The ¾ inch glass tube be used rather than the 4 oz. sample bottle.

The 75 watt lamp be used instead of the 150 watt one.

I wish to take this occasion to thank all the members of the Committee for their co-operation and the promptness with which they did what was asked of them.

The Color Committee of the A. O. C. S.

J. D. Evans, Chairman
G. Worthen Agee
H. E. Brownfield
J. C. Burt
Garry G. Grant
J. Pelofsky.

Report of Cake Color Committee

IN November, 1926, this committee proposed two possible procedures for making the color comparison of cake or meal samples with the official standards prescribed in Interstate Rule 102. Method I of the 1926 report was based upon the use of a rotating glass cup and Method II of the same report was substantially the same as the detailed method recommended herein and referred to in the tables as the "unaided eye" method.

These two methods and a third method, based upon use of a weak lens out of focus so as to blur individual particles of meal, have been tried on a number of samples by different observers and the gradings compared. Analysis of the results discloses no substantial advantage of method I (rotating cup) over the simpler Method II and no advantage at all in favor of the method using a weak lens out of focus, in spite of the fact that the individual observer may feel more confident of his judgments when using the rotating cup or a lens. Therefore the committee recommends official adoption of the simpler method with the rotating cup method as optional. Specifically, the following rule is proposed for making the color comparison:

"a. Meal. The meal to be graded should be placed in the center of a gray sheet or board at least eight inches square; it should be flattened out to make a level circle about three or four inches across, and a clean, one-inch square of the color standard laid on the center of the meal. The meal and standard, lying in a horizontal plane, should then be observed, in good daylight, from a position directly above them and at least 36 inches distant. For making close decisions, it is best to lay the board on the floor and observe it from a standing position directly above. To be graded 'prime' the meal must be as light or a lighter shade than the standard. If darker, it must be graded 'off' in color.

"Optionally, use may be made of a horizontal rotating cylinder of clear glass, containing meal at the bottom and a strip of color standard above the meal, both lying in close contact with the inner glass surface. The width of color standard, also of the band of meal exposed to view, should be not less than about one inch. The inside diameter of the cup should be about two inches. All gradings should be made in good daylight with a speed of rotation sufficient to blur the individual particles of meal.

"b. Cake. A representative portion of the cake to be graded should be ground so that 85 per cent will pass a 20-mesh screen. Portions of sample used for screen test should not be used for color comparison. The ground sample should be graded as for meal.

"Note: Any samples of meal containing coarse particles should be ground to the standard for cake and this fact should be stated in the report."

Two sets of observations have been made, those in table 1 by widely scattered observers and those in table 2 by observers independently recording gradings at the same time in the same laboratory. All samples recorded in table 1 were selected by the chairman either as obviously difficult or as disputed cases. Likewise six of the samples in table 2 were selected as difficult meals to grade. It seemed useless to study the grading of any large proportion of samples obviously prime or off.

TABLE 1.

Sample No.	I. Rotating Cup Observer				II. Unaided Eye Observer				III. Lens Observer			
	1	2	3	4	1	2	3	4	1	2	3	4
1	off	..	..	off	off	off	off	off	off	pr	off	off
2	off	..	..	off	off	off	off	off	off	off	off	off
3	off	..	..	off	off	pr	pr	pr	off	pr	pr	pr
4	pr	..	..	off	pr	pr	pr	pr	pr	pr	pr	pr
5	off	..	..	off	off	off	off	off	off	pr	pr	pr
6	off	..	..	off	off	pr	pr	off	off	pr	pr	off
7	off	..	..	off	off	off	pr	pr	off	pr	pr	pr
17	pr	..	..	pr	pr	pr	pr	pr	pr	pr	pr	pr
18	pr	..	..	pr	off	pr	pr	pr	off	pr	pr	pr
20	off	..	..	off	off	off	off	off	off	off	off	off

TABLE 2

Sample No.	I. Rotating Cup Observer			II. Unaided Eye Observer			III. Lens Observer		
	1	2	3	1	2	3	1	2	3
1	off	off	off	off	off	off	off	off	off
2	off	off	off	off	off	off	off	off	off
3	off	off	pr	off	pr	pr	off	off	pr
4	off	off	pr	off	off	pr	off	off	pr
5	pr	pr	pr	pr	pr	pr	pr	pr	pr
6	off	off	pr	off	off	pr	off	off	pr
7	pr	pr	pr	pr	off	pr	pr	off	pr
8	pr	pr	pr	pr	pr	pr	pr	pr	pr
9	pr	pr	pr	pr	pr	pr	pr	pr	pr
10	pr	pr	pr	pr	pr	pr	pr	pr	pr
11	pr	pr	pr	off	off	pr	pr	off	pr
12	off	off	off	off	off	off	off	off	off
13	off	off	off	off	off	off	off	off	off
14	off	pr	pr	off	pr	pr	off	pr	off
15	off	off	off	off	off	off	off	off	off
16	pr	off	pr	off	off	pr	off	off	pr
17	off	off	off	off	off	off	off	off	off
18	pr	pr	pr	pr	pr	pr	pr	off	pr
19	pr	pr	pr	pr	pr	pr	pr	pr	pr
20	off	off	off	off	off	off	off	off	off
21	off	off	pr	off	off	pr	off	off	pr

N. C. HAMMER
T. C. LAW
J. R. MAYS, JR.
A. S. RICHARDSON, Chairman.