#### AutoDosage<sup>®</sup> AutoFilt<sup>®</sup> Standards



SCHMIDT + HAENSCH instruments comply with a multitude of international standards and norms. Depending on which standards are relevant to you, you can navigate our instrument portfolio according to applicable standards and norms.\*

Or contact us directly! Our experts are happy to find or develop a solution tailored to your needs.

\* listed standards and norms are examplary applications for SCHMIDT + HAENSCH instruments. Liability is only granted once specific application and correct use of instrument has been thoroughly validated by SCHMIDT + HAENSCH. Please speak to our instrument qualification team for specific requests on norm and standard updates: sales@schmidt-haensch.de

ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
ICUMSA GS5/7-1	Polarisation , Brix and Fibre in Cane and Bagasse by the Wet Disintegrator with Lead Subacetate Single Method	AutoFilt <sup>®</sup> , AutoDosage <sup>®</sup>
ICUMSA GS6-1	The Determination of the Polarisation of Sugar Beet by the Macerator or Cold Aqueous Digestion Method using Lead Acetate as Clarifying Agent – Official	AutoFilt <sup>®</sup> , AutoDosage <sup>®</sup>
ICUMSA GS6-3	The Determination of the Polarisation of Sugar Beet by the Macerator or Cold Aqueous Digestion Method using Aluminium Sulfate as Clarifying Agent – Official	AutoFilt <sup>®</sup> , AutoDosage <sup>®</sup>
ICUMSA GS3-2	Polarisation of Raw Sugar without Wet Lead Clarification	AutoFilt Z <sup>®</sup> , AutoDosage <sup>®</sup>
ICUMSA GS7-7	Determination of the Polarisation of Filter Cake	AutoFilt <sup>®</sup> , AutoFilt Z <sup>®</sup> , AutoDosage <sup>®</sup>
ICUMSA GS3-1	The Braunschweig Method for the Polarisation of White Sugar by Polarisation	AutoFilt <sup>®</sup> , AutoDosage <sup>®</sup>

## **Density Meter** Standards

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ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
21 CFR Part 11	Documentation and system validation of United States Food and Drug Administration (FDA) regulations	VariDens
AOAC 945.102	Oil (Mineral) in Fat	VariDens
AOAC 982.10	Alcohol by Volume in Distilled Liquor	VariDens
AOAC 983.12	Alcohol by Volume in Liqueurs and Alcoholic Dairy Products	VariDens
AOAC 988.06	Specific Gravity of Beer and Wort	VariDens
AOAC 992.29 Ethanol and Original Gravity Content in Beer	Ethanol and Original Gravity Content in Beer	VariDens
ASBC Beer-2B	Specific Gravity by digital density meter (1978)	VariDens
ASBC Beer-4B	Instrumental method for alcohol and original gravity content (1989)	VariDens
ASBC Beer-5A&B	Real Extract — Beer measured volumetrically & gravimetrically (1958)	VariDens
ASBC Wort-2	Specific Gravity by digital density meter (2011)	VariDens
ASTM 7961	Standard Practice for Calibrating U-tube Density Cells over Large Ranges of Temperature and Pressure	VariDens
ASTM D1250	Standard Guide for Use of the Petroleum Measurement TablesASTM D1250-08:2013 Standard Guide for Use of the Petroleum Measurement Tables	VariDens



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
ASTM D1475	Standard Test Method For Density of Liquid Coatings, Inks, and Related Products	VariDens
ASTM D2501	Standard Test Method for Calculation of Viscosity-Gravity Constant (VGC) of Petroleum Oils	VariDens
ASTM D4052	Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density Meter	VariDens
ASTM D4806	Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel	VariDens
ASTM D5002	Method for Density and Relative Density of Crude Oils by Digital Density Analyzer	VariDens
ASTM D5931	Standard Test Method for Density and Relative Density of Engine Coolant Concentrates and Aqueous Engine Coolants by Digital Density Meter	VariDens
ASTM D6448	Standard Specification for Industrial Burner Fuels from Used Lubricating Oils	VariDens
ASTM D8188	Standard Test Method for Determination of Density and Relative Density of Asphalt, Semi-Solid Bituminous Materials, and Soft-Tar Pitch by Use of a Digital Density Meter (U-Tube)	VariDens
ABNT NBR 14065	Petroleum distillates and viscous oils - Determination of specific gravity and relative density by digital densimeter	VariDens
ABNT NBR 15639	Fuel ethanol - Determination of specific mass and alcohol content by bench top digital densimeter	VariDens
ASTM D6448 - 16	Standard Specification for Industrial Burner Fuels from Used Lubricating Oils	VariDens
ASTM D7777-13	Standard Test Method for Density, Relative Density, or API Gravity of Liquid Petroleum by Portable Digital Density Meter	VariDens
CPTC SH/T 0604-2000 eqv. ISO 12185)	(eqv. ISO 12185) Crude petroleum and petroleum products. Determination of density. Oscillating U-tube method	VariDens



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
DIN 51423	Testing of mineral oils — Part 2: Measurement of the relative refractive index with the Abbe-refractometer	VariDens
DIN 51757	Testing of mineral oils and related materials - Determination of density	VariDens
EBC 1.6 (Apparatus)	Care and Adjustment of Apparatus: Density Meters	VariDens
EBC 8.2.2 (Wort)	Specific Gravity of Wort using a Density Meter	VariDens
EBC 9.43.2 (Beer)	Specific Gravity of Beer using a Density Meter	VariDens
EI IP 365	Crude petroleum and petroleum products — Determination of density — Oscillating U-tube method	VariDens
EI IP559	Determination of density of middle distillate fuels - Hand held oscillating U-tube density meter method	VariDens
EU Commission Reg. (EC) No 2676	Determining Community methods for the analysis of wines	VariDens
EU Commission Reg. (EC) No 2870	Laying down Community reference methods for the analysis of spirits drinks	VariDens
EU Commission Reg. (EC) No 128	Amending Regulation (EEC) No 2676/90 determining Community methods for the analysis of wines	VariDens
EU Commission Reg. (EC) No 355	Amending Regulation (EEC) No 2676/90 determining Community methods for the analysis of wines	VariDens
GB 23971	Heat transfer fluids	VariDens
GB 5009.225	National Food Safety Standard - Determination of ethanol concentration	VariDens
GB T 11540	Fragrance/flavor substances – Determination of relative density	VariDens
GB T 11857	Whisky	VariDens
GB 13531	General Methods on Determination of Cosmetics -	VariDens
GB 15531-4	Determination of pH	VariDens



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
GB T2013	Standard test method for density of liquid petrochemical products	VariDens
GB 21862.3	Paints and varnishes. Determination of densi. Part 3: Oscillation method	VariDens
GB T22731	Fragrance compound	VariDens
GB T 29617	Determination of density, relative density,and API gravity of liquids by digital density meter	VariDens
GB T 4928	Method for analysis of beer	VariDens
HGT 4067	Cell liquor of lithium hexafluorophosphate	VariDens
IP 365	Crude petroleum and petroleum products - Determination of density - Oscillating U-tube method	VariDens
ISO 12185	Crude petroleum and petroleum products — Determination of density — Oscillating U-tube method	VariDens
ISO 14214	Liquid petroleum products — Fatty acid methyl esters (FAME) for use in diesel engines and heating applications — Requirements and test methods	VariDens
ISO 15212-2	Oscillation-type density meters — Part 1: Laboratory instruments	VariDens
ISO ISO 15212-1	Animal and vegetable fats and oils — Determination of conventional mass per volume (litre weight in air) — Oscillating U-tube method	VariDens
ISO 18301	Paints and varnishes — Determination of density — Part 3: Oscillation method	VariDens
ISO 2811-3	Method for density and specific gravity measurement of chemical products	VariDens
JJF 1070	Rules of Metrological Testing for Net Quantity of Products in Prepackages with Fixed Content	VariDens
JIS K 0061	Crude Petroleum And Petroleum Products — Determination Of Density — Part 1: Oscillating U-tube Method	VariDens



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
JIS K 2249	International Alcoholometric Tables — Determination of Volume of ethanol-water solution	VariDens
OIML R 22	Total dry matter	VariDens
OIV MA-AS2-03B   MA-AS2-01A	Reference method for the determination of real alcoholic strength by volume of spirit drinks of viti-vinicultural origin: measurement by electronic densimetry	VariDens
OIV MA-BS-04	Relative density	VariDens
OIV MA-BS-06	Density of alcohols and alcohlic beverages method for determining electronic densimetry (principle based on measuring the period of oscillation)	VariDens
SH 0604-2000	Crude petroleum and petroleum products-Determination of density-Oscillating U-tube method	VariDens
Ph. Eur. 9th Edition-2.2.5	Specific Gravity	VariDens
USP 841	Australian Standards (AS) compliant	VariDens
Australian Standard K157	Determination of sucrose content of sugar cane juices, sugars and sugar mill products	VariDens
AS 4185	Polarimeters - Sugar - Automatic standard by Standards Australia, 01/01/1994	VariDens
EU Pharmacopoeia	Compliant with European pharmaceutical quality standards	VariDens
US Pharmacopoeia	Compliant with US-American pharmaceutical quality standards	VariDens
JP 17 2 56 Pharmacopoeia	Compliant with Japanese pharmaceutical quality standards	VariDens
Chinese Pharmacopoeia 2020	Compliant with Chinese pharmaceutical quality standards	VariDens
QB T 1858.1	Florida water	VariDens
QB T 2660	Skin tonic	VariDens

## **Polarimeter** Standards



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ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
21 CFR Part 11	Documentation and system validation of United States Food and Drug Administration (FDA) regulations	Polartronic <sup>®</sup> HX32, VariPol, Polartronic <sup>®</sup> and UniPol 2020 (with Aquisys 2)
AOAC 896.01	Lactose in Milk	Polartronic <sup>®</sup> V
AOAC 896.02	Sucrose in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOAC 898.02	Physical Constants of 10 % Distillate of Lemon and Orange Oils	VariPol
AOAC 902.02	Sucrose in Vanilla Extract	Saccharomat <sup>®</sup> V
AOAC 906.03	Invert Sugar in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOAC 920.139	Sucrose in Lemon, Orange, and Lime Extracts	VariPol
AOAC 920.142	Optical Rotation of Lemon and Orange Oils	VariPol
AOAC 920.182	Polarization (Direct) of Honey	Unipol 2020
AOAC 920.184	Sucrose in Honey	Unipol 2020
AOAC 920.188	Polarization of Maple Products	Polartronic <sup>®</sup> V
AOAC 920.189	Sucrose in Maple Products	Polartronic <sup>®</sup> V
AOAC 920.190	Sugars (Reducing) in Maple Products as Invert Sugar	Saccharomat <sup>®</sup> V
AOAC 920.191	Glucose (Commercial) in Maple Products	Saccharomat <sup>®</sup> V
AOAC 920.65	Nonsugar Solids (Sugar-Free Extract) in Wines	Unipol 2020



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
AOAC 920.65	Sucrose in Wine	Unipol 2020
AOAC 920.66	Commercial Glucose in Wine	Unipol 2020
AOAC 920.82	Sucrose in Cacao Products	Saccharomat <sup>®</sup> V
AOAC 920.83	Starch in Cacao Products	Polartronic <sup>®</sup> V
AOAC 920.96	Coating and Glazing Substances in Roasted Coffee	Unipol 2020
AOAC 921.03	Sugars (Reducing) in Plants	Saccharomat <sup>®</sup> V
AOAC 921.10	Oil (Rosin) in Oils and Fats	Polartronic <sup>®</sup> V
AOAC 925.05	Sucrose in Animal Feed	UniPol 2020
AOAC 925.33	Oils of Lemon and Orange in Extracts	VariPol
AOAC 925.35	Sucrose in Fruits and Fruit Products	Saccharomat <sup>®</sup> V
AOAC 925.37	Glucose (Commercial) in Fruits and Fruit Products Procedure	Polartronic <sup>®</sup> V
AOAC 925.42	Sugars (Reducing) Before Inversion in Food Dressings	Unipol 2020
AOAC 925.43	Sugars (Reducing) After Inversion in Food Dressings	Unipol 2020
AOAC 925.46	Sucrose in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOAC 925.47	Sucrose in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOAC 925.48	Sucrose in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOAC 925.52	Sugars in canned vegetables	Saccharomat <sup>®</sup> V
AOAC 926.11	Oils of lemon, Orange, or Lime in oil-base flavours	VariPol
AOAC 926.13	Sucrose and Raffinose in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOAC 926.14 & Surplus	Sucrose and Raffinose in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOCS 926.18	Camphor in drugs	Polartronic <sup>®</sup> HX32
AOAC 929.09	Invert Sugar in Sugars and Syrups	Saccharomat <sup>®</sup> V



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
AOAC 930.32	Lactose in Process Cheese	Saccharomat <sup>®</sup> V
AOAC 930.35	Vinegars	Unipol 2020
AOAC 930.36	Sucrose in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOAC 930.37	Corn (Glucose) Syrup in Sugars and Syrups	Saccharomat <sup>®</sup> V
AOAC 931.07	Glucose and Sucrose in Eggs Sugar Inversion Method	Saccharomat <sup>®</sup> V
AOAC 932.13 & Surplus	Levo-Malic Acid in Fruits and Fruit Products	VariPol
AOAC 932.14 & Surplus	Amphetamine Drugs	Polartronic <sup>®</sup> HX32
AOAC 933.04	Lactose in Milk Chocolate	Unipol 2020
AOAC 933.07	Malic acid (inactive) in fruits and fruit products	VariPol
AOAC 935.62	Glucose in sugars and syrups. Chemical methods	Saccharomat <sup>®</sup> V
AOAC 940.11	Sucrose in Cordials and Liqueurs	Saccharomat <sup>®</sup> V
AOAC 942.20	Sucrose in Sugar Beets	Saccharomat <sup>®</sup> V
AOAC 945.37	Starch in flour	Polartronic <sup>®</sup> V
AOAC 945.55	Sucrose in Gelatine	Saccharomat <sup>®</sup> V
AOAC 945.56	Loss on drying (moisture) in starch dessert powders	Polartronic <sup>®</sup> V
AOAC 945.67	Glucose in Corn Syrups and Dextrose Products	Saccharomat <sup>®</sup> V
AOAC 950.18	Malic acid (levo and inactive) in non-alcoholic beverages	Unipol 2020
AOAC 950.29	Sucrose in non-alcoholic beverages	Saccharomat <sup>®</sup> V
AOAC 950.30	Sugars (reducing) in non-alcoholic beverages	Unipol 2020
AOAC 950.31	Glucose (commercial) in non-alcoholic beverages	Unipol 2020
AOAC 965.31	Lemon juice	Unipol 2020



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
AOAC 968.19	Levo-malic acid in fruits and fruit products	Unipol 2020
AOAC 970.57	Sucrose in molasses. Polarimetric methods	Saccharomat <sup>®</sup> V
AOAC 975.14	Sugars in bread	Saccharomat <sup>®</sup> V
AOAC 975.43	Identification of RRR- or all-rac-alpha-Tocopherol in Drugs and Food or Feed Supplements	Polartronic <sup>®</sup> HX32
IUPAC-AOAC 986.19	Triglycerides in fats and oils	Polartronic <sup>®</sup> V
ASTM C1426-14	Standard Practices for Verification and Calibration of Polarimeters	Polartronic <sup>®</sup> V, VariPol, Unipol 2020
EHC Harmonised methods of the European Honey Commission 1997	Sugars Determination of specific rotation	Saccharomat <sup>®</sup> V
GS1/2/3/9-1	The Determination of the Polarisation of Raw Sugar by Polarimetry	Polartronic <sup>®</sup> V
ICUMSA GS1/2/3/9-1	Determination of Polarisation of Raw Sugar by Polarimetry - Official	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
ICUMSA GS1/2/3-2	Polarisation of Raw Sugar without Wet Lead Clarification	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
ICUMSA GS2/3-1	The Braunschweig Method for the Polarisation of White Sugar by Polarisation – Official (Reference) Method	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
ICUMSA GS3-1	The Determination of the Polarisation of the Sugar Component of Powdered Sugars Containing Anti-Caking Agents – Official	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
ICUMSA GS4/7-1	The Determination of Apparent Sucrose in Molasses by a Double Polarisation Method – Accepted	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
ICUMSA GS5/7-1	Polarisation , Brix and Fibre in Cane and Bagasse by the Wet Disintegrator with Lead Subacetate Single Method	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
ICUMSA GS6-1	The Determination of the Polarisation of Sugar Beet by the Macerator or Cold Aqueous Digestion Method using Lead Acetate as Clarifying Agent – Official	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
ICUMSA GS6-3	Polarisation of Sugar Beet by the Macerator or Cold Aqueous Digestion and Aluminium Sulphate Single Method	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
ICUMSA GS7-7	The Determination of the Pol (Polarisation) of Filter Cake by Polarimetry with Lead Subacetate – Accepted	Polartronic <sup>®</sup> V
ICUMSA GS7-31	The Determination of Pol by NIR Polarimetry and Brix for Sugarcane and Factory Product – Tentative	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
ICUMSA SPS-1	Polarimetry and the International Sugar Scale	Polartronic <sup>®</sup> V
ICUMSA SPS-1SScale	Specification and Standard SPS - 1 (2017), Polarimetry and the International Sugar Scale	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
OIML R 14	Polarimetric saccharimeters graduated in accordance with the ICUMSA International Sugar Scale	Saccharomat <sup>®</sup> V
Ph. Eur. 7th Edition-2.2.7	Optical rotation	Polartronic <sup>®</sup> HX32, VariPol
USP 781	Optical rotation	Polartronic <sup>®</sup> HX32, VariPol
Australian Standard K157	Australian Standards (AS) compliant	Polartronic <sup>®</sup> HX32, VariPol
AS 4185	Determination of sucrose content of sugar cane juices, sugars and sugar mill products	Polartronic <sup>®</sup> HX32, VariPol
EU Pharmacopoeia	Compliant with European pharmaceutical quality standards	Polartronic <sup>®</sup> HX32, VariPol
US Pharmacopoeia	Compliant with US-American pharmaceutical quality standards	Polartronic <sup>®</sup> HX32, VariPol
JP 17 2 56 Pharmacopoeia	Compliant with Japanese pharmaceutical quality standards	Polartronic <sup>®</sup> HX32, VariPol
Chinese Pharmacopoeia 2020	Compliant with Chinese pharmaceutical quality standards	Polartronic <sup>®</sup> HX32, VariPol

# **Refractometer** Standards

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ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
21 CFR Part 11	Documentation and system validation of United States Food and Drug Administration (FDA) regulations	VariRef
AOAC 896.02	Sucrose in sugar and syrups	ATR-P
AOAC 898.02	Physical Constants of 10 per cent distillate of lemon and orange oils	VariRef
AOAC 905.01	Methanol in Distilled Liquors - Immersion refractometer method	ATR-P
AOAC 908.01	Percent Alcohol by Volume in Distilled Liquors	ATR-P
AOAC 920.141	Refractive index of lemon and orange oils	VariRef
AOAC 920.58	Alcohol in wines - By volume from refraction (rapid method)	ATR-P
AOAC 920.78	Index of refraction of cacao fat	VariRef
AOAC 921.08	Index of refraction of oils and fats	VariRef
AOAC 932.12	Solids (soluble) in fruits and fruit products	ATR-P
AOAC 932.14	Solids in syrups	ATR-P
AOAC 940.06	Methanol in Cordials and Liqueurs	ATR-P
AOAC 940.09	Total Solids in Cordials and Liqueurs	ATR-P
AOAC 940.16	Volatile esters in cordials and liqueurs	ATR-P
AOAC 943.05	Dry substance in corn syrups and sugars	ATR-P



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
AOAC 945.102	Oil (mineral) in fats	ATR-BR
AOAC 948.10	Water (added) in milk	ATR-P
AOAC 950.04	Alcohol by volume in distilled liqueurs	ATR-P
AOAC 950.06	Fermentation of beer	ATR-P
AOAC 950.13	Alcohol in nonalcoholic beverages	ATR-P
AOAC 953.16	Fruit Content (Approximate) of Frozen Fruit-Sugar Mixtures	ATR-P
AOAC 960.57	Crystalline substances	VariRef
AOAC 969.18	Refractive Index of Butterfat	ATR-P
AOAC 969.38	Moisture in honey	ATR-P
AOAC 970.15	Alcohol (by weight) in beer - Refractometer method	ATR-P
AOAC 970.59	Solids (soluble) in tomato products	ATR-P
AOAC 973.65	Characterization and matching of glass fragments	ATR-L
AOAC 976.20	Solids (Soluble) in Frozen Concentrate for Lemonade	ATR-P
AOAC 983.01	Urea and methyleneureas (Water-soluble) in fertilizers	VariRef
AOAC 983.17	Solids (Soluble) in Citrus Fruit Juices	ATR-P
AOAC 995.17	Beet sugars in fruit juices	ATR-P
AOAC 2000.19	Beet or cane sugar in maple syrup	ATR-P
AOCS Tp 1a-64	Refractive Index of Drying Oils	VariRef
ASTM D542	Standard Test Method for Index of Refraction of Transparent Organic Plastics	ATR-L
ASTM D5775	Standard Test Method for Rubber—Determination of Bound Styrene in Styrene Butadiene Rubber by Refractive Index	ATR-L



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
ASTM D1218	Standard Test Method for Refractive Index and Refractive Dispersion of Hydrocarbon Liquids	ATR-L
ASTM D1747	Standard Test Method for Refractive Index of Viscous Materials	ATR-P
ASTM D3321	Standard Test Method for Use of the Refractometer for Field Test Determination of the Freezing Point of Aqueous Engine Coolants	VariRef
ASTM D4095	Standard Practice for Use of the Refractometer for Determining Nonvolatile Matter (Total Solids) in Floor Polishes	VariRef
ASTM D4542	Standard Test Methods for Pore Water Extraction and Determination of the Soluble Salt Content of Soils by Refractometer	ATR-BR
ASTM D5006	Standard Test Method for Measurement of Fuel System Icing Inhibitors (Ether Type) in Aviation Fuels	VariRef
ASTM D524	Standard Test Method for Ramsbottom Carbon Residue of Petroleum Products	VariRef
DIN 51423-2	Testing of mineral oils - Part 2: Measurement of the relative refractive index with the Abbe-refractometer Prüfung von Mineralölen - Teil 2: Messung der relativen Brechzahl mit dem Abbe-Refraktometer	ATR-L
EHC Harmonised methods of the European Honey Commission 1997	Determination of moisture, refractometric method	VariRef
ICUMSA GS4/3-13	The Determination of Refractometric Dry Substance (RDS%) of Molasses – Accepted and Very Pure Syrups (Liquid Sugars), Thick Juices and Run-off Syrups	ATR-P
ICUMSA GS4/3/8-13	The Determination of Refractometric Dry Substance (RDS %) of Molasses - Accepted and Very Pure Syrups (Liquid Sugars), Thick Juice and Run-off Syrups-Official	ATR-P, Purity Analyzer®
ISI 06-1e	Determination of Dry Matter in Syrup by Refractive Index	VariRef
ISO 1743:1982	Glucose Syrup – Determination of dry matter content – Refractive index method	ATR-P



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
ISO8036	Microscopes — Immersion liquids for light microscopy	VariRef
OIML R 108	Refractometers for the measurement of the sugar content of fruit juices	ATR-P
OIV MA-AS2-02:	Evaluation by refractometry of the sugar concentration in grape musts, concentrated grape musts and rectified concentrated grape musts	ATR-P
OIV MA-AS312-01B	Alcoholic strength by volume - Measurement of the alcoholic strength of the distillate by refractometry	VariRef
Ph. Eur. 7th Edition-2.2.7	Refractive Index	VariRef
USP 831	Refractive Index	VariRef
Australian Standard K157	Australian Standards (AS) compliant	Polartonic <sup>®</sup> V, Saccharomat <sup>®</sup> V
AS 4185	Determination of sucrose content of sugar cane juices, sugars and sugar mill products	Saccharomat <sup>®</sup> V, Purity Analyzer <sup>®</sup>
EU Pharmacopoeia	Compliant with European pharmaceutical quality standards	VariRef
US Pharmacopoeia	Compliant with US-American pharmaceutical quality standards	VariRef
JP 17 2 56 Pharmacopoeia	Compliant with Japanese pharmaceutical quality standards	VariRef
Chinese Pharmacopoeia	Compliant with Chinese pharmaceutical quality standards	VariRef

#### Spectrophotometer/ Colorimeter Standards

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ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
ICUMSA GS2-11	Visual appearance using Braunschweig Color-Types	Saccharoflex
ICUMSA GS2-13	Reflectance of white sugar	Saccharoflex
ICUMSA GS1-7	Solution color at pH 7.0	Coloromat
ICUMSA GS1-9	Solution color white sugar	Coloromat
ICUMSA GS1/3-7	Determination of the solution colour of raw sugars, brown sugars and colored syrups at ph 7.0	Coloromat
ICUMSA GS1-15	Determination of dextran in raw sugar by a modified alcohol haze method – accepted	Coloromat
ICUMSA GS2/3-29	Determination of copper in refined sugar products by a colorimetric method – accepted	Coloromat
ICUMSA GS2/3/7/8-31	Determination of iron in refined sugar products and sugar solutions by a coloric method – accepted	Coloromat
ICUMSA GS2/3-10	Determination of white sugar solution colour – official	Coloromat
ICUMSA GS2/7-33	Determination of sulphite by Rosaniline colorimetric method in white sugar - official; and in can sugar juices and syrups accepted	Coloromat



ORANIZATION	TITLE	SUGGESTED MEASURING DEVICE
ICUMSA GS7-15	Determination of total and soluble phosphate in cane juice by a colorimetric method – accepted	Coloromat
ICUMSA GS7-21	Determination of turbidity in clarified cane juice – accepted	Coloromat
ICUMSA GS8/4/6-4	Determination of glucose and fructose in beet juices and processing products by an enzymatic method	Coloromat
ICUMSA GS8/4/6-13	Determination of lactic acid (L- and D-) in juice and processing products by an enzymatic method	Coloromat
ICUMSA GS8/4/6-14	Determination of acetic acid in beet juices and processing products by an enzymatic method – accepted	Coloromat
ICUMSA GS8-23	Determination of pectic acid in beet raw juice by a 3- hydroxy-diphenyl colorometric method – accepted	Coloromat
ICUMSA GS8-25	Determination of pectic acid in beet liquors by a carbazole colorometric method - accepted	Coloromat