that wood rosin contains more unsaponifiable than gum rosin. This is not the case today when refined pale rosins are being considered. As previously stated, the wood rosin producer has been constantly alert to reduce the volatile oil content of his pale rosins and has been successful in reaching his goal. Our pale rosins contain only about 0.15% volatile oils, which is much less than the volatile oil content found in gum rosin. By reducing the volatile oil content of Pale Wood Rosin to a minimum in present day production, Pale Wood Rosins are produced on a par with Pale Gum Rosin in respect to unsaponifiable matter.

The next analysis in line is that of petroleum ether insoluble. Oxidized resin acids are insoluble in petroleum ether, so this determination might better be termed oxidized resin acid content. No doubt many soap manufacturers do not include this determination in their analysis of rosin. If such is the case, we recommend that they give this determination some consideration, because we believe that it is of some importance to them. Oxidized resin acids are much darker in color than the unoxidized resin acids, and when saponified, these oxidized materials produce a very dark colored soap. Therefore, any appreciable amount of oxidized resin acids in a rosin might very easily affect the final color of the soap made from such rosin. Further, the detergent efficiency of soap made from oxidized rosin as compared to soap made from fresh rosin, may be questioned.

From the comparative analyses it is evident that Pale Wood Rosins contain much less oxidized resin acids than the corresponding grades of gum rosin. The Pale Wood Rosins average from 0.1% to 0.15% oxidized resin acid, whereas the gum rosins contain from 1% to 3%. From the standpoint of oxidized rosin, Pale Wood Rosins are superior to Pale Gum Rosins, when the two raw materials are considered for the manufacture of soap.

The last analysis appears as the determination for the per cent dirt present in rosin. This is determined as the per cent of toluene insoluble material in both gum and wood rosins. From the analyses we find the Pale Gum Rosins averaging about 0.1% dirt, whereas the Pale Wood Rosins average about .003%.

Because of the method by which wood rosin is produced in large chemically controlled plant processes, the presence of dirt is definitely eliminated. Because of the absence of dirt and foreign materials in wood rosin, the soap-maker is able to minimize the presence of dirt in his product. This is an important property of wood rosin and one that should appeal to most of the rosin consuming industries. In this respect we state that wood rosins are superior to gum rosins as soap making raw materials.

In summarizing this comparison of pale wood and gum rosins, we find that: (1) the original color, grade for grade, of both pale gum and wood rosins is approximately the same; however, soap made from Pale Wood Rosin has a bright yellow color, whereas soap made from Pale Gum Rosin has a grey-yellow color. (2) The melting points of wood rosins in general are very slightly lower than the corresponding grades of gum rosin. (3) The acid number of wood and gum rosins, grade for grade, is about the same, indicating the same percentage content of free resin acids, but in general this free resin acid content consists of more abietic acid in wood rosin than in gum. (4) The saponification number of Pale Wood Rosins is very slightly lower than the same grade of gum rosin and the difference, in view of methods of analysis and methods of processing rosin in soap formulas, is too small to be of much importance to the soap manufacturer. (5) The unsaponifiable content of both pale gum and wood rosins on an average is the same. (6) Pale Wood Rosins contain much less oxidized resin acids than do Pale Gum Rosins. (7) Wood rosins contain less dirt or foreign materials than gum rosin. (8) The chemical constants of Pale Wood Rosins vary over narrower limits than gum rosins, and, therefore, the wood rosins will run more uniform.

REPORT OF

UNIFORM METHODS COMMITTEE**

By J. J. VOLLERTSEN*
Chairman

"The report of the Uniform Methods Committee is going to be very short this morning. There were only two or three reports that came in that required any action, so I will give you our recommendations and, as is the custom, we will have to act upon them to make them a part of our methods.

You heard yesterday the report of the Fat Analysis Committee. This report covered, really, a great deal about their future work and what they intended to do. There was only one change that they recommended in the method as written in our book or in our methods, and that was with reference to the correction of the unsaponifiable matter for the amount of free fatty acids combined therein. They recommended that this particular part of the method be changed to conform with the same method of the Soap Analysis Committee. The Uniform Methods Committee approves this recommendation, and I move, Mr. President, that it be adopted by the Society."

. . . The motion was seconded, voted upon, and carried . . .

"The Soap Committee had two recommendations, which they brought in with their report. The first was that the Wolff's Method, modified, is not detailed enough to follow. They recommend, therefore, that the method be re-written and clarified without changing any of the fundamentals. The Uniform Methods Committee approves this, and I move, Mr. Chairman, that it be changed and that it remain as a tentative method for another year."

*Armour & Company, Chicago.
**A report presented at the 8th Fall meeting of the American Oil Chemists Society in Chicago, October 11, 1934.

J. J. VOLLERTSEN

The motion was voted upon and carried.

"The other recommendation had to do with the determination of silicates in soap. The question of the factor to be used in converting silica, SIO_2, to sodium silicate was taken up by the committee and decided. The present factor, as shown in the methods, is 1.26, corresponding to a ratio of approximately 1.0 to 3.85. It was the opinion of the committee that the factor should be changed to 1.308, which, incidentally, corresponds to the ratio of NA_2O to SIO_2 in N brand silicate. I might explain that the factor now in the method is one that has been in there for many years.

"The Uniform Methods Committee approves this change, and I move, Mr. Chairman, that it be adopted by the Society."

The motion was seconded, voted upon, and carried . . .

"There was just one other report that came before us, and that was the report of the Committee on Sulphonated Oils. They have done a great deal of work and they came in with a recommendation for the adoption of two methods for determining moisture in sulphonated oils. The first one is a distillation method and the second is the hot plate method, similar to that in use by the Fat Analysis Committee. I do not believe I should take time to read the details of these methods, as they are rather lengthy, and I believe you heard them in reports delivered yesterday."

"The Uniform Methods Committee approved these two methods, and I move, Mr. Chairman, that they be adopted as tentative methods for the Society."

The motion was seconded, voted upon, and carried . . .

"That concludes my report."

REPORT OF THE CHAIRMAN OF COMMITTEE FOR THE STUDY OF PAPER AND INKS USED IN SOAP WRAPPERS*

By L. F. HOYT

Larkin Co., Inc., Buffalo, N. Y.

Collaborative work attempted by this committee this year comprised tests for alkali resistance by two methods on four different kinds of paper and two printed soap wrappers, and the effect of freshly cut soap on the same printed soap wrappers.

The composition of the papers used in this collaborative work was as follows:

Paper No. 1, ⅔ sulphite, ⅓ old papers stocks, 2% size.

Newsprint, groundwood stock. (Note: It is recognized that newsprint paper is very sensitive to discoloration with alkali. This sample is included, however, as an example of a type of paper which would be entirely unsuitable for use in wrapping soap.)

Paper No. 3, high grade vegetable parchment.

Paper "A-P," ¾ bleached sulphite, ¼ soda stocks. Part of the stock used is de-inked book stock and the finished paper contains traces of rag and ground wood, although it has good resistance to alkali and is sold as an alkali-proof paper.

No. 1, Newsprint, and No. 3 are respectively Standard Papers Nos. 1, 2, and 3 used by the Soap Wrap Committee of the Technical Association of the Pulp and Paper Industry in their 1934 collaborative work. Newsprint and Paper No. 1 samples were kindly furnished by Mr. T. Linsey Crossley, Chairman of the T.A.P.P.I. committee, and Paper No. 3 was supplied through the courtesy of Mr. F. D. Libby of the Kalamazoo Vegetable Parchment Co.

The soap wrappers used in these tests were printed each with one color only on the A-P paper. One wrapper was printed with a green ink supplied as an "alkali-proof ink." The other wrapper was printed with an ink supplied by the manufacturer as "soap-proof" after satisfactory contact test with a filled white laundry soap.

L. F. HOYT

*A report read at the 8th Fall Meeting of the American Oil Chemists Society in Chicago, October 11, 1934.