

# Report of the A.O.C.S. Committee for Analysis of Commercial Fats and Oils 1942-1943

The Committee on analysis of Commercial Fats and Oils recommends that the following procedure be adopted for measuring the color of fats and oils with the F.A.C. standards:

## Apparatus

- Color tubes of clear glass with the following dimensions:
  - Inside diameter—10.5 mm.  $\pm$  0.25 mm.
  - Outside diameter—12.25 mm.  $\pm$  0.25 mm.
  - Length—10 cm.
- Comparator block—Constructed of wood, painted dull black; dimensions are shown on the attached sketch, see Fig. 1.
- Light source—North sky background, avoiding reflections from buildings or a daylight type fluorescent bulb.
- Filter paper—Eaton and Dykeman No. 617, or Reeve-Angel No. 230.
- F.A.C. standard color set—This set consists of 26 color standards numbering from 1 to 45 in odd numbers. These are divided into five groups as follows:

Light-Colored Fats	Predominantly Yellow Fats	Dark Fats (Red Cast)	Very Dark Fats (Predominantly Green)	Very Dark Fats (Predominantly Red)
1	11	13	21	31
3	11A	15	23	33
5	11B	17	25	35
7	11C	19	27	37
9			29	39
				41
				43
				45

There are four additional supplementary colors intended to bridge the gaps between two groups of the series. These are not standards but are available as an aid in matching samples which fall within this range. These are:

19 RA	} Between 19 and 31
19 RB	
19 GA	} Between 19 and 21
19 GB	

## Procedure

- Filter the liquid sample through the designated filter paper, never using more than two papers.
- Pour the melted and filtered sample into one of the color tubes. Place this tube and two of the standards in the comparator block with the sample in the center.
- Hold the block containing the standards and sample up to the light in a vertical position and in such a way that the standards and sample are viewed simultaneously.
- The sample should not be heated any more than is necessary to melt and filter. The temperature

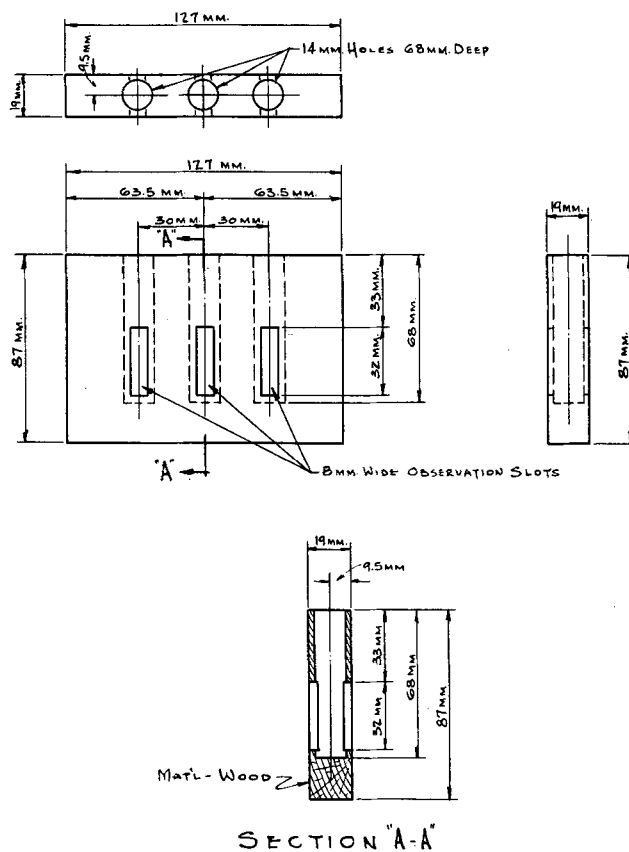


FIG. 1

“F.A.C. Comparator Block”

should not be more than 10°C. above the melting point when the comparison is made.

- The sample should be reported as not darker than the standard which it matches nor darker than the darker of the two standards between which it falls.

## Caution

While every care has been taken to produce permanent color standards, it is necessary to caution the user to keep them in the case away from the light and stored in a dark, cool place when not in use; otherwise some bleaching action or modification of the color standards may occur.

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