

Publications of the  
DEPARTMENT OF COMMERCE  
BUREAU OF STANDARDS

Letter  
Circular  
LC 35

WASHINGTON, D.C.

March 1, 1924.

PUBLICATIONS RELATING TO PETROLEUM PRODUCTS

(The publications not starred may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices stated. Those marked with a star are out of print, but may be consulted at leading libraries.)

S c i e n t i f i c   P a p e r s

Number	Title	Price
*S 153	Action of sunlight and air upon some lubricating oils. . . . .	5¢
S 160	Behavior of high boiling mineral oils on heating in air. . . . .	5¢
S 278	An investigation of laws of plastic flow. . .	10¢
*S 298	Standard substances for the calibration of viscosimeters. . . . .	5¢
S 340	A standardized method for the determination of solidification points, especially of naphthalene and paraffin. . . . .	5¢

T e c h n o l o g i c   P a p e r s

Number	Title	Price
T 4	Effect of added fatty and other oils upon carbonization of mineral lubricating oils....	5¢
T 13	Evaporation test for mineral lubricating and transformer oils. . . . .	5¢
T 73	Data on oxidation of automobile cylinder oils	5¢
T 77	Density and thermal expansion of American petroleum oils. . . . .	10¢
T 86	Resistance of an oil to emulsification. . . . .	10¢
*T 100	Determination of absolute viscosity by short tube viscosimeters. . . . .	10¢

1944  
The following information was obtained from the records of the  
Department of the Interior, Bureau of Land Management, regarding  
the land in question.

Section 1  
The land in question is situated in the  
County of \_\_\_\_\_, State of \_\_\_\_\_.

The land is bounded on the north by \_\_\_\_\_  
on the south by \_\_\_\_\_  
on the east by \_\_\_\_\_  
on the west by \_\_\_\_\_.

The land is owned by \_\_\_\_\_  
and is subject to the following conditions:

1. The land is to be used for agricultural purposes.
2. The land is to be used for the purpose of \_\_\_\_\_.
3. The land is to be used for the purpose of \_\_\_\_\_.
4. The land is to be used for the purpose of \_\_\_\_\_.
5. The land is to be used for the purpose of \_\_\_\_\_.
6. The land is to be used for the purpose of \_\_\_\_\_.
7. The land is to be used for the purpose of \_\_\_\_\_.
8. The land is to be used for the purpose of \_\_\_\_\_.
9. The land is to be used for the purpose of \_\_\_\_\_.
10. The land is to be used for the purpose of \_\_\_\_\_.

T 112	Standardization of the Saybolt Universal viscosimeter. . . . .	10¢
*T 125	Viscosity of gasoline. . . . .	5¢
T 140	Constant temperature still head for light-oil fractionation. . . . .	5¢
T 164	The Saybolt viscosity of blends. . . . .	5¢
T 176	Slushing oils. . . . .	5¢
T 177	Sulphur in petroleum oils. . . . .	5¢
T 204	Cutting fluids. . . . .	15¢
T 210	The Redwood viscosimeter. c. . . . .	10¢
T 223	Reclamation of used petroleum lubricating oils. . . . .	5¢

Note: Scientific Papers 153 and 160 and Technologic Papers 4, 13, 73, and 177 appeared entire or in abbreviated form in the Journal of Industrial and Engineering Chemistry, Volumes 2, 3, 5, 8, and 12.

C i r c u l a r s

Number	Title	Price
*C 45	Testing of materials, pages 68 to 72. . . . .	10¢
C 57	U. S. Standard tables for petroleum oils. . . . .	15¢
C 59	U. S. Standard Baume' hydrometer scales. . . . .	5¢
C 99	Carbonization of lubricating oils. . . . .	10¢

M i s c e l l a n e o u s

Number	Title	Price
M 15	Some technical methods of testing miscellaneous supplies, pages 57 to 59. . . . .	15¢

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## J o u r n a l   R e f e r e n c e s

- The Catalytic Oxidation of Petroleum oils -  
Journ. of Ind. & Engr. Chem., Vol. 13, 901 (1921).
- Sulphur Compounds and Oxidation of Petroleum Oils -  
Journ. of Ind. & Engr. Chem., Vol. 14, 725 (1922).
- Service Tests of Lubricants on Automobile Engines -  
Am. Pet. Inst. Bulletin 73.
- Quantitative Test for Resistance of Lubricating Oils to Emulsification -  
Proc. A.S.T.M., Vol. 16, part 2, p. 248; 1916 (T.P. 86)
- Determination of Absolute Viscosity by the Saybolt Universal and Engler Viscosimeters -  
Proc. A.S.T.M., Vol. 17, p. 551; 1917, part 2 (T.P. 100)
- The Standard Saybolt Universal Viscosimeter, -  
Proc. A.S.T.M., Vol. 18, part 2, p. 384; 1918 (T.P. 112)
- A Viscosimeter for Gasoline -  
Proc. A.S.T.M., Vol. 19, part 2, p. 676; 1919 (T.P. 125).
- The MacMichael Viscosimeter -  
Journ. Ind. & Engr. Chem., Vol. 12, p. 282; 1920.
- The Saybolt Viscosity of Oil Blends -  
Chem. & Met. Engr., Vol. 22, p. 1109, June 16, 1920 (TP164)
- Use of MacMichael Viscosimeter in Testing Petroleum Products (with F.W. Dean, petroleum chemist, Bureau of Mines) Reports and Investigations, Serial No. 3201, Jan. 1921. Issued by Bureau of Mines.
- The flow through short tubes -  
Trans. A.S.C.F., Vol. 84, p. 527, 1921. (This paper is along the same lines as P.S. Tice, B.S. Aeronautic Power Plant Report No. 10, being an investigation of the laws of flow upon which measurements of viscosity by flow tests depends.)
- Viscosity and Friction -  
Journ. S.A.E., Vol. 10, pp. 31, 369; 1922.
- Fuel Oil Viscosimeters -  
Chem. & Met. Engr., Vol. 26, p. 1175, June 21, 1923.
- The Change in Viscosity of Oils with the Temperature -  
Journ. Ind. & Engr. Chem., Vol. 14, p. 715, Aug. 1922.



- The Drainage Error in the Bingham Viscosimeter -  
Journ. Optical Society of America and Review of Scientific Instruments, Vol.6, p. 875, October 1922.
- Testing Oiliness by Friction Testing Machines -  
Chem. & Met. Engr., Vol.28, p.303, Feb. 14, 1923.
- Friction Testing of Lubricating Oils -  
Chem. & Met. Engr., Vol.28, p.594, March 28, 1923.
- Testing Lubricating Oils for Quality -  
Proc. Engineers Society of Western Pennsylvania,  
Vol.38, p.503, January 1923.
- The Improved MacMichael Viscosimeter,-  
Jour. Optical Society of America and Review of Scientific Instruments, Vol.7, p.335, April 1923.
- Bath Temperatures of Viscosimeters of the Saybolt Type -  
Ind. & Engr. Chem., Vol.15, p.945, 1923.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It is essential to ensure that every entry is properly documented and verified. This process helps in identifying any discrepancies or errors early on, allowing for prompt correction and ensuring the integrity of the financial data.

Furthermore, the document highlights the need for regular audits and reviews. By conducting periodic checks, the organization can maintain transparency and accountability. This not only builds trust among stakeholders but also provides valuable insights into the overall performance and financial health of the entity.

In addition, the document emphasizes the role of clear communication and collaboration between different departments. Effective teamwork is crucial for the successful implementation of financial policies and procedures. Regular meetings and open lines of communication can help in addressing any challenges or concerns that may arise during the process.

Overall, the document serves as a comprehensive guide for managing financial records and ensuring compliance with relevant regulations. It provides practical advice and best practices that can be applied to various organizational contexts, ultimately leading to improved financial management and operational efficiency.