

# Report of the Oil Characteristics Committee

## 1941-42

Recommended "standards" for the following have been passed upon by this committee: Whale, Neatsfoot, Teaseed, Oiticica Oils; Cocoa Butter, North American Lard and Beef Tallow.

As in the past, the values given are for normal pure oils or fats and do not include extremes, which sometimes occur and which are exceptional, due to the variables of climate, locality, source, method of manufacture, and preparation for the market. A brief note or two has been added below these proposed specifications as matters of information regarding special tests or characteristics and trade grades.

Members of the Society and those engaged in the trade are urged to consider this list, note any exceptions not within the scope given and call the chairman's attention to these and any new matter.

### A.O.C.S. Recommended Standard for Whale Oil (From Blubber)

Spec. Gr. @ 25°/25°C. ....	0.910 to 0.920
nD @ 25°C. ....	1.470 to 1.477
Iodine Value (Wijs).....	110 to 135
Sap. Value .....	185 to 202
Unsap. Matter (FAC).....	Max. 2.0%

From Karl Brandt's "Whale Oil: An Economic Analysis":

#### 1. Trade Grades:

	Color	F.F.A. (oleic)
1. ....	Pale straw or yellow	Max. 1%
2. ....	Amber yellow	1 to 6
3. ....	Pale brown	6 to 15
4. ....	Dark	15 to 60

#### 2. Tentative Draft of International Whale Oil Standards for Grades of Oil—1939:

Grades	M.&I.	Unsap.	F.F.A.
1.....	0.5	1.50	1.0
2.....	0.5	1.75	3.5
3.....	1.5	2.00	15.0

### A.O.C.S. Recommended Standard for Neatsfoot Oil

Shall be oil made from the feet of cattle and not from flesh or hide.

Spec. Gr. @ 25°/25°C. ....	0.907 to 0.912
nD @ 25°C. ....	1.464 to 1.465
Iodine Value (Wijs).....	66 to 76
Sap. Value .....	190 to 199
Unsap. Matter (FAC).....	Max. 1%
Titre .....	20 to 30°C.
Pour (ASTM) °F. ....	20 to 35

### A.O.C.S. Recommended Standard for Teaseed Oil

From several species of the *Camellia*. The *Sasanqua* is cultivated in China for the sake of its seed and is the chief source of commercial teaseed oil. The ordinary tea plant (*T. Sinensis*) however is grown for its leaves and is therefore seldom found in teaseed oil imported here.

Spec. Gr. @ 25°/25°C. ....	0.909 to 0.920
nD @ 25°C. ....	1.466 to 1.470
Iodine Value (Wijs)*.....	80 to 90
Sap. Value .....	188 to 196
Unsap. Matter (FAC).....	Max. 1.5%
Titre .....	13 to 18°C.

\* *T. Sinensis* oil runs higher—usually 90-95, and the oil from the Assam (Java) teaseed about 92-93.

Teaseed oil very closely resembles olive oil, except for odor and taste, which in the crude oil are quite characteristic. The Fitelson test serves to identify and determine its presence and amount in adulterated olive oil.

### A.O.C.S. Recommended Standard for Oiticica Oil

Spec. Gr. @ 25°/25°C. ....	0.970 to 0.978
nD @ 25°C. ....	1.500 to 1.512
Iodine Value (Wijs).....	140 to 180
Sap. Value .....	186 to 193
Unsap. Matter (FAC).....	Max. 1.0%
Titre .....	42 to 47°C.
Browne Heat Test .....	Max. 17 minutes

Characteristics: Closely resembles tung oil in general properties, but higher in titre and gravity and lower in index of refraction.

### A.O.C.S. Recommended Standard for Cocoa Butter

Spec. Gr. @ 99°/15°C. ....	0.856 to 0.864
nD @ 40°C. ....	1.453 to 1.458
Iodine Value (Wijs).....	35 to 40
Sap. Value .....	190 to 200
Unsap. Matter (FAC).....	Max. 1.0%
Melting Point (open Capillary).....	28 to 36°C.
Titre .....	45 to 50°C.

### A.O.C.S. Recommended Standard for North American Lard

Spec. Gr. @ 99°/15.5°C. ....	0.858 to 0.864
nD @ 40°C. (Zeiss).....	45 to 52
Iodine Value (Wijs).....	46 to 70
Sap. Value .....	195 to 202
Unsap. Matter (FAC).....	Max. 1.0%
Titre .....	36 to 42°C.

Grades: Edible—Neutral (Nos. 1 and 2), Leaf, Choice Kettle, Prime Steam.

Tests: F.F.A. max. 1%, Peroxide No. (milli-equivalents) 5 max.

Tristearin test for purity:

1. Bomer No. (ether) not less than 71
2. (AOCS) (acetone) not less than 73

### A.O.C.S. Recommended Standard for Beef Tallow

Spec. Gr. @ 99°/15/5°C. ....	0.860 to 0.870
nD @ 40°C. (Zeiss).....	46 to 49
Iodine Value (Wijs).....	35 to 48
Sap. Value .....	193 to 202
Unsap. Matter (FAC).....	Max. 0.8%
Titre .....	40 to 46°C.

Grades: Edible, Fancy, Choice, Packers Prime, Extra, N. Y. City Extra and N. Y. Prod. Exchange Contract Grades, Special No. 1, No. 2, No. 3 Western Grades, City, Country.

Argentine: Frigorifico No. 1.

Based on color, acid and titre (and M.I.U.).

W. D. HUTCHINS  
GEO. S. JAMIESON  
WM. G. McLEOD  
V. C. MEHLENBACHER  
R. C. STILLMAN  
L. M. TOLMAN  
J. J. VOLLERTSEN  
M. F. LAURO, *Chairman.*