



OFFICIAL METHODS LIST FOR REFRACTOMETERS

What follows are just some of the official methods for use of refractometers. This list is by no means complete. If you find any other methods, or have any questions, please notify us as soon as possible.

| Organization | Method Number | Title | Notes |
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| ICUMSA | SPS-3 | Refractometry and Tables-Official | Sucrose Measurement (Sugar) |
| ICUMSA | GS4-13 | The Determination of Refractometric Dry Substance (RDS%) of Molasses-Accepted | Molasses Measurement |
| SSDT | 11.5 | Solids (Corn Syrup) | Corn Syrup Measurement |
| ISI | 06-1e | Determination of Dry Matter in Syrup by Refractive Index | Various Sugars Measurement |
| AOAC | 950.04 | Alcohol by Volume in Distilled Liquors-Refractometer Method | Percent Alcohol Measurement |
| AOAC | 970.15 | Alcohol (by Weight) in Beer-Refractometer Method | Percent Alcohol Measurement |
| AOAC | 920.58 | Alcohol in Wines By Volume From Refraction (Rapid Method) | Percent Alcohol Measurement |
| AOAC | 976.20 | Solids (Soluble) in Frozen Concentrate for Lemonade-Refractometer Method | Sucrose Content, with Citric Acid Correction Factor |
| AOAC | 932.12 | Solids (Soluble) in Fruits and Fruit Products-Refractometer Method | Sugar Content of Fruits and Fruit Products |
| AOAC | 921.08 | Index of Refraction of Oils and Fats | Temperature Corrected Refractive Index of Oils and Fats |
| AOAC | 969.18 | Refractive Index of Butterfat | Acid Corrected Refractive Index of Butterfats |
| AOAC | 920.141 | Refractive Index of Lemon and Orange Oils | Refractive Index of Essential Oils |



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| AOAC | 970.59 | Solids (Soluble) in Tomato Products-Refractive Index Method | Concentration of Soluble Material in Tomato Products |
| AOAC | 932.14, Section C | Solids in Syrups (By Means of Refractometer) | Sugar Concentration of Raw and Refined Syrups |
| AOCS | S 2-64 | Recommended Practices for the Testing of Commercial Fatty Acids-Refractive Index | Detecting Adulteration in Oils, Iodine Value |
| AOCS | Tp 1a-64 | Refractive Index | Refractive Index of Drying Oils and all Fatty Acids |
| AOCS | Cc 7-25 | Refractive Index | Refractive Index of all Normal Oils and Liquid Fats |
| ASTM | D 542-50 | Index of Refraction of Transparent Organic Plastics | Refractive Index of Plastics (by Refractometer and Microscope) |
| ASTM | D 4542-85 | Standard Test Method for Pore Water Extraction and Determination of the Soluble Salt Content of Soils by Refractometer | Soluble Salt Content of Fine Grained Soils |
| ASTM | D 3321-94 | Standard Practice for Use of the Refractometer for Determining the Freezing Point of Aqueous Engine Coolants | Freeze Point Protection Factor for Radiator Fluid |
| ASTM | D 17474-89 | Standard Test Method for Refractive Index of Viscous Materials | Refractive Index of Transparent and Light Colored Viscous Hydrocarbon Liquids and Melted Solids |
| ASTM | D 1218-87 | Standard Test Method for Refractive Index and Refractive Dispersion of Hydrocarbon Liquids | Refractive Index and Dispersion Values of Hydrocarbon Liquids |
| ASTM | D 5006-90 | Standard Test Method for Measurement of Fuel System Icing Inhibitors (Ether Type) in Aviation Fuels | Concentration of both Ethylene, and Diethylene Glycol Monomethyl Ether in Aviation Fuels |



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| ASTM | D 1416 | Standard Test Method for Measurement of Bound Styrene in SBR | Measurement of Styrene Content of Rubber |
| ASTM | D 2159-88 | Standard Test Method for Naphthenes in Saturates Fractions by Refractivity Intercept | Determination of Naphthenes or "Equivalent Naphthenes" in Napthas of Depentanized Gasolines |
| ASTM | D 1807-94 | Standard Test Methods for Refractive Index and Specific Optical Dispersion of Electrical Insulating Liquids | Determination of the refractive index of electrical insulating liquids such as those used in capacitors, transformers, circuit breakers, and oil filled cables. |
| ASTM | D 4095-82 | Standard Practice for Use of the Refractometer for Determining Nonvolatile Matter (Total Solids) in Floor Polishes | Determination of the Total Solids Insoluble, Non-Volatile) of Floor Polishes, Resin Solutions, and Wax Emulsions |
| OIML | R 108 | REFRACTOMETERS FOR THE MEASUREMENT OF THE SUGAR CONTENT OF FRUIT JUICES - 1993 | |
| JIS | T 7319 | REFRACTOMETERS - 1988 | |
| IAMFES | 46 | REFRACTOMETERS AND ENERGY ABSORBING OPTICAL SENSORS FOR MILK AND MILK PRODUCTS - 2002 | |
| DIN | 51423 | TESTING OF MINERAL OILS; MEASUREMENT OF REFRACTIVE INDEX WITH THE ABBE-REFRACTOMETER - 1975 | |
| A-A-53856 | | REFRACTOMETER - 1989 | |

Again, please note that this is certainly not a complete list of standards developed which relate to refractive index. This list is meant as an introduction to the diversity of industries and applications where refractive index can be applied. Refractive Index is used for numerous other specific applications which are far too numerous to mention (including those which have official methodologies and those whose methodologies have been developed specifically for a particular industry or company).

If you or your customer require any assistance in determining whether refractive index is a viable method of analysis for their particular application, please do not hesitate to contact us at any time.