-17425-14 Small stopper for model 17425-13. Box of 20	\$32.50
TW-17425-17 Large stopper for model 17425-13. Box of 250	\$749.00



### Condensers

**Reflux Condensers** are complete with an internal coil-type cold finger. Features include a ⌘ outer joint at the top, ⌘ inner drip joint at the bottom and two hose connectors at the top for water inlet and outlet.

**West Full-Length Condensers** feature a ⌘ outer joint at the top and a ⌘ inner drip joint at the bottom. For distillation. High cooling efficiency is achieved with the increased flow rate of the cooling medium due to the design of the narrow annular space.

Catalog number	⌘ joint	Cold finger coil length (mm)	Jacket length (mm)	Approx condensing area (cm <sup>2</sup> )	Hose connection	Approx overall H (mm)	Qty/pk	Price/pk
<b>Reflux condensers, coil type</b>								
TW-34705-86	14/20	100	—	72	#1	200	1	\$194.00
TW-34705-90	24/40	125	—	115	#2	290	1	245.00
TW-34705-92	24/40	225	—	229	#2	390	1	272.00
<b>West condensers, full length</b>								
TW-34705-98	24/40	—	100	34	#2	242	1	118.00
TW-34706-00	24/40	—	200	68	#2	342	1	124.00
TW-34706-01	24/40	—	300	102	#2	442	1	129.00



## Babcock System for Fat Analysis

### 1 Babcock and Paley Bottles

AOAC Method 989.04

Easily measure the percentage of butter fat in your sample with these specialized bottles. The body of each bottle is a reaction chamber, while the graduated neck is a measuring device. Use the Babcock bottles for measuring liquids and small samples. The Paley bottles feature a large opening on the side of the body to accommodate larger or viscous samples. All bottles measure 6½" H (16.5 cm).

### REQUIRED SYSTEM Components

- 1 Babcock or Paley bottle
- 2 Pipette
- 3 Centrifuge
- 4 Orbital shaker

Catalog number	Description	Size	Subdivision	Tolerance	Sample	Qty	Price
<b>Babcock bottles</b>							
TW-34590-00	Skim milk test	0.5%	0.01%	±0.025%	18 grams	12	\$599.00
TW-34590-01						1	51.50
TW-34590-05	Milk test	8%	0.1%	±0.05%	18 grams	12	335.00
TW-34590-06						1	29.00
TW-34590-10	Ice cream test	10%	0.1%	±0.1%	18 grams	12	287.00
TW-34590-11						1	26.50
TW-34590-15	Ice cream/half & half test	20%	0.2%	±0.2%	9 grams	12	264.00
TW-34590-16						1	22.50
TW-34590-25	Cream and cheese test	50%	0.5%	±0.5%	9 grams	12	245.00
TW-34590-26						1	20.75
TW-34590-30	Cream test	50%	0.5%	±0.5%	18 grams	12	293.00
TW-34590-31						1	26.50
<b>Paley bottles</b>							
TW-34590-35	Cheese and sour cream	20%	0.2%	±0.20%	9 grams	3	237.00
TW-34590-36						1	81.50
TW-34590-40	Cheese	50%	0.5%	±0.5%	9 grams	3	237.00
TW-34590-41						1	81.50



### 2 Pipettes

Model 34590-50 is designed to comply with the Pennsylvania modified Babcock as referenced in APHA 15.8. Models 34590-55, -56, -60, and -61 include a special rubber washer that allows air displaced by incoming milk to escape freely. Models 34590-55 and -56 meet ASTM Specification E 1043, Type II A requirements; models 34590-60 and -61 meet ASTM Specification E 1043, Type II B requirements. All pipettes feature permanent brown-stain scales.

Catalog number	Description	Capacity	Tolerance	Qty	Price
TW-34590-50	Skim milk test, to contain	9 mL	±0.05 mL	1	\$ 23.25
TW-34590-55	Milk test, to contain	17.6 mL	±0.05 mL	12	245.00
TW-34590-56				1	22.50
TW-34590-60	Milk test, to deliver	17.6 mL	±0.05 mL	12	265.00
TW-34590-61				1	23.25

**Color-Coded Pipette Pumps** feature knurled thumb wheel for precise level measurement. Dispense by depressing plunger or rotating wheel. High-density polyethylene construction.

- TW-06221-03 Pipette pump; green, 10.0-mL capacity. . . . . \$32.00  
 TW-06221-04 Pipette pump; red, 25.0-mL capacity. . . . . \$43.50

### 3 Centrifuges

These centrifuges are specifically designed for Babcock testing. All models feature a heater, thermostat†, thermometer, speed indicator, and brakes in a durable cast aluminum housing. The control box on top of the centrifuge provides easy access to the pilot light, motor and heater switches.

†Thermostat is factory set for 140°F (60°C).



17360-00

### Specifications

- Speed:** 836 rpm  
**Maximum RCF:** 166 x g  
**Temperature range:** 88 to 200°F (31 to 93°C)  
**Bottle size:** 6½"H x 1⅞" dia (16.5 x 3.7 cm)  
**Overall dimensions:** 15½"H x 20" dia (39.4 x 50.8 cm)

Bottle capacity	110 VAC, 60 Hz models		220 VAC, 50 Hz models	
	Catalog number	Price	Catalog number	Price
8	TW-17360-00	\$5490.00	TW-17360-05	\$5550.00
12	TW-17360-10	5600.00	TW-17360-15	5660.00
24	TW-17360-20	5990.00	TW-17360-25	6030.00

### 4 Variable-Speed Orbital Shaker

Obtain consistently accurate results every time with this orbital shaker. A unique orbital action and a low center of gravity provide minimum vibration to ensure complete integration of sample in 30 to 45 seconds.



Orbital motion provides a smooth continuous motion for uniform mixing

### Specifications

- Speed range:** 40 to 400 rpm  
**Bottle size:** 6" to 9"H (15.2 to 22.9 cm)  
**Shaker dimensions:** 20"L x 11½"W x 5¼"H (50.8 x 29.2 x 13.3 cm)

Catalog number	Bottle capacity	Power (VAC, Hz)	Price
TW-51300-10	24	110, 60	\$3350.00
TW-51300-15		220, 50	3400.00



51300-10