

SMITHSONIAN MISCELLANEOUS COLLECTIONS.

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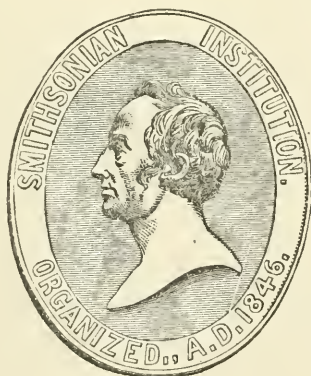
THE
CONSTANTS OF NATURE.

SPECIFIC GRAVITIES, BOILING POINTS,
AND MELTING POINTS.

FIRST SUPPLEMENT TO PART I.

COMPILED BY
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WASHINGTON, D. C.:
PUBLISHED BY THE SMITHSONIAN INSTITUTION.

APRIL: 1876.

ADVERTISEMENT.

THE following is a *first supplement* to PART I. of a general work on the "CONSTANTS OF NATURE," gratuitously prepared for the Smithsonian Institution by Professor F. W. Clarke, and published at the expense of its fund.

Part I., on Specific Gravities, Boiling Points and Melting Points, was published in 1873, since which time the new determinations have been made and collected which form this supplement.

JOSEPH HENRY,
Secretary Smithsonian Institution.

WASHINGTON, APRIL, 1876.

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PREFACE.

THE following supplement to Part I of the Constants of Nature, contains, in addition to determinations published during the past two years, some materials which were overlooked in compiling the original work. In it data are given for nearly seven hundred substances, of which at least four hundred are new since the publication of Part I.

Of course the compiler is anxious that his work should be as thorough as possible, and hence he will be greatly obliged to any person calling his attention to errors or omissions. He would also request investigators having unpublished determinations on hand to favor him with copies of them for use in subsequent supplements or editions. Such material is always worth saving, even when it is not of sufficient value to warrant publishing by itself.

Few explanations are needed in this supplement. The arrangement and abbreviations are the same which were originally used, with the exception of a very few new titles for periodicals. These are abbreviated as follows:—

B. D. C. G. "Berichte der Deutschen Chemischen Gesellschaft."

B. H. A. S. F. "Bulletin Hebdomadaire de l'Association Scientifique de France."

C. C. or C. Cent. "Chemisches Centralblatt." All references to this periodical apply only to the third or current series.

Fortsch. d. Phys. "Fortschritte der Physik."

F. W. C.

CINCINNATI, March 9, 1876.

SUPPLEMENT

TO

TABLES OF SPECIFIC GRAVITY, BOILING POINT AND MELTING POINT.

I. ELEMENTARY SUBSTANCES.

Name.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Bromine.			s.-24°.5.
² Sodium.	0.97.		
³ " "	0.9743. 10°. } 0.9735. 13°. 5. }		
⁴ " "			
⁵ Potassium.	0.8750. 13°. } 0.8766. 18°. }		
⁶ " "			
⁷ Silver.			1032°.
⁸ " "	10.1053. Slowly cooled from fusion.		
⁹ " "	10.5513. Ditto. Rolled.		
¹⁰ " "	10.4476. Hammered.		
¹¹ " "	9.6323. Granulated.		
¹² " "	9.8463. Brittle.		
¹³ " "	9.5538. Cryst. in laminæ.		
¹⁴ " "	10.4913. Wire.		
¹⁵ " "	10.5700. Solid. }		
¹⁶ " "	0.4612. Molten. }		

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SPECIFIC GRAVITY TABLES.

Name.	Specific Gravity.	Boiling Point.	Melting Point.
1 Sulphur.	1.97. Amorph. Yellow		
2 "	1.94-1.95. " Brown.		
3 "	2.009. Native		
4 "	2.0725. Cryst. Cryst.		
5 Selenium.	4.406 Cryst. Cryst.		
6 "	4.495. " Gray.		
7 "	4.514. " Granular		
8 "	4.77. Laminated		
9 "	4.75. From solution		
10 "	4.66. " "		
11 "	4.815. Cryst.		
12 "	4.54. From Carbon D-		
13 "	4.53. " "		
14 "	4.37-4.34. Amorphous.		
15 "	4.09-4.36. Males.		
16 Barium.	5.75.		
17 Lead.	11.3503.		
18 "	11.3503. Wire		
19 "	11.3501. " "		
20 "	11.35. Males.		
21 "	11.35. Cryst.		
22 Iron.	7.86.		
23 Copper.			1085°.
24 "	8.455. Slightly oxid. from Atmos.		
25 "	8.922. Cryst. Plate		

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11 Rammelsberg. P. A. 151.	24	Sergius Kern. C. N. 91.	24	Quinke. P. A. 97. 396.
12 Rammelsberg. P. A. 151.	24	249.		

Name.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Copper.	8.9565. 17°.	1035°.	
² " "	8.945. 0°.		
³ Palladium.	12.0.		
⁴ " "	12.104.		
⁵ Platinum.	21.504. 17° 6.		
⁶ Iridium.	22.421. 17° 5.		
⁷ Zinc.			
⁸ Cadmium.	8.6689. Wire.		
⁹ Mercury.	13.6078. 0°.		
¹⁰ " "	13.582. 5°-10°.		
¹¹ " "	13.570. 10°-15°.		
¹² " "	13.558. 15°-20°.		
¹³ Phosphorus.	1.85676. 0°.		44° 4.
¹⁴ " "	1.82321. 20°.		
¹⁵ " "	1.80681. 44°.		
¹⁶ " "	1.74924. 40°.		
¹⁷ " "	1.6949. 100°.		
¹⁸ " "	1.6027. 200°.		
¹⁹ " "	1.52867. 280°.		
²⁰ " Amorphous.	2.34. 0°.		
²¹ " "	2.148. 0°. Prepared at 265°.		
²² " "	2.19. 0°. " " 360°.		
²³ " "	2.293. 0°. " " 500°.		

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Name.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Gold.	19.2945. Unrolled. }		
² " "	19.2982. Rolled. }		
³ Carbon. Diamond.	3.51432. 18° I.		
⁴ " " "	3.5143.		
⁵ " " "	3.529. 15°.		
⁶ " Charcoal from sugar.	1.81-1.85.		
⁷ Tin.	7.2914.		
⁸ " "	7.3395. Wire.		
⁹ " "	7.143. } Reduced by H. from		
¹⁰ " "	7.166. } stannous chloride. }		
¹¹ " "	7.195. Precipitated.		
¹² " "	7.310. After Fusion.		
¹³ Cerium.	6.628. Electrolytic. }		Between Sb & Ag.
¹⁴ " "	5.728. After Fusion. }		
¹⁵ Lanthanum.	6.049. }		
¹⁶ " "	6.163. } Electrolytic.		
¹⁷ Didymium.	6.544. Electrolytic.		

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II. FLUORIDES, CHLORIDES, BROMIDES, AND IODIDES.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Strontium fluoride.	Sr F ₂ .	4.210.		
² Lead "	Pb F ₂ .	8.241.		
³ Arsenic trifluoride.	As F ₃ .	2.66. 1.	64°-66°.	
⁴ Potassium titanofluoride	K ₂ Ti F ₆ . H ₂ O.	2.992.		
⁵ Copper "	Cu Ti F ₆ . 4H ₂ O.	2.529.		
⁶ Ammoniumstannofluoride.	Am ₂ Sn F ₆ .	2.887.		
⁷ Potassium "	K ₂ Sn F ₆ . H ₂ O.	3.053.		
⁸ Manganese "	Mn Sn F ₆ . 6H ₂ O.	2.307.		
⁹ Cobalt "	Co Sn F ₆ . 6H ₂ O.	2.604.		
¹⁰ Potassium zirconofluoride.	K ₂ Zr F ₆ .	3.582.		
¹¹ Nickel "	Ni Zr F ₆ . 6H ₂ O.	2.227.		
¹² Zinc "	Zn Zr F ₆ . 6H ₂ O.	2.255.		
¹³ Potassium tantalofluoride.	K ₂ Ta F ₇ .	4.056.		
¹⁴ " niobofluoride.	K ₂ Nb O F ₅ . H ₂ O.	2.813.		
¹⁵ Copper "	Cu Nb O F ₅ . 4H ₂ O.	2.750.		
¹⁶ Iodine monochloride.	I Cl.	3.263. 0°	100°5-101°5	24°7.
¹⁷ Sodium chloride.	Na Cl.	2.06-2.08.		
¹⁸ " "	"	2.155. 15°5.		
¹⁹ " "	"	1.612. 960°.		
²⁰ " "	"			960°.
²¹ Potassium "	K Cl.	1.918. 15°5.		
²² " "	"	1.90-1.91.		
²³ " "	"	1.612. 730°.		
²⁴ " "	"			730°.
²⁵ Ammonium chloride.	N H ₄ Cl.	1.52. 15°5.		

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	(2). 10. 566.	

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Sulphur chloride.	S ₂ Cl ₂ .	1.6970. 5°-10°.		
² " "	"	1.6882. 10°-15°.		
³ " "	"	1.6793. 15°-20°.		
⁴ Strontium "	Sr Cl ₂ .	3.054.		
⁵ " "	"	2.770. 910°.		
⁶ " "	"			910°.
⁷ Barium "	Ba Cl ₂ .	3.7. 17°-5.		
⁸ Lead "	Pb Cl ₂ .			580°.
⁹ Manganese "	Mn Cl ₂ .	2.478.		
¹⁰ Zinc "	Zn Cl ₂ .			262°.
¹¹ Phosphorus trichloride.	P Cl ₃ .	1.6091. 5°-10°.	75°-9	
¹² " "	"	1.6001. 10-15°.		
¹³ " "	"	1.5911. 15°-20°.		
¹⁴ " "	"	1.61294. 0°.		
¹⁵ " "	"	1.46919. 75°9.		
¹⁶ Antimonic chloride.	Sb Cl ₅ .			-6°.
¹⁷ Perchloroethylene.	C ₂ Cl ₄ .	1.6595. 0°.	121°.	
¹⁸ Silicon tetrachloride.	Si Cl ₄ .	1.5083. 5°-10°.		
¹⁹ " "	"	1.4983. 10°-15°.		
²⁰ " "	"	1.4484. 15°-20°.		
²¹ Titanium "	Ti Cl ₄ .	1.7487. 5°-10°.		
²² " "	"	1.7403. 10°-15°.		
²³ " "	"	1.7322. 15°-20°.		
²⁴ Tin "	Sn Cl ₄ .	2.2618. 5°-10°.		
²⁵ " "	"	2.2492. 10°-15°.		
²⁶ " "	"	2.2368. 15°-20°.		
²⁷ Potassium palladiochloride.	K ₂ Pd Cl ₆ .	2.806. }		
²⁸ " "	"	2.739. }		
²⁹ Ammonium "	Am ₂ Pd Cl ₆ .	2.418.		
³⁰ Nickel "	Ni Pd Cl ₆ . 6H ₂ O.	2.353.		
³¹ Magnesium "	Mg Pd Cl ₆ . 6H ₂ O.	2.124.		
³² Zinc "	Zn Pd Cl ₆ . 6H ₂ O.	2.359.		

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Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Ammonium platin-chloride.	$\text{Am}_2 \text{Pt Cl}_6$.	3.065.		
² Sodium "	$\text{Na}_2 \text{Pt Cl}_6 \cdot 6\text{H}_2 \text{O}$.	2.500.		
³ Magnesium "	$\text{Mg Pt Cl}_6 \cdot 6\text{H}_2 \text{O}$.	2.437.		
⁴ " "	$\text{Mg Pt Cl}_6 \cdot 12\text{H}_2 \text{O}$.	2.060.		
⁵ Manganese "	$\text{Mn Pt Cl}_6 \cdot 6\text{H}_2 \text{O}$.	2.692.		
⁶ " "	$\text{Mn Pt Cl}_6 \cdot 12\text{H}_2 \text{O}$.	2.112.		
⁷ Iron "	$\text{Fe Pt Cl}_6 \cdot 6\text{H}_2 \text{O}$.	2.714.		
⁸ Copper "	$\text{Cu Pt Cl}_6 \cdot 6\text{H}_2 \text{O}$.	2.734.		
⁹ Cadmium "	$\text{Cd Pt Cl}_6 \cdot 6\text{H}_2 \text{O}$.	2.882.		
¹⁰ Barium "	$\text{Ba Pt Cl}_6 \cdot 4\text{H}_2 \text{O}$.	2.868.		
¹¹ Lead "	$\text{Pb Pt Cl}_6 \cdot 3\text{H}_2 \text{O}$.	2.681.		
¹² Cadmium ammoniochloride.	$\text{Cd Cl}_2 \cdot 2\text{N H}_3$.	2.632.		
¹³ Barium zinc chloride.	$2\text{BaCl}_2 \cdot \text{ZnCl}_2 \cdot 4\text{H}_2 \text{O}$.	2.845.		
¹⁴ Barium cadmium chloride.	$\text{BaCl}_2 \cdot \text{Cd Cl}_2 \cdot 4\text{H}_2 \text{O}$.	2.968.		
¹⁵ Phosphorus oxychloride.	P O Cl_3 .	1.71185. 0°.	107°23.	
¹⁶ " "	"	1.6936. 10°.		
¹⁷ " "	"	1.6181. 51°.		
¹⁸ " "	"	1.51008. 107°23		
¹⁹ Phosphorus sulphochloride.	P S Cl_3 .	1.66816. 0°.	125°.	
²⁰ Pyrophosphoric chloride.	$\text{P}_2 \text{O}_3 \text{Cl}_4$.	1.58. 7°.	210°215°	
²¹ Sulphur bromide.	S Br .	2.63.		
²² Antimony tribromide.	Sb Br_3 .	3.473. 96° L.	283°.	90°
²³ Bismuth "	Bi Br_3 .			198°202°
²⁴ Barium cadmium bromide.	$\text{BaBr}_2 \cdot \text{CdBr}_2 \cdot 4\text{H}_2 \text{O}$.	3.687.		
²⁵ Mercury hydrogen "	$\text{HgBr}_2 \cdot \text{HBr} \cdot 4\text{H}_2 \text{O}$.	3.17. Fused.		13°.

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Name.	Formula.	Specific Gravity.	Boil. Point	Melt. Point
¹ Nickel ammoniobromide.	Ni Br ₂ . 6 N H ₃ .	1.837.		
² Cadmium "	Cd Br ₂ . 2 N H ₃ .	3.366.		
³ Potassium stannobromide.	K ₂ Sn Br ₆ .	3.783.		
⁴ Ammonium "	Am ₂ Sn Br ₆ .	3.505.		
⁵ Strontium platinbromide.	Sr Pt Br ₆ . 9 H ₂ O.	2.923.		
⁶ Barium "	Ba Pt Br ₆ . 10 H ₂ O.	3.713.		
⁷ Lead "	Pb Pt Br ₆ .	6.025.		
⁸ Sodium "	Na ₂ Pt Br ₆ . 6 H ₂ O.	3.323.		
⁹ Potassium "	K ₂ Pt Br ₆ .	4.541.		
¹⁰ Ammonium "	Am ₂ Pt Br ₆ .	4.200.		
¹¹ Manganese "	Mn Pt Br ₆ . 12 H ₂ O.	2.759.		
¹² Cobalt "	Co Pt Br ₆ . 12 H ₂ O.	2.762.	} Two samples.	
¹³ " "	" "	2.634.		
¹⁴ Nickel "	Ni Pt Br ₆ . 6 H ₂ O.	3.715.		
¹⁵ Magnesium "	Mg Pt Br ₆ . 12 H ₂ O.	2.802.		
¹⁶ Zinc "	Zn Pt Br ₆ . 12 H ₂ O.	2.877.		
¹⁷ Phosphorus sulphobromide.	P S Br ₃ .	2.87.		36.4.
¹⁸ Potassium iodide.	K I.	2.497, 666.°		666.°
¹⁹ " "	"			
²⁰ Silver " }	Ag I.	5.406, 450.° Molten.	} Maximum density at 116.°	} 450.°
²¹ " " }	"	5.8167, 116.°		
²² " " }	"	5.561. Cryst.		
²³ " " }	"	5.681, 0° After boiling in water.		
²⁴ " " }	"	5.812. By solution Ag in H I.		
²⁵ Carbon tetriiodide.	C I ₄ .	4.32, 20.°2.		
²⁶ Sodium platiniodide.	Na ₂ Pt I ₆ . 6H ₂ O.	3.707.		
²⁷ Potassium "	K ₂ Pt I ₆ .	5.031.		

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⁹ Topsoë. C. Cent. 4. 76.	¹⁸ Braun. C. S. J. (2). 13. 31.	²⁷ Topsoë. C. Cent. 4. 76.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Ammonium platiniodide	Am ₂ Pt I ₆ .	4.610.		
² Manganese	" Mn Pt I ₆ . 9 H ₂ O.	3.604.		
³ Iron	" Fe Pt I ₆ . 9 H ₂ O.	3.455.		
⁴ Cobalt	" Co Pt I ₆ . 9 H ₂ O.	3.618.		
⁵ "	" Co Pt I ₆ . 12 H ₂ O.	3.048.		
⁶ Nickel	" Ni Pt I ₆ . 6 H ₂ O.	3.976.		
⁷ "	" Ni Pt I ₆ . 9 H ₂ O.	3.549.		
⁸ Zinc	" Zn Pt I ₆ . 9 H ₂ O.	3.689.		
⁹ Magnesium	" Mg Pt I ₆ . 9 H ₂ O.	3.458.		
¹⁰ Nickel ammonioiodide	Ni I ₂ . 6 N H ₃ .	2.101.		

III. OXIDES AND SULPHIDES.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹¹ Ice.	H ₂ O.	0.91674.		
¹² Lead dioxide.	Pb O ₂ .	9.045.		
¹³ Hematite.	Fe ₂ O ₃ .	5.079.		
¹⁴ Alumina. Ruby.	Al ₂ O ₃ .	3.95. Natural.	}	40.°
¹⁵ " "	"	3.7. Artificial.		
¹⁶ " Sapphire.	"	3.98. Natural.		
¹⁷ Ruthenium tetroxide.	Ru O ₄ .			
¹⁸ Magnesia.	Mg O.	3.1932, 0.°	}	
¹⁹ "	"	3.2014, 0.°		
²⁰ "	"	3.2482, 0.°		
²¹ "	"	3.5699, 0.°		
²² Lanthanum oxide.	La ₂ O ₃ .	6.53, 17.°		
²³ Didymium "	Di ₂ O ₃ .	6.852.		
²⁴ Nitrous oxide.	N ₂ O.	0.9004, 0.° L.	-92.°	-99.°
²⁵ Silicon dioxide.	Si O ₂ .	2.61. Quartz.		
²⁶ " "	"	2.247. Assmannite.		

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¹ Topsoë. C. Cent. 4. 76.	¹¹ Bunsen. A. C. Phys. (4). 23. 65.	¹⁸ Ditte. C. S. J. (2). 9. 870.
² Topsoë. C. Cent. 4. 76.	¹² Wernicke. C. S. J. (2). 9. 306.	¹⁹ First sample calcined at 350°; second at 440°; third at dull redness, last at bright redness.
³ Topsoë. C. Cent. 4. 76.	¹³ Neumann. P. A. 23. 1.	²⁰
⁴ Topsoë. C. Cent. 4. 76.	¹⁴ Williams. C. N. 28. 101.	²¹
⁵ Topsoë. C. Cent. 4. 76.	¹⁵ Williams. C. N. 28. 101.	²² Cleve. B. S. C. 21. 196.
⁶ Topsoë. C. Cent. 4. 76.	¹⁶ Williams. C. N. 28. 101.	²³ Cleve. C. S. J. (2). 13. 340.
⁷ Topsoë. C. Cent. 4. 76.	¹⁷ Deville and Debray. C. R. 80. 458.	²⁴ Will. C. N. 28. 170.
⁸ Topsoë. C. Cent. 4. 76.		²⁵ Neumann. P. A. 23. 1.
⁹ Topsoë. C. Cent. 4. 76.		²⁶ v. Rath. S. J. (3). 7. 149.
¹⁰ Topsoë. C. Cent. 4. 76.		

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Silicon dioxide.	Si O ₂	2.311.	Artificial tridymite.	
² " "	"	2.317.		
³ " "	"	2.373.		
⁴ Tin "	Sn O ₂ .	6.952.	Tinstone.	
⁵ Zirconium "	Zr O ₂ .	5.42.	Crystallized from borax.	
⁶ " "	"	5.52.		
⁷ Tantalie acid.	Ta ₂ O ₅ .	7.234-7.253.		
⁸ Lead sulphide.	Pb S.	7.568.	Galena.	
⁹ " "	"	6.77.	Artif. cryst. powder.	
¹⁰ Iron disulphide.	Fe S ₂ .	5.042.	Pyrite.	
¹¹ " "	"	4.882.			Marcasite.
¹² Zinc sulphide.	Zn S.	4.060.	Blende.	
¹³ Arsenic disulphide.	As ₂ S ₂ .	3.240.	Realgar.	
¹⁴ Antimony trisulphide.	Sb ₂ S ₃ .	4.603.	Stibnite.	
¹⁵ Carbon monosulphide.	C S.	1.66.		
¹⁶ " disulphide.	C S ₂ .	1.2823, 5°-10.°		
¹⁷ " "	"	1.2750, 10°-15.°		
¹⁸ " "	"	1.2676, 15°-20.°		
¹⁹ " "	"	1.2665, 16.°06.		

IV. HYDRATES.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
²⁰ Sulphuric acid.	H ₂ S O ₄ .	1.857, 0.°		
²¹ " "	"	1.85289, 0.°		
²² Selenious "	H ₂ Se O ₃ .	3.123.		
²³ Ferric hydrate.	Fe ₂ O ₃ . 3 H ₂ O.	3.77. Precipitated.		

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⁷ Oesten. P. A. 100. 342.	¹⁷ { Regnault. P. A. 62. 50.	269.
⁸ Neumann. P. A. 23. 1.	¹⁸ { Regnault. P. A. 62. 50.	

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Ferric hydrate.	$\left. \begin{array}{l} \text{Fe}_2 \text{O}_3 \cdot \text{H}_2 \text{O}. \\ \text{“} \\ \text{“} \end{array} \right\} \text{Göthite.}$	4.22-4.24. Lostwithiel		
² “ “		4.11. Compact.		
³ “ “		4.19. Fibrous.		
⁴ Hypophosphorous hydrate.	$\text{H}_3 \text{P O}_2.$	1.493, 18.°8. Fused.		17.°4.
⁵ Phosphorous “	$\text{H}_3 \text{P O}_3.$	1.651, 21.°2. “		70.°1.
⁶ Phosphoric “	$\text{H}_3 \text{P O}_4.$	1.884, 18.°2. “		38.°6.

V. CHLORATES AND BROMATES.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
⁷ Potassium chlorate.	$\text{K Cl O}_3.$	2.323.		
⁸ Silver “	$\text{Ag Cl O}_3.$	4.439.		
⁹ Lead “	$\text{Pb Cl}_2 \text{O}_6 \cdot \text{H}_2 \text{O}.$	3.989.		
¹⁰ Mercury oxychlorate.	$\text{Hg}_2 \text{Cl}_2 \text{O}_7 \cdot \text{H}_2 \text{O}.$	5.151.		
¹¹ Potassium bromate.	$\text{K Br O}_3.$	3.218.		
¹² Calcium “	$\text{Ca Br}_2 \text{O}_6 \cdot \text{H}_2 \text{O}.$	3.329.		
¹³ Strontium “	$\text{Sr Br}_2 \text{O}_6 \cdot \text{H}_2 \text{O}.$	3.773.		
¹⁴ Barium “	$\text{Ba Br}_2 \text{O}_6 \cdot \text{H}_2 \text{O}.$	3.820.		
¹⁵ Lead “	$\text{Pb Br}_2 \text{O}_6 \cdot \text{H}_2 \text{O}.$	4.950.		
¹⁶ Nickel “	$\text{Ni Br}_2 \text{O}_6 \cdot 6 \text{H}_2 \text{O}.$	2.575.		
¹⁷ Copper “	$\text{Cu Br}_2 \text{O}_6 \cdot 6 \text{H}_2 \text{O}.$	2.583.		
¹⁸ Magnesium “	$\text{Mg Br}_2 \text{O}_6 \cdot 6 \text{H}_2 \text{O}.$	2.289.		
¹⁹ Zinc “	$\text{Zn Br}_2 \text{O}_6 \cdot 6 \text{H}_2 \text{O}.$	2.566.		
²⁰ Cadmium “	$\text{Cd Br}_2 \text{O}_6 \cdot 2 \text{H}_2 \text{O}.$	3.758.		
²¹ Mercury oxybromate.	$\text{Hg}_2 \text{Br}_2 \text{O}_7 \cdot \text{H}_2 \text{O}.$	5.815.		

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265 and 267.	¹¹ Topsoë. C. Cent. 4. 76.	¹⁹ Topsoë. C. Cent. 4. 76.
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⁵ Thomsen. J.F.P. (2). 2. 160.	¹³ Topsoë. C. Cent. 4. 76.	²¹ Topsoë. C. Cent. 4. 76.

VI. DITHIONATES AND SULPHATES.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Lithium dithionate.	$\text{Li}_2 \text{S}_2 \text{O}_6, 2 \text{H}_2 \text{O}.$	2.158.		
² Sodium "	$\text{Na}_2 \text{S}_2 \text{O}_6, 2 \text{H}_2 \text{O}.$	2.189.		
³ Potassium "	$\text{K}_2 \text{S}_2 \text{O}_6.$	2.277.		
⁴ Silver "	$\text{Ag}_2 \text{S}_2 \text{O}_6, 2 \text{H}_2 \text{O}.$	3.605.		
⁵ Ammonium "	$\text{Am}_2 \text{S}_2 \text{O}_6.$	1.704.		
⁶ Calcium "	$\text{Ca S}_2 \text{O}_6, 4 \text{H}_2 \text{O}.$	2.180.		
⁷ Strontium "	$\text{Sr S}_2 \text{O}_6, 4 \text{H}_2 \text{O}.$	2.373.		
⁸ Barium "	$\text{Ba S}_2 \text{O}_6, 4 \text{H}_2 \text{O}.$	3.142.		
⁹ Lead "	$\text{Pb S}_2 \text{O}_6, 4 \text{H}_2 \text{O}.$	3.245.		
¹⁰ Iron "	$\text{Fe S}_2 \text{O}_6, 7 \text{H}_2 \text{O}.$	1.875.		
¹¹ Manganese "	$\text{Mn S}_2 \text{O}_6, 6 \text{H}_2 \text{O}.$	1.757.		
¹² Cobalt "	$\text{Co S}_2 \text{O}_6, 8 \text{H}_2 \text{O}.$	1.815.		
¹³ Nickel "	$\text{Ni S}_2 \text{O}_6, 6 \text{H}_2 \text{O}.$	1.908.		
¹⁴ Zinc "	$\text{Zn S}_2 \text{O}_6, 6 \text{H}_2 \text{O}.$	1.915.		
¹⁵ Cadmium "	$\text{Cd S}_2 \text{O}_6, 6 \text{H}_2 \text{O}.$	2.272.		
¹⁶ Magnesium "	$\text{Mg S}_2 \text{O}_6, 6 \text{H}_2 \text{O}.$	1.666.		
¹⁷ Sodium sulphate.	$\text{Na}_2 \text{S O}_4.$	2.104, 1280.°		
¹⁸ " "	"			1280.°
¹⁹ Potassium "	$\text{K}_2 \text{S O}_4.$	2.676.		
²⁰ Calcium "	$\text{Ca S O}_4.$	2.955. Anhydrite.		
²¹ Strontium "	$\text{Sr S O}_4.$	3.955. Celestine.		
²² " "	"	3.949. "		
²³ Barium "	$\text{Ba S O}_4.$	4.424. Barite.		
²⁴ Lead "	$\text{Pb S O}_4.$	6.329. Native.		
²⁵ " "	"	6.212. Precipitated. }		
²⁶ Manganese "	$\text{Mn S O}_4.$	3.192, 16.°		
²⁷ " "	$\text{Mn S O}_4, 4 \text{H}_2 \text{O}.$	2.261.		

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¹⁰ Topsoë. C. Cent. 4. 76.	²⁰ Neumann. P. A. 23. 1.	

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Manganese sulphate.	Mn S O ₄ . 5 H ₂ O.	2.059, 16.°		
² Iron "	Fe S O ₄ . 7 H ₂ O.	1.9854, 16.°		
³ " "	"	1.851, 15.°5.		
⁴ Nickel "	Ni S O ₄ .	3.643, 16.°		
⁵ " "	Ni S O ₄ . 6 H ₂ O.	2.042-2.074.		
⁶ " "	Ni S O ₄ . 7 H ₂ O.	1.877, 16.°		
⁷ Copper "	Cu S O ₄ .	3.527, 16.°		
⁸ " "	Cu S O ₄ . H ₂ O.	3.125, 16.°		
⁹ " "	Cu S O ₄ . 2 H ₂ O.	2.808, 16.°		
¹⁰ " "	Cu S O ₄ . 3 H ₂ O.	2.268, 16.°		
¹¹ " "	Cu S O ₄ . 5 H ₂ O.	2.268, 16.°		
¹² Zinc "	Zn S O ₄ .	3.435, 16.°		
¹³ " "	Zn S O ₄ . H ₂ O.	3.215, 16.°		
¹⁴ " "	Zn S O ₄ . 7 H ₂ O.	1.976, 15.°5.		
¹⁵ " "	"	1.901, 16.°		
¹⁶ Magnesium "	Mg S O ₄ .	2.675, 16.°		
¹⁷ " "	Mg S O ₄ . H ₂ O.	2.281, 16.°		
¹⁸ " "	Mg S O ₄ . 7 H ₂ O.	1.701, 16.°		
¹⁹ " "	"	1.665, 15.°5.		
²⁰ Glucinum "	Gl S O ₄ . 4 H ₂ O.	1.725.		
²¹ Thorium "	Th (S O ₄) ₂ . 9 H ₂ O.	2.767.		
²² Syngenite.	CaSO ₄ . K ₂ SO ₄ . H ₂ O.	2.603.		
²³ Ferric potassium alum.	FeK(SO ₄) ₂ . 12H ₂ O.	1.831.		
²⁴ " ammonium "	AmK(SO ₄) ₂ . 12H ₂ O	1.719.		
²⁵ Potassium magnesium sulphate.	K ₂ Mg (S O ₄) ₂ .	2.735,-2.750.		
²⁶ " nickel "	K ₂ Ni (S O ₄) ₂ .	3.086.		
²⁷ " cobalt "	K ₂ Co (S O ₄) ₂ .	3.105.		
²⁸ " manganese "	K ₂ Mn (S O ₄) ₂ .	3.031.		

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¹¹ Pape. P. A. 120. 371.		

VII. SELENATES AND CHROMATES.

Name.	Formula.	Specific Gravity.	Boil. Point.	Melting Point.
¹ Lithium selenate.	$\text{Li}_2 \text{Se O}_4, \text{H}_2 \text{O}.$	2.439.		
² Sodium "	$\text{Na}_2 \text{Se O}_4.$	3.098.		
³ " "	$\text{Na}_2 \text{Se O}_4, 10 \text{H}_2 \text{O}.$	1.584.		
⁴ Potassium "	$\text{K}_2 \text{Se O}_4.$	3.050.		
⁵ Ammonium "	$\text{Am}_2 \text{Se O}_4.$	2.162.		
⁶ Calcium "	$\text{Ca Se O}_4, 2 \text{H}_2 \text{O}.$	2.676.		
⁷ Glucinum "	$\text{Gl Se O}_4, 4 \text{H}_2 \text{O}.$	2.029.		
⁸ Thorium "	$\text{Th (Se O}_4)_2, 9 \text{H}_2 \text{O}.$	3.026.		
⁹ Manganese "	$\text{Mn Se O}_4, 2 \text{H}_2 \text{O}.$	2.949.		
¹⁰ " "	$\text{Mn Se O}_4, 5 \text{H}_2 \text{O}.$	2.334.		
¹¹ Iron "	$\text{Fe Se O}_4, 7 \text{H}_2 \text{O}.$	2.973.		
¹² Nickel "	$\text{Ni Se O}_4, 6 \text{H}_2 \text{O}.$	2.314.		
¹³ Cobalt "	$\text{Co Se O}_4, 5 \text{H}_2 \text{O}.$	2.512.		
¹⁴ " "	$\text{Co Se O}_4, 6 \text{H}_2 \text{O}.$	2.179.		
¹⁵ " "	$\text{Co Se O}_4, 7 \text{H}_2 \text{O}.$	2.135.		
¹⁶ Copper "	$\text{Cu Se O}_4, 5 \text{H}_2 \text{O}.$	2.559.		
¹⁷ Zinc "	$\text{Zn Se O}_4, 5 \text{H}_2 \text{O}.$	2.591.		
¹⁸ " "	$\text{Zn Se O}_4, 6 \text{H}_2 \text{O}.$	2.325.		
¹⁹ Magnesium "	$\text{Mg Se O}_4, 6 \text{H}_2 \text{O}.$	1.928.		
²⁰ Cadmium "	$\text{Cd Se O}_4, 2 \text{H}_2 \text{O}.$	3.632.		
²¹ Ammonium hydrogen selenate.	$\text{Am H Se O}_4.$	2.409.		
²² Sodium potassium "	$\text{Na}_2 \text{Se O}_4, 3 \text{K}_2 \text{Se O}_4.$	3.095.		
²³ Manganese " "	$\text{Mn K}_2 (\text{Se O}_4)_2, 2 \text{H}_2 \text{O}.$	3.070.		
²⁴ " ammonium "	$\text{Mn Am}_2 (\text{Se O}_4)_2, 6 \text{H}_2 \text{O}.$	2.093.		
²⁵ Iron " "	$\text{Fe Am}_2 (\text{Se O}_4)_2, 6 \text{H}_2 \text{O}.$	2.160.		
²⁶ Cobalt " "	$\text{Co Am}_2 (\text{Se O}_4)_2, 6 \text{H}_2 \text{O}.$	2.212.		
²⁷ " potassium "	$\text{Co K}_2 (\text{Se O}_4)_2, 6 \text{H}_2 \text{O}.$	2.514.		
²⁸ Nickel " "	$\text{Ni K}_2 (\text{Se O}_4)_2, 6 \text{H}_2 \text{O}.$	2.539.		

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	¹⁹ Topsoë. C. Cent. 4. 76.	

Name.	Formula.	Specific Gravity.	Boil. Point.	Melting Point.
¹ Nickel ammonium selenate.	Ni Am ₂ (Se O ₄) ₂ . 6 H ₂ O.	2.228.		
² Copper " "	Cu Am ₂ (Se O ₄) ₂ . 6 H ₂ O.	2.221.		
³ " potassium "	Cu K ₂ (Se O ₄) ₂ . 6 H ₂ O.	2.527.		
⁴ Zinc " "	Zn K ₂ (Se O ₄) ₂ . 6 H ₂ O.	2.538.		
⁵ " " "	Zn K ₂ (Se O ₄) ₂ . 2 H ₂ O.	3.210.		
⁶ " ammonium "	Zn Am ₂ (Se O ₄) ₂ . 6 H ₂ O.	2.200.		
⁷ Cadmium " "	Cd Am ₂ (Se O ₄) ₂ . 6 H ₂ O.	2.307.		
⁸ " " "	Cd Am ₂ (Se O ₄) ₂ . 2 H ₂ O.	2.897.		
⁹ Magnesium " "	Mg Am ₂ (Se O ₄) ₂ . 6 H ₂ O.	2.035.		
¹⁰ " potassium "	Mg K ₂ (Se O ₄) ₂ . 6 H ₂ O.	2.336.		
¹¹ Cadmium " "	Cd K ₂ (Se O ₄) ₂ . 2 H ₂ O.	3.376.		
¹² Silver ammonio "	Ag ₂ (Se O ₄). 4 N H ₃ .	2.854.		
¹³ Potassium chromate.	K ₂ Cr O ₄ .	2.678, 15.°5.		
¹⁴ " trichromate.	K ₂ Cr ₃ O ₁₀ .	2.676. }		
¹⁵ " " "	"	2.702. }		
¹⁶ Silver chromate.	Ag ₂ Cr O ₄ .	5.536.		
¹⁷ " ammonio chromate.	Ag ₂ Cr O ₄ . 4 N H ₃ .	2.717.		

VIII. NITRATES, VANADATES, ARSENATES, AND PHOSPHATES.

Name.	Formula.	Specific Gravity.	Boil. Point.	Melting Point.
¹⁸ Sodium nitrate.	Na NO ₃ .	2.246, 15.°5.		
¹⁹ " " "	"	2.24-2.25.		
²⁰ " " "	"	1.878, 314.°		
²¹ " " "	"			314.°
²² " " "	Na NO ₃ . 7 H ₂ O.	1.357, 0.°		L. above -15.°

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⁴ Topsoë. C. Cent. 4. 76.	¹³ Holker. P. M. (3) 27.	213.
⁵ Topsoë. C. Cent. 4. 76.	¹⁴ { Schröder. A. C. P. 174.	¹⁹ Page & Keightley. C. S. J.
⁶ Topsoë. C. Cent. 4. 76.	249.	(2). 10. 566.
⁷ Topsoë. C. Cent. 4. 76.	¹⁵ { Schröder. A. C. P. 174.	²⁰ Braun. C. S. J. (2). 13. 31.
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Name.	Formula.	Specific Gravity.	Boil. Point.	Melt. Point.
¹ Potassium nitrate.	$K N O_3$.	2.074, 15.°5.		
² " "	"	2.06.		
³ " "	"	1.702, 342.°.		
⁴ " "	"			342.°
⁵ Ammonium "	$N H_4 N O_3$.			145.°
⁶ Barium "	$Ba N_2 O_6$.	3.228, 17.°5.		
⁷ Lead "	$Pb N_2 O_6$.	4.41, 15.°5.		
⁸ Bismuth vanadate.		5.91, Pucherite.		
⁹ Potassium hydrogen arsenate.				
	$K H_2 A s O_4$.	2.862.		
¹⁰ Ammonium " "	$A m H_2 A s O_4$.	2.308.		
¹¹ " " phosphate	$A m H_2 P O_4$.	1.779.		

IX. CARBONATES.

Name.	Formula.	Specific Gravity.	Boil. Point.	Melt. Point.
¹² Sodium carbonate.	$N a_2 C O_3$.	2.041, 960.°		
¹³ " "	"			960.°
¹⁴ " "	$N a_2 C O_3 \cdot 10 H_2 O$.	1.455, 15.°5.		
¹⁵ Potassium "	$K_2 C O_3$.	2.00, 1150.		
¹⁶ " "	"			1150.°
¹⁷ Arragonite.	$C a C O_3$.	2.926. }		
¹⁸ Calcite.	"	2.750. }		
¹⁹ Lead carbonate.	$P b C O_3$.	6.510. } Native.		
²⁰ " "	"	6.717. } Two l. c. lities.		
²¹ Chalybite.	$F e C O_3$.	3.872.		
²² Magnesite.	$M g C O_3$.	3.037.		
²³ Dolomite	$C a C O_3, M g C O_3$.	2.914. }		
²⁴ "	"	2.918. }		

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		²⁴ { Neumann. P. A. 23. 1.

X. SILICOFLUORIDES.

Name.	Formula.	Specific Gravity.	Boil. Point.	Melt. Point.
¹ Lithium silicofluoride.	$\text{Li}_2 \text{Si F}_6 \cdot 2\text{H}_2\text{O}$.	2.244.		
² Ammonium "	$\text{Am}_2 \text{Si F}_6$.	1.970.		
³ Calcium "	$\text{Ca Si F}_6 \cdot 2\text{H}_2\text{O}$.	2.254.		
⁴ Copper "	$\text{Cu Si F}_6 \cdot 4\text{H}_2\text{O}$.	2.535.		
⁵ " "	$\text{Cu Si F}_6 \cdot 6\text{H}_2\text{O}$.	2.207.		
⁶ Nickel "	$\text{Ni Si F}_6 \cdot 6\text{H}_2\text{O}$.	2.109.		
⁷ Cobalt "	$\text{Co Si F}_6 \cdot 6\text{H}_2\text{O}$.	2.067.		
⁸ Manganese "	$\text{Mn Si F}_6 \cdot 6\text{H}_2\text{O}$.	1.858.		
⁹ Magnesium "	$\text{Mg Si F}_6 \cdot 6\text{H}_2\text{O}$.	1.761.		
¹⁰ Zinc "	$\text{Zn Si F}_6 \cdot 6\text{H}_2\text{O}$.	2.104.		

XI. MISCELLANEOUS INORGANIC COMPOUNDS.

Name.	Formula.	Specific Gravity.	Boil. Point.	Melt. Point.
¹¹ Potassium manganicyanide.	$\text{K}_3 \text{Mn Cy}_6$.	1.821.		
¹² Potassium cobalticyanide.	$\text{K}_3 \text{Co Cy}_6$.	1.913.		
¹³ Thorium platinumocyanide.	$\text{Th Pt}_2 \text{Cy}_8 \cdot 16\text{H}_2\text{O}$.	2.460.		
¹⁴ Ammonio-cyanide of silver and iron.	$(\text{Fe}_2 \text{Ag}_6 \text{Cy}_{12} \cdot 3\text{NH}_3)_2 \cdot \text{H}_2\text{O}$	2.42-2.47. 14°2.		
¹⁵ Ammonium ferrocyanide with ammonium chloride.	$\text{Am}_4 \text{FeCy}_6 \cdot 2\text{AmCl} \cdot 3\text{H}_2\text{O}$.	1.490.		
¹⁶ Potassium selenate with nickel sulphate.	$\text{K}_2 \text{Ni} (\text{SeO}_4) (\text{SO}_4) \cdot 6\text{H}_2\text{O}$.	2.34.		

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⁵ Topsoë. C. Cent. 4.76.	¹¹ Topsoë. C. Cent. 4.76.	20. 80.
⁶ Topsoë. C. Cent. 4.76.	¹² Topsoë. C. Cent. 4.76.	

Name.	Formula.	Specific Gravity.	Boil. Point.	Melt. Point.
¹ Magnesium niobate.	4 Mg O. Nb ₂ O ₅ .	4.3.		
² Manganese "		4.94.		
³ Cryst. tin compound.	2 Sn O ₂ . P ₂ O ₅ .	3.87-3.98.		
⁴ " " "	Sn O ₂ . P ₂ O ₅ .	3.61.		
⁵ " zirconium "	Zr O ₂ . P ₂ O ₅ .	3.12-3.14.		
⁶ Vanadium-wagnerite.	Ca ₃ V ₂ O ₈ . Ca Cl ₂ .	4.01. Artif. cryst.		
⁷ Iron nitride.	Fe ₅ N ₂ .	3.147. Impure.		
⁸ Palladium hydride.	Pd ₂ H.	11.06.		
⁹ Sodium "	Na ₂ H.	0.959.		

XII. METALLIC ALLOYS.

Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹⁰ Silver and copper.	Ag ₃ Cu ₂ .	9.0554. Molten.		
¹¹ Lead and palladium.	Pb Pd ₃ .	11.225.		
¹² " " tin.	Pb Sn.	9.387. 13° 3.		
¹³ " " "	Pb Sn ₂ .	8.777. 13° 3.		
¹⁴ " " mercury.	Pb ₂ Hg ₃ .	12.49. 17°.		
¹⁵ Tin and bismuth.	Sn ₂ Bi.	8.085.		
¹⁶ " " "	Sn Bi.	8.759.		
¹⁷ Zinc and antimony.	Sb Zn.	6.383-6.384.		
¹⁸ " " "	Sb ₂ Zn ₃ .	6.327.		
¹⁹ Tin, bismuth and lead.	Pb Sn ₂ Bi.	9.194. 11°.		
²⁰ " " " "	Pb Sn ₂ Bi ₂ .	9.253. 20°.		
²¹ " " " anti- mony	Bi Sb Sn ₂ .	7.883. 20°.		

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XIII. HYDROCARBONS.

Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Amyl hydride.	C ₅ H ₁₂ .	.626. 14°.	32°-35°.	
² Hexyl "	C ₆ H ₁₄ .	.667. 13°.	68°-70°.	
³ Heptyl "	C ₇ H ₁₆ .	.693. 12°.	96°-98°.	
⁴ Octyl "	C ₈ H ₁₈ .	.723. 13°.	118°-120°.	
⁵ Nonyl "	C ₉ H ₂₀ .	.744. 13°.	138°-140°.	
⁶ Decatyl "	C ₁₀ H ₂₂ .	.758. 14°.	158°-160°.	
⁷ Endecatyl "	C ₁₁ H ₂₄ .	.770. 14°.	176°-178°.	
⁸ Duodecatyl "	C ₁₂ H ₂₆ .	.784. 14°.	a. 200°.	
⁹ Heptylene.	C ₇ H ₁₄ .	.9212. 24°.		
¹⁰ "	"	.7144. 0°.	83°-84°.	
¹¹ Benzol.	C ₆ H ₆ .	.899487. 0°.		
¹² "	"	.883573. 15°.		
¹³ "	"	.872627. 25°.		
¹⁴ "	"	.846170. 50°.		
¹⁵ "	"	.818721. 75°.		
¹⁶ "	"	.8931. 5°-10°.		
¹⁷ "	"	.8827. 10°-15°.		
¹⁸ "	"	.8838. 15°-20°.		

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		¹⁸ Regnault. P. A. 62. 50.

Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.		
¹ Benzol.	$C_6 H_6$.	.90023. 0°.	}			
² "	"	.89502. 5°.				
³ "	"	.88982. 10°.				
⁴ "	"	.88462. 15°.				
⁵ "	"	.87940. 20°.				
⁶ "	"	.87417. 25°.				
⁷ "	"	.86891. 30°.				
⁸ "	"	.86362. 35°.				
⁹ "	"	.85829. 40°.				
¹⁰ "	"	.85291. 45°.				
¹¹ "	"	.84748. 50°.				
¹² "	"	.84198. 55°.				
¹³ "	"	.83642. 60°.				
¹⁴ "	"	.83078. 65°.				
¹⁵ "	"	.82505. 70°.				
¹⁶ "	"	.81923. 75°.				
¹⁷ "	"	.81331. 80°.				
¹⁸ Toluol.	$C_7 H_8$.	.866. 20°.	}			
¹⁹ Cumol.	$C_9 H_{12}$.	.87976. 0°.				
²⁰ "	"	.85870. 25°.				
²¹ "	"	.83756. 50°.				
²² "	"	.81585. 75°.				
²³ "	"	.79324. 100°.				
²⁴ Meta ethyl toluol.	"	.869. 20°.			158°-159°.	
²⁵ Cymol. From cummin oil.	$C_{10} H_{14}$.	.87446. 0°.			}	175°.I.
²⁶ " "	"	.85457. 25°.				

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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Cymol. From cummin oil.	$C_{10}H_{14}$.82352. 20°.	175°.1.	
² " " "	"	.81409. 75°.		
³ " " "	"	.79307. 100°.		
⁴ " " "	"	.8708. 0°.	175°.	
⁵ " " "	"	.8572. 20°.2.		
⁶ " From cymyl alcohol.	"	.87227. 0°.	177°.25.	
⁷ " " "	"	.85258. 25°.		
⁸ " " "	"	.82352. 50°.		
⁹ " " "	"	.81209. 75°.		
¹⁰ " " "	"	.79129. 100°.		
¹¹ " From camphor.	"	.87224. 0°.	176°.55.	
¹² " " "	"	.85237. 25°.		
¹³ " " "	"	.83251. 50°.		
¹⁴ " " "	"	.81230. 75°.		
¹⁵ " " "	"	.79122. 100°.		
¹⁶ " " "	"	.8732. 0°.		
¹⁷ " From wormwood oil.	"	.8707. 0°.	175°.	
¹⁸ " From thyme oil.	"	.86542. 0°.		
¹⁹ " " "	"	.78429. 100°.		
²⁰ " " "	"	.86.		
²¹ " " "	"	.8424.		
²² " " "	"	.8638.	m. of 8 from dif- ferent sources.	
²³ " " "	"	.858. 16°.		
²⁴ Dimethyl ethyl benzol.	"	.8644. 20°.	180°-182°.	

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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Tetramethyl benzol.	C ₁₀ H ₁₄ .	.8816. 9°.	196°.	
² Normal phenyl butyl.	"	.8622. 16°.	180°.	
³ Phenyl isobutyl.	"	.89. 15°.	167°.5.	
⁴ β " "	"	.8726. 16°.	170°-172°.	
⁵ Methyl diethyl benzol.	C ₁₁ H ₁₆ .	.8790. 20°.	198°-200°.	
⁶ Oil of citron.	C ₁₀ H ₁₆ .	.8597. 5°-10°.	} 177°-179°.	} 45°-47°.
⁷ " "	"	.8558. 10°-15°.		
⁸ " "	"	.8518. 15°-20°.		
⁹ Caoutchûn.	"	.855. 0°.		
¹⁰ " "	"	.842. 20°.		
¹¹ Polymer of isoprene.	"	.866. 0°.		
¹² " "	"	.854. 21°.		
¹³ Olibene.	"	.863. 12°.		
¹⁴ Calamus oil.	"	.8793. 0°.		
¹⁵ From parsnip oil.	"	.865. 12°.		
¹⁶ Camphene.	"	.8481. 47°.7.		
¹⁷ " "	"	.8387. 58°.9.		
¹⁸ " "	"	.8211. 79°.7.		
¹⁹ " "	"	.8062. 97°.7.		
²⁰ Terebene.	"	.8645. 5°-10°.		
²¹ " "	"	.8605. 10°-15°.		
²² " "	"	.8564. 15°-20°.		
²³ " "	"	.8767. 0°.		
²⁴ " "	"	.8600. 20°.		
²⁵ " "	"	.8433. 40°.		
²⁶ " "	"	.8267. 60°.		
²⁷ " "	"	.8100. 80°.		
²⁸ " "	"	.7933. 100°.		
²⁹ " "	"	.8264. 15°.		

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		²⁹ Orlowsky. B. S. C. 21. 321.

Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Terebenthene.	$C_{10} H_{16}$.	.8767. 0°.	156°-5.	
² " "	"	.8601. 20°.		
³ " "	"	.8436. 40°.		
⁴ " "	"	.8270. 60°.		
⁵ " "	"	.8105. 80°.		
⁶ " "	"	.7939. 100°.		
⁷ Isoterebenthene.	"	.8586. 0°.	175°.	
⁸ " "	"	.8427. 20°.28.		
⁹ " "	"	.8273. 40°.19.		
¹⁰ " "	"	.8131. 58°.32.		
¹¹ " "	"	.7964. 79°.24.		
¹² " "	"	.7793. 100°.		
¹³ From cubeb oil.	$C_{15} H_{24}$.	.9289. 0°.	264°-265°.	
¹⁴ " clove. "	"	.905. 15°.	253°.9.	
¹⁵ " calamus "	"	.942. 0°.	255°-258°.	
¹⁶ Oil of cedar.	"	.9231. 18°.	252°.	
¹⁷ " santal wood.	"	.9190.		
¹⁸ " vitivert.	"	.9332.	255°.	
¹⁹ Petrolene.	"	.8953. 5°-10°.	260°.	
²⁰ " "	"	.8921. 10°-15°.		
²¹ " "	"	.8888. 15°-20°.		
²² Poplar oil.	$C_{20} H_{32}$.	.9002.		Below 100°.
²³ Tetraterebenthene.	$C_{40} H_{64}$.	.977. 0°.		
²⁴ Isopropyl acetylene.	$C_3 H_8$.	.652. 11°.	85°.	-2.
²⁵ Dipropargyl.	$C_6 H_6$.	.81. 18°.		
²⁶ Hexhydroisoxylol.	$C_8 H_{16}$.	.777. 0°.		
²⁷ Tetramethyl allene.	$C_7 H_{12}$.	.9513. 9°.	118°-120°.	
²⁸ Toly phenyl.	$C_{13} H_{12}$.	1.015. 27°.	263°-267°.	
²⁹ Benzyl ethyl benzol.	$C_{15} H_{16}$.	.985. 18°.9.	294°-295°.	
³⁰ Phenanthrene tetrahy- dride.	$C_{14} H_{14}$.	1.067. 10°.2.	310°.	

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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Phenyl xylene.	C ₁₄ H ₁₄ .	1.01. 0°.	283°-286°.	
² From benzyl toluol.	C ₂₁ H ₂₀ .	1.049.	392°-396°.	
³ " phenylbromethyl.	C ₁₅ H ₁₆ .	.98.	278°-280°.	
⁴ " calamus oil.	C ₁₀ H ₁₈ .	.8793. 0°.	158°-159°.	
⁵ Retene.	C ₁₈ H ₁₈ .	1.08-1.13.		98°.5.

XIV. COMPOUNDS CONTAINING C, H, AND O.

Name.	Formula.	Specific Gravity	Boiling Point.	Melt. Point.
⁶ Methyl alcohol.	C H ₄ O.	.7997. 15°.		
⁷ Ethyl "	C ₂ H ₆ O.	.815. 0°.		
⁸ " "	"	.80214. 15°.		
⁹ " "	"	.8150. 5°-10°.		
¹⁰ " "	"	.8113. 10°-15°.		
¹¹ " "	"	.8072. 15°-20°.		
¹² " "	"	.7946. 16°.03.		
¹³ Propyl "	C ₃ H ₈ O.	.8198. 0°.		
¹⁴ " "	"	.80825. 15°.		
¹⁵ Butyl "	C ₄ H ₁₀ O.	.806. 15°.		
¹⁶ Amyl "	C ₅ H ₁₂ O.	.8253. 0°.		
¹⁷ " "	"	.8146. 15°.		
¹⁸ " "	"	.8255. 0°.	130°.	
¹⁹ " "	"	.808. 15°.	128°.	
²⁰ Diethyl carbinol.	"	.832. 0°.		
²¹ " "	"	.819. 16°.	.116°-117°.	

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Name.	Formula.	Specific Gravity	Boiling Point.	Melt. Point.
¹ Diethyl carbinol.	$C_5 H_{12} O.$.831. 0°.	} 116° .5.	
² " " "	"	.816. 18°.		
³ Amylene hydrate.	"	.827. 0°.		
⁴ " " "	"	.815. 18°.	} 118° .5.	
⁵ " " "	"	.827. 17°.		108°.
⁶ Alcohol from amylene.	"	.8258. 0°.	} 103°-104°.	
⁷ " " "	"	.810. 19°.		
⁸ Ethyl allyl hydrate.	"	.826. 0°.	} 134°.	
⁹ " " "	"	.815. 18°.		
¹⁰ Isohexyl alcohol.	$C_6 H_{14} O.$	.83433. 0°.	} 134° .5-135° .5.	
¹¹ " " "	"	.81825. 20°.		
¹² Ethyl propyl carbinol.	"	.8335. 0°.	} 175° .5-177° .5.	
¹³ " " "	"	.8188. 20°.		131°-132°.
¹⁴ Heptyl alcohol.	$C_7 H_{16} O.$	.8323. 17°.	} 181°-182°.	
¹⁵ " " "	"	.823. 16°.		179° .5.
¹⁶ Methyl hexyl carbinol.	$C_8 H_{18} O.$			
¹⁷ " " "	"			
¹⁸ Ethyl oxide.	$C_4 H_{10} O.$	.7297. 5°-10°.	} 131° .1.	
¹⁹ " " "	"	.7241. 10°-15°.		
²⁰ " " "	"	.7185. 15°-20°.		
²¹ Ethyl hexyl oxide.	$C_8 H_{18} O.$.7865. 0°.	} 120°-121°.	
²² " " "	"	.7702. 20°.		
²³ " " "	"	.7574. 40°.		
²⁴ Secondary butyl oxide.	"	.756. 21°.		

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		²³ Lieben. A. C. P. 178. 14.
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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Acetic acid.	$C_2 H_4 O_2$.	1.0647. 5°-10°.	173°.	
² " "	"	1.0591. 10°-15°.		
³ " "	"	1.0535. 15°-20°.		
⁴ Valeric "	$C_5 H_{10} O_2$.	.917. 15°.	163°7-163°8. 35°3-35°5.	
⁵ Trimethylacetic acid.	"	.944. 0°.		
⁶ " "	"	.905. 50°.	205°.	
⁷ Caproic "	$C_6 H_{12} O_2$.	.9438. 0°.		
⁸ " "	"	.928. 20°.		
⁹ " "	"	.9164. 40°.	223°-224.	s.—10°.
¹⁰ Oenanthic "	$C_7 H_{14} O_2$.	.9345. 0°.		
¹¹ " "	"	.9278. 8°5.		
¹² " "	"	.9208. 16°.		
¹³ " "	"	.9110. 28°.		
¹⁴ " "	"	.9359. 0°.		
¹⁵ " "	"	.9348. 9°.		
¹⁶ " "	"	.9235. 28°.	244°-246°.	
¹⁷ Isononylic "	$C_9 H_{18} O_2$.	.90325. 18°.		
¹⁸ Propionic anhydride.	$C_6 H_{10} O_3$.	1.0169. 15°.	168°-169°.	
¹⁹ Methyl formate.	$C_2 H_4 O_2$.	.9928. 0°.	30°4.	
²⁰ " acetate.	$C_3 H_6 O_2$.	.940.	56°-58°.	
²¹ Acetate from amylene.	$C_7 H_{14} O_2$.	.8909. 0°.	124°-124°5.	
²² " " "	"	.8738. 19°.		
²³ " " diethyl-carbinol.	"	.909. 0°.	132°.	
²⁴ " " "	"	.893. 16°.		
²⁵ Isohexyl acetate.	$C_8 H_{16} O_2$.		149°-151.	

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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Ethyl trimethylacetate	$C_7 H_{14} O_2$.875. 0°.	118°5.	
² " caproate.	$C_8 H_{16} O_2$	.8898. 0°.	166°9-167°3.	
³ " "	"	.8728. 20°.		
⁴ " "	"	.8596. 40°.		
⁵ " cœnanthate.	$C_9 H_{18} O_2$	.8735. 16°.	180°-187°.	
⁶ " isononylate.	$C_{11} H_{22} O_2$	.86406. 17°.	213°-215°.	
⁷ Aldehyde.	$C_2 H_4 O$	.8217. 5°-10°.		
⁸ " "	"	.8173. 10°-15°.		
⁹ " "	"	.8130. 15°-20°.]		
¹⁰ Acetone.	$C_3 H_6 O$	.7998. 15°.	53°3-56°6.	
¹¹ Diethyl ketone.	$C_6 H_{10} O$	.829. 0°.	104°.	
¹² " "	"	.811. 19°.		
¹³ Ketone from amylen.	"	.828. 0°.		
¹⁴ " " "	"	.810. 19°.	103°.	
¹⁵ Methyl isopropyl ketone.	"	.811. 15°.	93°-94°.	
¹⁶ Ethyl propyl "	$C_6 H_{12} O$	.833. 0°.	122°-124°.	
¹⁷ Di isopropyl "	$C_7 H_{14} O$	.8254. 17°.	124°-126°.	
¹⁸ Butyrene.	"	.82. 20°.	144°.	
¹⁹ Propylene glycol.	$C_3 H_8 O_2$	1.053. 19°.	216°.	
²⁰ Butylene "	$C_4 H_{10} O_2$	1.0189. 0°.	191°-192.	
²¹ " "	"	1.0059. 17°5.		
²² Amylene "	$C_5 H_{12} O_2$.9945. 0°.		
²³ " "	"	.9800. 19°.	187°5.	

AUTHORITIES.

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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Amylene glycol.	$C_8 H_{12} O_2$.	.9987. 0°.	206°.	
² " "	"	.9843. 21° 5'.		
³ Ethylidene diacetate.	$C_6 H_{10} O_4$.	1.060. 12°.	165°-168°.	38°. 3° 5'
⁴ Propylene "	$C_7 H_{12} O_4$.	1.070. 19°.	209°-210°.	
⁵ Propyl carbonate.	$C_7 H_{14} O_3$.	.968. 22°.	156°-160°.	
⁶ Ethyl oxalate.	$C_6 H_{10} O_4$.	1.1010. 5°-10°.	}	
⁷ " "	"	1.0953. 10°-15°.		
⁸ " "	"	1.0898. 15°-20°.		
⁹ Propyl "	$C_8 H_{14} O_4$.	1.018. 22°.	209°-211°.	
¹⁰ Butyl "	$C_{10} H_{18} O_4$.	1.002. 14°.		
¹¹ Methyl sebate.	$C_{12} H_{22} O_4$.		287°.	
¹² Ethyl "	$C_{14} H_{26} O_4$.		307°.	
¹³ Amyl "	$C_{20} H_{38} O_4$.	.951. 18°.	366°.	
¹⁴ Ethyl tetramethylsuccinate.		1.012. 0°.	} 230°-231°.	
¹⁵ " "		1.0015. 13° 5'.		
¹⁶ " acetosuccinate.	$C_{10} H_{16} O_5$.	1.079. 21°.	260°-263°.	
¹⁷ " acetomalonnate.	$C_9 H_{14} O_5$.	1.080. 23°.	238°-240°.	
¹⁸ Methyl malonnate.	$C_5 H_8 O_4$.	1.135. 22°.	175°-180°.	
¹⁹ Ethyl acrylate.	$C_5 H_8 O_2$.	.9252. 0°.	} 101°-102°.	
²⁰ " "	"	.9136. 15°.		
²¹ " glycerate.	$C_5 H_{10} O_4$.	1.193. 6°.		230°-240°.
²² " allylacetate.	$C_9 H_{14} O_3$.	.982. 20°.		
²³ " glycollate.	$C_4 H_8 O_3$.	1.0333.	150°.	

AUTHORITIES.

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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Ethyl pivalate.*	$C_7 H_{14} O_2$.	.8773. 0°.	} 118°-5.	} 5°-6°.
² " "	"	.8535. 25°.		
³ " diallyloxalate.	$C_{10} H_{12} O_3$.	.9873. 0°.	} 213°-6.	
⁴ " "	"	.9718. 18°.		
⁵ Pyroterebic acid.	$C_6 H_{10} O_2$.	1.006. 26°.	207°.	
⁶ Acid from petroleum.	$C_{11} H_{20} O_2$.	.982. 0°.	} 258°-261°.	
⁷ " " "	"	.969. 23°.		
⁸ Ether of above acid.	$C_{13} H_{24} O_2$.	.939. 0°.	} 236°-240°.	
⁹ " " " "	"	.919. 27°.		
¹⁰ Propyl salicylate.	$C_{10} H_{12} O_3$.	1.021. 21°.	238°-240°.	
¹¹ Glycerin.	$C_3 H_8 O_3$.	1.2609.	} 290°.58.	} 15°-5.
¹² " "	"	"		
¹³ " cryst.	"	1.261. 15°-5.		
¹⁴ Glycerin ether.	$C_6 H_{10} O_3$.	1.0907. 18°.	170°-172°.	
¹⁵ " "	"	1.16. 16°.		
¹⁶ Cane sugar.	$C_{12} H_{22} O_{11}$.	1.5951. 15°.	} 250°-253°.	
¹⁷ " "	"	1.63.		
¹⁸ Aldol.	$C_4 H_8 O_2$.	1.1208. 0°.		
¹⁹ " "	"	1.1094. 16°.		
²⁰ " "	"	1.0819. 49°-6.		
²¹ Dibutylated ethyl acetate.	$C_{14} H_{26} O_3$.	.947. 10.	250°-253°.	
²² Derivative of amyl aldehyde.	$C_{10} H_{18} O_2$.	.861. 0°.	} 187°-191°.	
²³ " "	"	.851. 14°.		

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* Compare with Ethyl Trimethylacetate.

Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Pinacolin. Synthetic.	$C_6 H_{12} O.$	.830. 0°.	} 106°.	
² " " "	"	.791. 50°.		
³ " From acetone.	"	.823. 0°.		
⁴ " " "	"	.787. 50°.		
⁵ Methyl amyl pinacolin	$C_7 H_{14} O.$	.842. 0°.	} 131°-5-132°-5	
⁶ " " "	"	.825. 21°.		
⁷ Butyl ethyl " "	"	.831. 0°.	} 125°-5-126°.	
⁸ " " " "	"	.810. 21°.		
⁹ Ethyl amyl " "	$C_8 H_{16} O.$	.845. 0°.	} 150°-5-151°-5	
¹⁰ " " " "	"	.829. 21°.		
¹¹ Pinacolic alcohol.	$C_6 H_{14} O.$	.8347. 0°.	120°-5.	
¹² Diacetone " "	$C_6 H_{12} O_2.$	.9306. 25°.	163°-5-164°-5	
¹³ Propargyl acetate.	$C_5 H_6 O_2.$	1.0031. 12°.	124°-125°.	
¹⁴ Phenylethyl "	$C_{10} H_{12} O_2.$	1.05. 17°.	213°-216°.	
¹⁵ Phenylacetone.	$C_9 H_{10} O.$	1.010. 3°.	215°.	
¹⁶ Phenyl propyl alcohol.	$C_9 H_{12} O.$	1.008. 18°.	235.	
¹⁷ " " ketone.	$C_{10} H_{12} O.$	.990. 15°.	220°-222°.	
¹⁸ " " " "	"	.992. 15°.	218°-221°.	
¹⁹ Propyl phenate.	$C_9 H_{12} O.$	.968. 20°.	190°-191°.	
²⁰ Acetophenone alcohol	—	1.013.	202°-203°.	
²¹ Benzyl phenylacetate.	$C_{15} H_{14} O_2.$	1.101.	317°-319°.	
²² Ngai camphor.	$C_{10} H_{18} O.$	1.02.		204°.
²³ Anethol.	$C_{10} H_{12} O.$	.984. 20°.		
²⁴ Acetocinnamone.	$C_{10} H_{10} O.$	1.008.	240°-241°.	
²⁵ Phloryl ethyl ether.	$C_{10} H_{14} O.$.9323. 18°.	215°-217°.	
²⁶ Phenol.	$C_6 H_6 O.$	1.0709. 38°.		36°.
²⁷ " "	"	1.066. Cryst.	180°-180°-5.	40°-41°.

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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Phenol.	$C_6 H_6 O$.	1.05433. 40°.		
² "	"	1.04663. 50°.		
³ "	"	1.03804. 60°.		
⁴ "	"	1.02890. 70°.		
⁵ "	"	1.01950. 80°.		
⁶ "	"	1.01015. 90°.		
⁷ "	"	1.00116. 100°.		
⁸ " From tar.	"	1.0558. 46°.	182°.1.	38°-40°.
⁹ " "	"	1.0463. 56°.		
¹⁰ " From para- oxybenzoic acid.	"	1.0567. 46°.	182°.1.	38°-40°.
¹¹ " "	"	1.0470. 56°.		
¹² " From salicy- lic acid.	"	1.0560. 46°.	182°.1.	39°.
¹³ " "	"	1.0467. 56°.		
¹⁴ " From oxyben- zoic acid.	"	1.0559. 46°.	182°.3-182°.5	39°.5.
¹⁵ " "	"	1.0476. 56°.		
¹⁶ Eugenol.	$C_{10} H_{12} O_2$.	1.066. 15°.	251°.8.	
¹⁷ Methyl eugenol.	$C_{11} H_{14} O_2$.	1.046. 15°.	262°.5.	
¹⁸ Ethyl "	$C_{12} H_{16} O_2$.	1.026. 0°.	252°-254°.	
¹⁹ " "	"	1.0117. 18°.5.		
²⁰ Carvol.	$C_{10} H_{14} O$.	.9530. 20°.	227°.	
²¹ Dill carvol.	"	.9562. 20°.		
²² Thymol.	"	1.009136. 0°.	244°.7.	
²³ "	"	.92424. 100°.		

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Name.	Formula.	Specific Gravity	Boiling Point.	Melting Point.
¹ Cymothymol.	$C_{10}H_{14}O$.	1.01068. 0°.	245° .8.	
² Methyl thymol.	$C_{11}H_{16}O$.	.953898. 0°.	216° .7.	
³ " "	"	.869281. 100°.		
⁴ " "	"	.954314. 0°.		
⁵ " "	"	.870459. 100°.	216° .8.	
⁶ Acetyl "	$C_{12}H_{16}O_2$.	1.009. 0°.	244° .7.	}
⁷ " "	"	.924. 100°.		
⁸ " "	"	1.010. 0°.	245° .8.	
⁹ Menthol. } Two	$C_{10}H_{14}O$.	.9515. 20°.	225°.	}
¹⁰ " } specimens.	"	.9394. 20°.	225°.	
¹¹ Myristicol.	"	.9466. 20°.	224°.	
¹² Citronellol } Two	$C_{10}H_{16}O$.	.8742. 20°.	200°.	}
¹³ " } specimens.	"	.875. 20°.	200°.	
¹⁴ Absinthol.	"	.9267. 20°.	217°.	
¹⁵ Oil of Melaleuca erici- folia.	$C_{10}H_{18}O$.	.8960. 20°.	173°.	
¹⁶ " " " linari- folia.	"	.8985. 20°.	173°.	
¹⁷ " " Eucalyptus oleosa.	"	.9075. 20°.	171°-176°.	
¹⁸ Cajeputol.	"	.9160. 20°.	174°.	
¹⁹ Furfurol.	$C_5H_4O_2$.	1.006. 27°.	168°.	
²⁰ Cholesterine.	$C_{26}H_{44}O$.	1.046-1.047. 20°.		

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XV. COMPOUNDS CONTAINING C. H. AND N.

Name.	Formula.	Specific Gravity	Boiling Point.	Melt. Point.
¹ Hexylamine.	C ₆ H ₁₅ N.	.7638.	116°.	
² Propylene diamine.	C ₃ H ₁₀ N ₂ .	.878. 15°.	119°-120°.	
³ Meta toluidine.	C ₇ H ₉ N.	.998. 25°.	197°.	
⁴ Methyl aniline.	"	.976. 15°.	190°-191°.	
⁵ Meta ethyltoluidine.	C ₉ H ₁₃ N.	.869. 20°.	158°-159°.	
⁶ Phenylacetic nitrile.	C ₈ H ₇ N.	1.0155. 8°.	229°.	
⁷ From oil of tropaeolum majus.	C ₈ H ₇ N.	1.0146. 18°.	231°.	9.
⁸ Nasturtium oil.	C ₉ H ₉ N.	1.0014. 18°.	261°.	

XVI. COMPOUNDS CONTAINING C. H. N. AND O.

Name.	Formula.	Specific Gravity	Boiling Point.	Melt. Point.
⁹ Propyl nitrite.	C ₃ H ₇ N O ₂ .	.935. 21°.		
¹⁰ Amyl "	C ₅ H ₁₁ N O ₂ .	.902-.9026.		
¹¹ Nitromethane.	C H ₃ N O ₂ .		99°.	
¹² Nitroethane.	C ₂ H ₅ N O ₂ .	1.0582. 13°.	111°-113°.	
¹³ Nitropropane.	C ₃ H ₇ N O ₂ .		125°-127°.	
¹⁴ Dinitroethane.	C ₂ H ₄ N ₂ O ₄ .	1.3503. 23°.	185°-186°.	
¹⁵ αDinitropropane.	C ₃ H ₆ N ₂ O ₄ .	1.258. 22°.	189°.	
¹⁶ Nitrosnitric glycol.	C ₂ H ₄ N ₂ O ₅ .	1.472.		
¹⁷ Nitroglycerine.	C ₃ H ₅ N ₃ O ₉ .	1.6. 15°.		s.-4°.

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Name.	Formula.	Specific Gravity	Boiling Point.	Melt. Point.
¹ Nitrobenzol.	$C_6 H_5 N O_2$.	1.2159. 5°-10°.	}	
² " "	"	1.2107. 10°-15°		
³ " "	"	1.2504. 15°-20°.		
⁴ Mononitrocymol.	$C_{10} H_{13} N O_2$.	1.0385. 18°.		
⁵ Dinitrocymol.	$C_{10} H_{12} N_2 O_4$.	1.206. 18°.5.		
⁶ " "	"	1.204. 21°.		
⁷ Metanitrobenzoic acid.	$C_7 H_5 N O_4$.	1.4721.		
⁸ Orthonitrobenzoic "	"	1.5588.		
⁹ Paranitrobenzoic "	"	1.5804.		
¹⁰ Methyl orthonitrophenate.	$C_7 H_7 N O_3$.	1.268. 20°.				265°.
¹¹ " paranitrophenate.	"	1.233. 20°.		51°.
¹² " adinitrophenate	$C_7 H_6 N_2 O_3$.	1.341. 20°.		88°.
¹³ " β "	"	1.319. 20°.		118°.
¹⁴ " trinitrophenate	$C_7 H_5 N_3 O_7$.	1.408. 20°.		64°.
¹⁵ Oxetheniline.	$C_8 H_{11} N O$.	1.11. 0°.	280°.	
¹⁶ Ethylglycollic nitrile.	$C_4 H_7 N O$.	.918. 6°.	134°-135°.	
¹⁷ Hydroxycaprylonitrile	$C_8 H_{15} N O$.	.9048. 17°.		
¹⁸ Leucine.	$C_6 H_{13} N O_3$.	1.293. 18°.		
¹⁹ Cyanuric acid.	$C_3 N_3 H_3 O_3$.	1.768. 0°.		
²⁰ " "	"	2.500. 19°.		
²¹ " "	"	2.228. 24°.		
²² " "	"	1.725. 48°.		
²³ Cyanelfide.	$(C N H O)_{11}$.	1.974. 0°.		
²⁴ " "	"	1.774. 24°.		

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XVII. METALLIC SALTS OF ORGANIC ACIDS.

Name.	Formula.	Specific Gravity.	Boil. Point.	Melt. Point.
¹ Sodium triacetate.	Na C ₆ H ₁₁ O ₆ .	1.47.		112°.
² Potassium "	K C ₆ H ₁₁ O ₆ .	1.34.		127°.
³ Ammonium tartar emetic.	(Am(SbO)C ₄ H ₄ O ₆) ₂ .H ₂ O.	2.324.		
⁴ Calcium formate.	Ca C ₂ H ₂ O ₄ .	2.021. Powder.		
⁵ Strontium. "	Sr C ₂ H ₂ O ₄ . 2 H ₂ O.	2.266. "		
⁶ " "	"	2.252. Crystals.		
⁷ Barium "	Ba C ₂ H ₂ O ₄ .	3.193. "		
⁸ " "	"	3.219. Powder.		
⁹ Lead "	Pb C ₂ H ₂ O ₄ .	4.621. "		
¹⁰ " "	"	4.610. Crystals.		
¹¹ Copper "	Cu C ₂ H ₂ O ₄ 4 H ₂ O.	1.795. "		
¹² " "	"	1.811. Powder.		
¹³ Zinc "	Zn C ₂ H ₂ O ₄ . 2 H ₂ O.	2.339. "		
¹⁴ Potassium orthonitrophenate.		1.682. 20°.		
¹⁵ Silver "		2.661. 20°.		
¹⁶ Barium "		2.3301. 20°.		
¹⁷ Lead "	Pb ₂ C ₁₂ H ₈ N ₂ O ₇ . H ₂ O.	2.712. 20°.		
¹⁸ Potassium metanitrophenate.		1.691. 20°.		
¹⁹ Barium "		2.343. 20°.		
²⁰ Lead "	Pb C ₆ H ₅ N O ₄ .	2.694. 20°.		

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⁸ Schröder. B. D. C. G. 8. 199.		

Name.	Formula.	Specific Gravity.	Boil. Point.	Melt. Point.
¹ Potassium paranitrophenate.		1.652. 20°.		
² Silver "		2.652. 20°.		
³ Barium "	Ba C ₁₂ H ₈ N ₂ O ₆ . 8 H ₂ O.	2.322. 20°.		
⁴ Lead "	Pb C ₆ H ₅ N O ₄ . 2 H ₂ O.	2.682. 20°.		
⁵ Potassium dinitrophenate.		1.778. 20°.		
⁶ Silver "		2.755. 20°.		
⁷ Barium "	Ba C ₁₂ H ₆ N ₄ O ₆ . 4 H ₂ O.	2.439. 20°.		
⁸ Lead "	Pb C ₆ H ₄ N ₂ O ₆ . 2 H ₂ O.	2.817. 20°.		
⁹ Potassium ₃ "		1.757. 20°.		
¹⁰ Silver "		2.733. 20°.		
¹¹ Barium "		2.406. 20°.		
¹² Lead "	Pb C ₁₂ H ₆ N ₄ O ₁₁	2.807. 20°.		
¹³ Potassium picrate.	K C ₆ H ₂ N ₃ O ₇ .	1.852. 20°.		
¹⁴ Silver "	Ag C ₆ H ₂ N ₃ O ₇ . H ₂ O.	2.816. 20°.		
¹⁵ Barium "	Ba C ₁₂ H ₄ N ₆ O ₁₄ . 4 H ₂ O.	2.518. 20°.		
¹⁶ Lead "	Pb C ₁₂ H ₄ N ₆ O ₁₄ . H ₂ O.	2.831. 20°.		

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XVIII. COMPOUNDS CONTAINING C. H. AND CL.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Chloride from diethyl carbinol.	C ₅ H ₁₁ Cl.	.916. 0°. } .895. 21°. }	103°-105°.	
² " " "	"			
³ Amylene hydrochlorate.	"	.912. 0°. } .891. 21°. }	125°-128°.	
⁴ " " "	"			
⁵ Hexyl chloride.	C ₆ H ₁₃ Cl.	.895. 13°.	182°.	
⁶ Octyl " "	C ₈ H ₁₇ Cl.	.850.		
⁷ Ethylene " "	C ₂ H ₄ Cl ₂ .	1.272. 14°. } 1.201. 13°. }	61°.	
⁸ Ethylidene " "	"		117°.	
⁹ Propylene " "	C ₃ H ₆ Cl ₂ .	1.201. 15°.	8.5°-87°.	
¹⁰ Propylidene " "	"	1.143. 10°.	62°.	
¹¹ Chloroform.	C H Cl ₃ .	1.502.	60°5.	
¹² " " "	"	1.500. 15°.	87°.	
¹³ Monochloroamylene.	C ₅ H ₉ Cl.	.872. 5°.1.		
¹⁴ Monochloro benzol.	C ₆ H ₅ Cl.	1.12855. 0°.	From benzol.	
¹⁵ " " "	"	1.11807. 9°.79.		
¹⁶ " " "	"	1.10467. 22°.43.		
¹⁷ " " "	"	1.04428. 77°.27.		

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Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Monochloro benzol.	$C_6 H_5 Cl.$	1.12818. 0°.	} From phenol.	
² " "	"	1.11421. 9°.79.		
³ " "	"	1.10577. 22°.43.		
⁴ " "	"	1.04299. 77°.27.		
⁵ Dichlorobenzol.	$C_6 H_4 Cl_2.$	1.3148.	172°-173°.	
⁶ " ortho.	"	1.3278. 0°.	179°.	
⁷ " meta.	"	1.307. 0°.	172°.	
⁸ Monochlorotoluol.	$C_7 H_7 Cl.$	1.0735. 27°.2.	158°-161°.	
⁹ Dichlortoluol.	$C_7 H_6 Cl_2.$	1.2596. 18°.4.	} 196°-198°.	
¹⁰ " "	"	1.2518. 16°.		
¹¹ Benzyl dichloride.	"	1.295. 16°.	212°-214°.	
¹² Trichlortoluol.	$C_7 H_5 Cl_3.$	1.4093. 19°.5.	237°.	
¹³ Dichlorbenzotrichloride.	$C_7 H_3 Cl_5$	1.5829. 16°.	273°.	
¹⁴ Allylene dichloride.	$C_3 H_4 Cl_2.$	1.233. 17°.5.	109°.	
¹⁵ " tetrachloride.	$C_3 H_4 Cl_4.$	1.503. 17°.5.	171°.	
¹⁶ " "	"	1.482-1.485.	153°.	
¹⁷ Propargyl chloride.	$C_3 H_3 Cl.$	1.0454. 5°.	65°.	
¹⁸ Pinacolie "	$C_6 H_{13} Cl.$	.8991. 0°.	112°.5-114°.5.	
¹⁹ Dichloroglycide.	$C_3 H_4 Cl_2.$	1.21.		
²⁰ " "	"	1.22. 8°.	97°-98°.	
²¹ Naphtyl chloride.	$C_{10} H_7 Cl.$	1.2025. 15°.	251°-255°.	
²² Isoterebenthen chlorhydrate.	$C_{10} H_{17} Cl.$.9927. 0°.	210°.	

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XIX. COMPOUNDS CONTAINING C. H. O. AND CL.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Deriv. of chloral hydrate.	$C_4 H_4 Cl_4 O_2$.	1.4761. 17°.	185°.	
² Diacetyl chloral hydrate.	$C_6 H_7 Cl_3 O_4$.	1.422. 11°.	221°-222°.	
³ Acetyl chloral alcoholate.	$C_6 H_9 Cl_3 O_3$.	1.327. 11°.	198°.	
⁴ Deriv. of chloral.	$C_7 H_{10} Cl_4 O_3$.	1.42. 11°.		
⁵ " "	$C_6 H_6 Cl_3 O_2$.	1.73. 17°.		
⁶ Tetrachlorinated ether.	$C_4 H_6 Cl_4 O$.	1.4379. 0°.		
⁷ " "	"	1.4182. 15°.	189°.	
⁸ " "	"	1.3055. 99°.		
⁹ Pentachlorinated ether.	$C_4 H_5 Cl_5 O$.	1.577. 8°.		235°.
¹⁰ Dichloracetone.	$C_3 H_4 Cl_2 O$.	1.326. 0°.	121°.	
¹¹ Monochloracetal	$C_6 H_{13} Cl O_2$.	1.0418. 0°.	156°.	
¹² " "	"	1.0416. 26°.		
¹³ " "	"	.9315. 99°.		
¹⁴ Monochloracetin	$C_5 H_9 Cl O_3$.	1.27. 9°.	230°.	
¹⁵ Bichloracetin.	$C_5 H_8 Cl_2 O_2$.	1.274. 8°.	194°-195°.	

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Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Methyl monochloracetate.	$C_3 H_5 Cl O_2$.	1.22. 15°.	126°-127°.	
² Methylene chloracetate.	"	1.1953. 14°.2.	115°-116°.	
³ Paradichloraldehyde.	$C_2 H_2 Cl_2 O$.	1.69. Solid.		129°-130°.
⁴ Deriv. of valerylene.	$C_4 H_7 Cl O_2$.	1.065. 15°.		
⁵ Monochlorhydrin.	$C_3 H_7 Cl O_2$.	1.4. 13°.	230°-235°.	
⁶ Ether of monochlorhydrin.	$C_5 H_{11} Cl O_2$.	1.117. 11°.	183°-185°.	
⁷ Dichlorhydrin.	$C_3 H_6 Cl_2 O$.	1.369. 9°.	179°-180°.	
⁸ "	"	1.383. 19°.	171°-171°.5.	
⁹ Propyl glycol chlorhydrin.	$C_3 H_7 Cl O$.	1.132. 17°.	160°.	
¹⁰ Diallyl dichlorhydrin	$C_8 H_{12} Cl_2 O_2$.	1.4. 7°.		
¹¹ Chlorodracylic chloride.		1.377.	220°-222°.	
¹² Chloranethol.	$C_{10} H_{11} Cl O$.	1.191. 20°.	228°-230°.	3°-4°.
¹³ Ethyl ortho dichlorobenzoate.	$C_9 H_8 Cl_2 O_2$.	1.3278. 0°.	271°.	
¹⁴ Monochlorophenol.	$C_6 H_5 Cl O$.	1.306. 20°.	218°-219°.	
¹⁵ Benzophenone chloride.		1.235. 18°.5.	298°-300°.	

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XX. COMPOUNDS CONTAINING C. H. Cl. N.; OR C. H. Cl. N. O.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Dichlorethylamine.	$C_2 H_5 Cl_2 N.$	1.2397. 5°.	88°-89°.	
² " "	"	1.2300. 15°.		
³ Chloracetoni- trile.	$C_2 H_2 Cl N.$	1.204. 11°.	123°-124°.	
⁴ " "	"	1.193. 20°.	126°-127°.	
⁵ Dichloracetoni- trile.	$C_2 H Cl_2 N.$	1.374. 11°.	112°-113°.	
⁶ Trichloracetoni- trile.	$C_2 Cl_3 N.$	1.439. 12°.	83°-84°.	
⁷ Chloroxaethy- line.	$C_6 H_9 Cl N_2.$	1.1420. 15°.	217°-218°.	
⁸ Ortho chlorani- line.	$C_6 H_6 Cl N.$	1.2338. 0°.	207°.	
⁹ Meta " "	"	1.2432. 0°.	230°.	
¹⁰ Chloronitro me- thane.	$C H_2 Cl N O_2.$	1.466. 15°.	122°-123°.	
¹¹ Deriv. of aceta- nilide.	$C_5 H_7 Cl NO. HO Cl.$	1.3893. 20°.		
¹² Chloronitro to- luol.	$C_7 H_6 Cl N O_2.$	1.300. 20°.	249°.	

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XXI. ORGANIC COMPOUNDS CONTAINING BROMINE.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Ethyl bromide.	C ₂ H ₅ Br.	1.4775. 5°-10°.	} 38°-39°. 38°.5-39°.5.	
² " "	"	1.4679. 10°-15°.		
⁸ " "	"	1.4582. 15°-20°.		
⁴ " "	"	1.385. 15°.		
⁵ " "	"	1.47. 15°.		
⁶ Butylene "	C ₄ H ₈ Br ₂ .	1.8503. 0°.	} 164°-165°.	
⁷ " "	"	1.8204. 20°.		
⁸ Amylene "	C ₅ H ₁₀ Br ₂ .	1.3443. 0°.	} 170°-175°.	
⁹ " "	"	1.7087. 0°.		
¹⁰ " "	"	1.6868. 14°.	} 178°.	
¹¹ Hexylene "	C ₆ H ₁₂ Br ₂ .	1.6058. 0°.		
¹² " "	"	1.5809. 19°.	} 195°-197°.	
¹³ " "	"	1.6497. 0°.		
¹⁴ Dibromomethane.	C H ₂ Br ₂ .	2.0844. 11°.5.	} 80°-82°.	
¹⁵ Bromo-ethylene bromide.	C ₂ H ₃ Br ₃ .	2.624. 16°.		
¹⁶ " "	"	2.65. 0°.	} 184°-185°.	
¹⁷ Bromo-propylene, <i>a</i> .	C ₃ H ₅ Br.	1.364. 19°.5.		
¹⁸ " " <i>β</i> .	"	1.428. 19°.5.	} 59°.5-60.	
¹⁹ Bromo- <i>β</i> propylene bromide.	C ₃ H ₅ Br ₃ .	2.356. 18°.		
²⁰ " " "	"		} 200°-201°.	

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Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Monobromo hexylene.	$C_6 H_{11} Br.$	1.2205. 0°.	140°-141°.	
² " "	"	1.2025. 15°.		
³ Propargyl bromide.	$C_3 H_3 Br.$	1.52. 20°.	88°-90°.	
⁴ " "	"	1.59. 11°.	88°-90°.	
⁵ " tribromide.	$C_3 H_3 Br_3.$	2.53. 10°.		
⁶ " tetrabromide.	$C_3 H_3 Br_4.$	3.01. 10°.		
⁷ Dipropargyl tetrabromide.	$C_6 H_6 Br_4.$	2.464. 19°.		
⁸ Dibromo diallyl.	$C_6 H_8 Br_2.$	1.656.	205°-210°.	
⁹ Acetylene dibromide.	$C_2 H_2 Br_2.$	2.120. 17°.	157°	
¹⁰ " tetrabromide.	$C_2 H_2 Br_4.$	2.848. 21°.		
¹¹ Monobromo benzol.	$C_6 H_5 Br.$	1.51768. 0°.	154°86. 155°52.	
¹² " "	"	1.50236. 11°.46.		
¹³ " "	"	1.48977. 20°.96.		
¹⁴ " "	"	1.41163. 77°.76.		
¹⁵ " "	"	1.519. } 0°.		
¹⁶ " "	"	1.522. }		
¹⁷ Ortho bromo toluol.	$C_7 H_7 Br.$	1.401. 18°.	182°-183°.	
¹⁸ Methyl bibromopropionate, α .	$C_4 H_6 Br_2 O_2.$		203°.	
¹⁹ " " β .	"	1.9043. 0°.	175°-179°.	
²⁰ " " "	"	1.8973. 12°.		

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Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Ethyl bibromopropionate, <i>a</i> .	$C_5 H_8 Br_2 O_2$.	1.7728. 0°. }	190°-191°.	
² " " "	"	1.7536. 12°. }		
³ " " β .	"	1.796. 0°. }		
⁴ " " "	"	1.777. 15°. }	211°-214°.	
⁵ Propyl " <i>a</i> .	$C_6 H_{10} Br_2 O_2$.	1.6842. 0°. }	200°-204°.	
⁶ " " "	"	1.6632. 12°. }		
⁷ Butyl " "	$C_7 H_{12} Br_2 O_2$.	1.6008. 0°. }	213°-218°.	
⁸ " " "	"	1.5778. 12°. }		
⁹ Allyl " β .	$C_6 H_8 Br_2 O_2$.	1.843. 0°. }	215°-220°.	
¹⁰ " " "	"	1.818. 20°. }		
¹¹ Ethyl bromisobutyrate.	$C_6 H_{11} Br O_2$	1.328. 0°. }	158°-159°.	
¹² " " "	"	1.300. 19°.5. }		
¹³ Bromodiethylin.	$C_7 H_{15} Br O_2$.	1.258. 8°.	<i>a</i> 200°.	
¹⁴ Monobrom-ethylallyl oxide.	$C_5 H_9 Br O$.	1.27. 12°.	130°-135°.	
¹⁵ Bibromo allyl oxide.	$C_6 H_8 Br_2 O$.	1.7. 17°.	212°-215°.	
¹⁶ Bromo bromacetin.	$C_4 H_6 Br_2 O_2$.	1.98. 0°.	193°-195°.	
¹⁷ _____	$C_2 H_4 Br_2 O$.	2.35. 0°.	179°-181°.	
¹⁸ Dibromhydrin.	$C_3 H_6 Br_2 O$.	2.02. 18°.5.	214°-220°.	
¹⁹ Bromotoluidine.	$C_7 H_8 Br N$.	1.510. 20.	240°.	8°.
²⁰ Chlorobromhydrin.	$C_3 H_6 Cl Br O$.	1.764. 9°.	197°.	
²¹ Chloro dibromonitro methane.	$C Cl Br_2 N O_2$.	2.421. 15°.		
²² Chlorobromonitritin.	$C_3 H_5 Cl Br N O_3$.	1.7904. 9°.		

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⁷ { Philippi. Göttingen Inaug. Diss. 1873.	¹⁴ L. Henry. B. D. C. G. 5. 186.	²¹ Tscherniak. B. D. C. G. 8. 610.
		²² L. Henry. B. D. C. G. 4. 701.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Carbon chloro-bromide.	C Cl ₃ Br.	2.058. 0°.	104°.	
² " "	"	1.842. 100°.		
³ Propylene "	C ₃ H ₆ Cl Br.	1.63. 8°.	140°-141°.	
⁴ " "	"	1.474. 21°.	93°-95°.	
⁵ " "	"	1.60. 20°.	110°.	
⁶ " "	"	—	120°.	

XXII. ORGANIC COMPOUNDS CONTAINING IODINE.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
⁷ Methyl iodide.	C H ₃ I.	2.2905. 16°.	41°.8.	
⁸ Ethyl "	C ₂ H ₅ I.	1.9567. 5°-10°.		
⁹ " "	"	1.9457. 10°-15°.		
¹⁰ " "	"	1.9348. 15°-20°.		
¹¹ Iodide from diethylcarbinol.	C ₅ H ₁₁ I.	1.528. 0°.	145°-146°.	
¹² " "	"	1.501. 20°.		
¹³ Amylene hydriodate.	"	1.539. 0°.	144°-145°.	
¹⁴ " "	"	1.510. 20°.		
¹⁵ " "	"	1.5207. 0°.	129°-130°.	
¹⁶ " "	"	1.4954. 19°.		
¹⁷ Isohexyl iodide.	C ₆ H ₁₃ I.		164°-166°.	
¹⁸ Pinacolic "	"	1.4739. 0°.	140°-144°.	
¹⁹ Ethylidene "	C ₂ H ₄ I ₂ .	2.84. 0°.	177°-179°.	

AUTHORITIES.

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⁴ Reboul. B. D. C. G. 7.	¹⁰ Regnault. P. A. 62. 50.	¹⁸ Friedel & Silva. C. S. J. (2). 11. 488.
⁵ Reboul. B. D. C. G. 7.	¹¹ Wagner & Saytzeff. A. C. P. 179. 318.	¹⁹ Gustavson. B. S. C. 22. 13.
⁶ Reboul. B. D. C. G. 7.	¹² Wagner & Saytzeff. A. C. P. 179. 318.	
	¹³ Wagner & Saytzeff. A. C. P. 179. 318.	
	¹⁴ Wagner & Saytzeff. A. C. P. 179. 318.	

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Vinyl iodide.	$C_2 H_3 I.$	2.09. 0°.	56°.	
² Acetylene diiodide.	$C_2 H_2 I_2.$	3.303. 21° Solid.		73° s. 70°
³ " "	"	2.942. 21° Fluid.		
⁴ Diiodhydrin.	$C_3 H_6 I_2 O.$	2.4.		
⁵ Ortho chloriodobenzol.	$C_6 H_4 I Cl.$	1.928. 24°.5.	229°-230°.	
⁶ Bichloro iodhydrin.	$C_3 H_5 Cl_2 I.$	2.0476. 9°.	205°.	
⁷ Chlorobromiodhydrin.	$C_3 H_5 Cl Br I.$	2.325. 9°.		
⁸ Ethylene bromiodide.	$C_2 H_4 Br I.$	2.516. 29°.	162°-167°.	28°.
⁹ " "	"	2.514. 30°.	163°.	27°.7.
¹⁰ Ethylidene "	"	2.705. 18° S.	}	
¹¹ " "	"	2.452. 16° L.		
¹² Iododibromovinyl.	$C_2 H_3 Br_2 I.$	2.86. 29°.		

XXIII. ORGANIC COMPOUNDS CONTAINING SULPHUR.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
¹³ Butyl sulphide.	$C_8 H_{18} S.$	.8523. 0°.	} 182°.	
¹⁴ " "	"	.8386. 16°.		
¹⁵ " "	"	.8317. 23°.		165°.
¹⁶ Ethyl sulphhydrate.	$C_2 H_6 S.$	.8456. 5°-10°.	}	
¹⁷ " "	"	.8406. 10°-15°.		
¹⁸ " "	"	.8356. 15°-20°.		

AUTHORITIES.

¹ Gustavson. B. D. C. G. 7. 731.	⁶ L. Henry. B. D. C. G. 4. 701.	¹² Simpson. C. N. 29. 53.
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³ Sabanejeff. A. C. P. 178. 121.	⁸ Simpson. C. N. 29. 53.	¹⁴ { Grabowsky & Saytzeff. A. C. P. 175. 351.
⁴ Nalmacher. B. D. C. G. 5. 356.	⁹ Friedel. C. R. 79. 164.	¹⁵ Reymann. C. S. J. (2). 13. 141.
⁵ Beilstein & Kurbatow. A. C. P. 176. 43.	¹⁰ { Lagermark. B. D. C. G. 7. 907.	¹⁶ { Regnault. P. A. 62. 50.
	¹¹ { Lagermark. B. D. C. G. 7. 907.	¹⁷ { Regnault. P. A. 62. 50.
		¹⁸ { Regnault. P. A. 62. 50.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Butyl sulphydrate.	$C_4 H_{10} S.$	.858. 0°.	} 84°-85°. 235°-236°. 230°-231°. 233°.	
² " "	"	.843. 16°.		
³ " "	"	.8299. 17°.		
⁴ Cymol "	$C_{10} H_{14} S.$	.9975. 17°.5.		
⁵ " "	"	.989.		
⁶ " "	"	.995.		
⁷ Methyl cymol sulphydrate.	$C_{11} H_{16} S.$	.986.	244°.	
⁸ Ethyl ethylsulphacetate.	$C_6 H_{12} S O_2.$	1.047. 4°.	187°-189°.	
⁹ " amylsulphacetate.	$C_9 H_{18} S O_2.$	.979.	230°.	
¹⁰ " phenylsulphacetate.	$C_{10} H_{12} S O_2.$	1.136.	} 276°-278°. p. d.	
¹¹ " "	"	1.1269. 15°.		
¹² Methyl disulphocarbonate.	$C_3 H_6 S_2 O.$	1.176. 18°.	167°-168°.	
¹³ Xanthogenic ether.	$C_4 H_8 S_2 O.$	1.12. 18°.	184°.	
¹⁴ Isomer of xanthogenic ether.	"	1.129. 18°.	184°.	
¹⁵ Butyl sulphethyl-dioxy carbonate.	$C_7 H_{14} S_2 O.$	.9939. 10°.	190°-195°.	
¹⁶ Ethyl sulphobutyldioxy carbonate.	"	.9938. 10°.	190°-193°.	
¹⁷ Ethyl sulphocyanide.	$C_3 H_5 N S.$	1.033. 0°.	} 146°.	
¹⁸ " "	"	1.01261. 19°.		
¹⁹ " "	"	1.00238. 22°.		
²⁰ " "	"	.870135.		
²¹ " "	"	.869367.		

AUTHORITIES.

¹ Grabowsky & Saytzeff. A. C. P. 175. 351.	⁷ Bechler. Leipzig Inaug. Diss. 1873.	¹⁴ Salomon. J. F. P. (2). 8. 114.
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³ Reymann. C. S. J. (2). 13. 141.	⁹ Claesson. B. D. C. G. 8. 122.	¹⁶ Mylius. B. D. C. G. 6. 312.
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⁶ Bechler. Leipzig Inaug. Diss. 1873.	¹² Salomon. J. F. P. (2). 8. 114.	¹⁹ { Buff. B. D. C. G. 1. 206.
	¹³ Salomon. J. F. P. (2). 8. 114.	²⁰ { Buff. B. D. C. G. 1. 206.
		²¹ { Buff. B. D. C. G. 1. 206.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melting Point.
¹ Ethyl isosulphocyanide.	$C_3 H_5 N S$	1.01913.	} 133°.2.	
² " " "	"	1.019375.		
³ " " "	"	.997525. 21°.4.		
⁴ " " "	"	.997235. 22°.		
⁵ " " "	"	.87909.		
⁶ " " "	"	.873513.		
⁷ Isopropylsulphocyanide.	$C_4 H_7 N S$.989. 0°.	} 152°-153°.	
⁸ " " "	"	.974. 15°.		
⁹ Hexyl " "	$C_7 H_{13} N S$.9253.	} 182°.	
¹⁰ Amyl isosulphocyanide.	$C_6 H_{11} N S$	.957538. 0°.	
¹¹ " " "	"	.94189. 17°.	} 182°.	
¹² " " "	"	.78749. 182°.		
¹³ Allyl sulphocyanide.	$C_4 H_5 N S$	1.071. 0°.	} 148°-149°.	
¹⁴ " " "	"	1.056. 15°.		
¹⁵ Phenyl " "	$C_7 H_5 N S$	1.155. 17°.5.	} 231°.	
¹⁶ Acetyl " "	$C_3 H_3 O N S$	1.151. 16°.		
¹⁷ Benzoyl " "	$C_8 H_5 O N S$	1.197. 16°.		
¹⁸ Monochlorallyl sulphocyanide.	$C_4 H_4 Cl N S$	1.27. 12°.	} 185°.	
¹⁹ Perchloromethyl mercaptan.	$C S Cl_4$	1.712. 12°.8.		
²⁰ Carbonyl sulphethyl chloride.	$C_3 H_5 Cl S O$	1.184. 16°.	} 136°.	

AUTHORITIES.

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⁴ Buff. B. D. C. G. 1. 206.	¹² Buff. B. D. C. G. 1. 206.	¹⁹ Rathke. A. C. P. 167.
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⁶ Buff. B. D. C. G. 1. 206.	¹⁴ Gerlich. B. D. C. G. 8. 653.	
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⁸ Gerlich. B. D. C. G. 8. 651.		

XXIV. MISCELLANEOUS ORGANIC COMPOUNDS.

Name.	Formula.	Specific Gravity.	Boiling Point.	Melt. Point.
¹ Phosphenyl chloride.	$C_6 H_5 P Cl_2$.	1.319. 20°.	222°.	
² " oxychloride.	$C_6 H_5 P Cl_2 O$.	1.375. 20°.	260°.	
³ Dimethyl phenyl phosphin.	$C_8 H_{11} P$.	.9768. 11°.	192°.	
⁴ Diethyl " "	$C_{10} H_{15} P$.	.9571. 13°.	221.9°.	
⁵ Tripropyl borate.	$C_9 H_{21} B O_3$.	.867. 16°.	175°.	
⁶ Silicon phenyl triethyl.	$C_{12} H_{20} Si$.	.9042. 0°.	230°.	
⁷ Propyl silicate.	$C_{12} H_{25} Si O_4$.	.915. 18°.	225°-227°.	
⁸ Butyl " "	$C_{16} H_{36} Si O_4$.	.953. 15°.	256°-260°.	
⁹ Ethyl orthosilicoacetate.	$C_7 H_{13} Si O_3$.	.9283. 0°.	145°-151°.	
¹⁰ Methyl orthosilicopropionate.	$C_5 H_{14} Si O_3$.	.9747. 0°.	125°-126°.	
¹¹ Ethyl orthosilicobenzoate.	$C_{12} H_{20} Si O_3$.	1.0133. 0°.		
¹² " " "	" "	1.0055. 10°.		
¹³ Silicon triethyl oxide.	$C_{12} H_{30} Si_2 O$.	.8831. 0°.	224°-229°.	
¹⁴ Propyl silicic monochlorhydrin.	$C_9 H_{21} Si Cl O_3$.	.980.	208°-210°.	
¹⁵ Propyl silicic dichlorhydrin.	$C_6 H_{14} Si Cl_2 O_2$.	1.028.	185°-188°.	
¹⁶ Deriv. of silicon phenyl triethyl.	$C_{12} H_9 Si Cl$.	1.0185. 0°.	260°-265°.	
¹⁷ Zinc propyl.	$(C_3 H_7)_2 Zn$.	1.098. 15°.	158°-160°.	
¹⁸ " " "	" "		a. 146°.	
¹⁹ " butyl.	$(C_4 H_9)_2 Zn$.		185°-188°.	

AUTHORITIES.

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		¹⁹ Cahours. C. Cent. 5. 20.

Name.	Formula.	Specific Gravity	Boiling Point.	Melt. Point.
¹ Mercury butyl.	(C ₄ H ₉) ₂ Hg.	1.835. 15°.	205°-207°.	
² Aluminum propyl.	(C ₃ H ₇) ₆ Al ₂ .		248°-252°.	
³ Glucinum ethyl.	(C ₂ H ₅) ₂ Gl.		185°-188°.	
⁴ " propyl.	(C ₃ H ₇) ₂ Gl.		244°-246°.	
⁵ Stann tetrapropyl.	(C ₃ H ₇) ₄ Sn.	1.179. 14°.	222°-225°.	
⁶ Stantributyl iodide.	C ₁₂ H ₂₇ Sn I.	1.540. 15°.	292°-296°.	

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