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Spectrolab Silverado Series:

A New Range of innovative refractometers for all industrial, environmental and food science applications

This is a unique range of hand held instruments calibrated to measure refractive index parameter directly in absolute units

Applications include food and beverages, clinical, motor industry, chemical industry, etc

We offer laboratory and hand held models for all applications

Silverado Refractometers



NEW MINI DIGITAL REFRACTOMETER



Models and Specifications:

Model	Unit of Measure	Range	Resolution	Accuracy
Brix -Scan	BRIX%	0~65%	0.1	±0.2%
	nD	1.3330~ 1.4535nD	0.0001	±0.0003
Brix/RI-Scan	BRIX%	0~95% Brix	0.1	±0.2%
	nD	1.3330~ 1.5320nD	0.0001	±0.0003
Honey-Scan	Be'	28 ~ 48	0.10%	±0.2%
	Water	10 ~ 45%	0.10%	±0.2%
	Brix	40 ~ 95%	0.10%	±0.2%
Salinity/RI-Scan	SALINITY%	0~28% Salinity	0.1	±0.2%
	nD	1.3330~ 1.3900nD	0.0001	±0.0003
Clinical-Scan	Urine SP.G.	1.000~1.050	0.001	±0.002
	Serum P.	0~12	0.1	±0.2
	nD	1.3330~ 1.3900nD	0.0001	±0.0003
Wine-Scan	BRIX%	0~35%	0.1	±0.2%
	%VOP ap	0~22%	0.1	±0.2%
	Oe	0~150	1	±2
	KMW	0~25	0.1	±0.2
Brix/Salinity/RI-Scan	BRIX%	0~35%	0.1	±0.2%
	SALINITY%	0~28%	0.1	±0.2%
	nD	1.3330~ 1.3900nD	0.0001	±0.0003
Brix/Salinity/RI-Scan	BRIX%	0~35%	0.1	±0.2%
	SALINITY%	0~28%	0.1	±0.2%
	nD	1.3330~ 1.3900nD	0.0001	±0.0003

Hand Held Refractometer



1. Rrefractometer for Brix and Industrial Fluids

S/N	Catalog No.	Range	Resolution
1	REF101A	0-5%Brix	0.10%
2	REF101	0-10%Brix	0.10%
3	REF111ATC	0-10%Brix	0.10%
4	REF102A	0-15%Brix	0.1% or 0.2%
5	REF112A-ATC	0-15%Brix	0.1% or 0.2%
6	REF102	0-18%Brix	0.1% or 0.2%
7	REF112ATC	0-18%Brix	0.1% or 0.2%
8	REF103	0-32%Brix	0.20%
9	REF103BP(Plastic)	0-32%Brix	0.20%
10	REF 113ATC	0-32%Brix	0.20%
11	REF104	28-62%Brix	0.20%
12	REF 114ATC	28-62%Brix	0.20%
13	REF105	45-82%Brix	0.50%
14	REF106	58-90%Brix 38-43 °Be' 17-27% Water	0.5% 0.5
15	REF116ATC	58-90%Brix 38-43 °Be' 17-27% Water	0.5% 0.5 1%
16	REF106C	13-25% Honey Moisture	0.1
17	REF106B	58-92%Brix 38-43 °Be' 12-27% Water	1% 0.5 1%
18	REF107	0-90%Brix (3 Ranges)	0.20%
19	REF108	0-80%Brix (2 Ranges)	1%
20	REF108A	0-80%Brix (1 Range)	1%
21	REF109	58-92%Brix	0.50%
22	REF109B	1.435-1.520Nd	0.001 Nd
23	REF1010	0-50%	1%

2 Refractometer for Salinity

S/N	Catalog No.	Range	Resolution
1	REF201	0-100 ‰ Salinity	0.10%
2	REF 211ATC	0-100 ‰ Salinity	0.10%
3	REF202	0-28 ‰ Salinity	0.20%
4	REF 212ATC	0-28 ‰ Salinity	0.20%
5	REF203	0-10 ‰ Salinity	0.25%
	REF 213ATC	0-10 ‰ Salinity	0.25%

3. Refractometer for Clinical Protein

S/N	Catalog No.	Range	Resolution
1	REF301	0-12g/dl, 1.000-1.040sg	0.2g/dl 0.002sg
2	REF302	0-12g/dl, 1.000-1.050sg 1.3330-1.3600RI	0.2g/dl 0.002sg 0.00025RI
3	REF312ATC	0-12g/dl, 1.000-1.050sg 1.3330-1.3600RI	0.2g/dl 0.002sg 0.00025RI
4	REF303	0-12g/1000ml, 1.000-1.050UG 1.3325-1.3600ND	0.2g/1000ml 0.005UG 0.0005ND
5	REF304	0-12g/dl 1.000-1.040UG 1.3330-1.3600ND	0.2g/gl 0.005UG 0.0005ND

4 . Refractometer for Battery Acid/Coolant/Cleaner

	Catalog No	Range	Resolution
1	REF401/411/401bp	E. 32~ -60 °F P. 32~- 50 °F B 1.15-1.30Kg/l	-10°F - 10°F 0.01 Kg/l
2	REF401K/411K	E. 32~ -60 °F(0-59%) P. 32~-60°F(0-63%) B 1.15-1.30Kg/l	-5°F - 5°F 0.01 Kg/l
3	REF401A/411A	E. 32~ -84 °F P. 32~- 60 °F B 1.100-1.4000Kg/l	-5°F -5°F 0.01 Kg/l
4	REF402/412/402bp	E/P 0~ -50°C B 1.15-1.30 Kg/l E. 0~ -60°C	5°C 0.01sg
5	REF402A/412A	P. 0~- 50 °CB 1.100-1.4000Kg/l	- 5°C 0.01 Kg/l
6	REF402K/412K	E. 0~ -50 °C(0-58.4%) P. 0~ -50 °C(0-62.4%) B 1.15-1.30Kg/l	-5°C - 5°C 0.01 Kg/l
7	REF403/413/403bp	E/P. 0~ -50°C Cleaner. 0~50 °CB 1.15-1.30Kg/l	-5°C - 5°C 0.01 Kg/l
8	REF403A/413A	E/P. 0~ -50°C Cleaner. 0~50 °CB 1.10-1.40Kg/l	-5°C - 5°C 0.01 Kg/l
9	REF404/414/404bp	E/P. 0~ -50°C Cleaner. 0~40 °C B 1.100-1.400Kg/l	10°C 5°C 0.01Kg/L
10	REF408/418	E/P/C. 0~ -50°C E/P/C. 32~ - 60 °F B 1.15-1.30Kg/l	10°C 0.01 Kg/l
11	REF408A/418A	E/P 0~ -50°C E/P 32~ - 60 °F B 1.10-1.40 Kg/l	-5°C - 10 °C 0.01 Kg/l
12	REF409/419	Nd 1.33~ 1.40 P -2~ -43°C P 28 ~ - 45 °F	0.01Nd

4a ,Brake Fluid Tester(Refractometer)

	Catalog No	Range	Resolution
1	REF416	DOT3 Boiling point 250~500 °F/1~6H2O High temp Boiling point 250~570 °F/ 1~6H2O	1% H2O
2	REF417	DOT4 Boiling point 125~275 °C/1~6H2O PLUS(SUPER) Boiling point	1% H2O
		150~275 °C/1~6H2O	

5 .Refractometer for Alcohol

	Catalog No	Range	Resolution
1	REF501/511/501bp	0-80% w/w	1%
2	REF502/512/502bp	0-25% vol	0.2% 0.2%
3	REF503/513/503bp	0-25% vol 0-40% Brix	0.2% 0.2%
4	REF504/514/504bp	0-25% vol 0-20% Baume'	0.2% 0.2%
5	REF505/515/505bp	0-110lgG(g/l)	1
6	REF506/516/506bp	0-40% Brix 0-20% Baume'	0.2% 0.2%
7	REF507/517/507bp	30-160 Oechsle 0-25% vol	1 0.1%

6 . Refractometer for °Oe/°KMW Babo/mas sacch

	Catalog No	Range	Resolution
1	REF701/711/701bp	0-140°Oe 0-25°KMW babo 0-32% mas sacch	1°Oe 0.2 OKMW Babo 0.2% mas sacch
2	REF702/712/702bp	0-170°Oe	2°Oe
3	REF703/713/703bp	30-140°Oe 0-32% Brix	1°Oe 0.2% Brix
4	REF704/714/704bp	30-140°Oe 0-32% Brix	1°Oe 0.2% Brix
5	REF705/715/705bp	0-44% Brix 0-190°Oe 0.5°KMW Babo	0.5% Brix 2°Oe 0.5°KMW Babo

7 ,Refractometer for Honey

	Catalog No.	Range	Resolution
1	REF106	58-90%Brix 38-43 °Be' 17-27% Water	0.5% 0.5 1%
2	REF116ATC	58-90%Brix 38-43 °Be' 17-27% Water	0.5% 0.5 1%
3	REF106c	13-25% Honey Moisture	0.1
4	REF106b	58-92%Brix 38-43 °Be' 12-27% Water	1% 0.5 1%

8 . Refractometer for Refractive Index

	Catalog No.	Range	Resolution
1	REF107B	1.333 – 1.404 1.404-1.468 1.468-1.520	0.001 0.001 0.001

9. Gemological Refractometer

	Catalog No.	Range	Resolution
1	REF601	1.30-1.81 RI	0.01

LDR series Bench-top Digital Refractometer



Model	Scale	Range	Resolution	Accuracy
LDR-400 BRIX HONEY	BRIX	45.0--95.0%	0.10%	±0.1%
	REFRACTIVE INDEX	1.4098--1.5318	0.0001	±0.0002
	HONEY MOISTURE	12.0-30%	0.10%	±0.1%
LDR-500 BRIX	BRIX	0.0--95.0%	0.10%	±0.1%
	REFRACTIVE INDEX	1.3330--1.5318	0.0001	±0.0002
	C.S.1			
	C.S.2			
LDR-600 SALINITY	BRIX	0.0--60.0%	0.10%	±0.1%
	SALINITY	0.0--30.0%	0.10%	±0.1%
	SALINTY PPT	0--280	1	±1
	nD	1.3330-1.4419	0.0001	±0.0002
LDR-700 CLINCAL	USG	1.000-1.090	0.001	±0.001
	Serum Protein	0.0--12.0	0.1	±0.1
	nD	1.3330-1.4098	0.0001	±0.0002
ALL MODELS Temperature		5-80°C °F	0.1°C 0.1°F	±1°C ±2°F

PDR Series Digital Refractometer



Model	Scale	Range	Res.	Accuracy
PDR-20	BRIX	0~35%	0.1	±0.1%
	REFRACTIVE INDEX	1.3330~1.3900	0.0001	±0.00015
PDR-30	BRIX	0~45%	0.1	±0.1%
	REFRACTIVE INDEX	1.3330~1.4098	0.0001	±0.00015
PDR40	BRIX	28~65%	0.1	±0.1%
	REFRACTIVE INDEX	1.3800~1.4535	0.0001	±0.00015
PDR-50	BRIX	60~92%	0.1	±0.1%
	REFRACTIVE INDEX	1.4400~1.5230	0.0001	±0.00015
PDR-60	SALINTY	0~28%	0.1	±0.1%
	REFRACTIVE INDEX	1.3330~1.3900	0.0001	±0.00015
PDR-70	BRIX	0~35%	0.1	±0.1%
	SALINTY	0~28%	0.1	±0.1%
	REFRACTIVE INDEX	1.3330~1.3900	0.0001	±0.00015
PDR-80	URINE SP.G.	1.000~1.050	0.001	±0.001
	SERUM P.	0~12	0.1	±0.1
	REFRACTIVE INDEX	1.3330~1.3900	0.0001	±0.00015
PDR-90	MASS S/W	0~35%	0.1	±0.1%
	VOL AP	0~22%	0.1	±0.1%
	Oe	0~150	1	±1
	KMW	0~25	0.1	±0.1
PDR-100	MASS S/W	0~35%	0.1	±0.1%
	VOL AP	0~22%	0.1	±0.1%
	Oe	0~150	1	±1
	Be'	33~48	0.1	±0.2
PDR-200	WATER	38~5%	0.1	±0.1%
	Be'	33~48	0.1	±0.2
	REFRACTIVE INDEX ETHYLENE GLYCOL	1.4400~1.5230 (0)≈(-50)°C	0.0001 0.1	±0.00015 ±0.5°C
	BATTERY	1.00~1.50sg	0.001	±0.005sg
	CLEANER	(0)≈(-40)°C	0.1	±0.5°C

Automotive and Truck Fluids Testers

Auto Fluids Mater

5 scales digital refractometer for testing battery acid, coolant, windscreen fluid, and DEF(adblue)



MODEL	SCALES	RANGE	DIVISIONS	ACCURACY
Auto Fluid Master (C)	Cleaner	(14)≈(-40)°F	0.1	±1
	E.G./C	(32)≈(-50)°F	0.1	±1
	P.G./C	(32)≈(-50)°F	0.1	±1
	Battery	1.000 ~ 1.500 sg	0.001sg	±0.005sg
	UREA	0 ~ 45%	0.1	±0.2
Auto Fluid Master (F)	Cleaner	(0)≈(-40)°C	0.1	±0.5
	E.G./C	(0)≈(-50)°C	0.1	±0.5
	P.G./C	(0)≈(-50)°C	0.1	±0.5
	Battery	1.000 ~ 1.500 sg	0.001sg	±0.005sg
	UREA	0 ~ 45%	0.1	±0.2

SCAN Series
Mini Digital Automotive and Truck Fluids Tester



MODEL	SCALES	RANGE	DIVISIONS	ACCURACY
Multi-Scan(F)	Cleaner	(14)≈(-40) ^{°F}	0.1	±1
	E.G./C	(32)≈(-50) ^{°F}	0.1	±1
	P.G./C	(32)≈(-50) ^{°F}	0.1	±1
	Battery	1.000 ~ 1.500 sg	0.001sg	±0.005sg
Multi-Scan(C)	Cleaner	(0)≈(-40) ^{°C}	0.1	±0.5
	E.G./C	(0)≈(-50) ^{°C}	0.1	±0.5
	P.G./C	(0)≈(-50) ^{°C}	0.1	±0.5
	Battery	1.000 ~ 1.500 sg	0.001sg	±0.005sg
Brake-Scan (C)	DOT3/C	100-700 ^{°C}	1 ^{°C}	±10 ^{°C}
	DOT3(High Temp)/C	90-500 ^{°C}	1 ^{°C}	±10 ^{°C}
	DOT4/C	100-300 ^{°C}	1 ^{°C}	±10 ^{°C}
	DOT4(Plus)/C	100-300 ^{°C}	1 ^{°C}	±10 ^{°C}
	R.I.	1.3330-1.5177	0.0001	±0.0005
DEF-Scan	UREA	0 ~ 45%	0.1	±0.2
	R.I.	1.3330-1.4098	0.0001	±0.0005

PDR Series Automotive and Truck Fluids Tester



DC-700/DC600



PDR-UREA



Engine Coolant Refractometer DC-700 - Fahrenheit
 Engine Coolant Refractometer DC-600 - Celsius
 PDR-UREA Digital Diesel Exhaust Fluid Tester



Technical Specifications

Model	Scale	Range	Res.	Accuracy
PDR-UREA	REFRACTIVE INDEX	1.3330-1.4098	0.0001	±0.002
	ADBLUE	20%-38%	0.1	±0.5%
DC700	PROPYLENE GLYCOL	(32)≈(-50)°F	0.1	±1.0°F
	ETHYLENE GLYCOL	(32)≈(-50)°F	0.1	±1.0°F
	BATTERY	1.00~1.50sg	0.001	±0.005sg
	CLEANER	(14)≈(-40)°F	0.1	±1.0°F
DC600	PROPYLENE GLYCOL	(0)≈(-50)°C	0.1	±0.5°C
	ETHYLENE GLYCOL	(0)≈(-50)°C	0.1	±0.5°C
	BATTERY	1.00~1.50sg	0.001	±0.005sg
	CLEANER	(0)≈(-40)°C	0.1	±0.5°C

ADBLUE (DEF) Refractometer

The Hand Refractometer is specifically designed to measure the Urea concentration of Diesel Exhaust Fluid (DEF). This refractometer provides a simple and quick tool for an operator or technician.

SCR-equipped engines require the periodic addition of Diesel Exhaust Fluid (DEF, a urea solution) to enable the process. DEF is available in a bottle from most truck stops, and some have installed bulk DEF dispensers near the Diesel Fuel pumps. However, to ensure the proper operation of the SCR system, operators must ensure the DEF in their vehicle consists of a 32.5% Urea / Water solution.

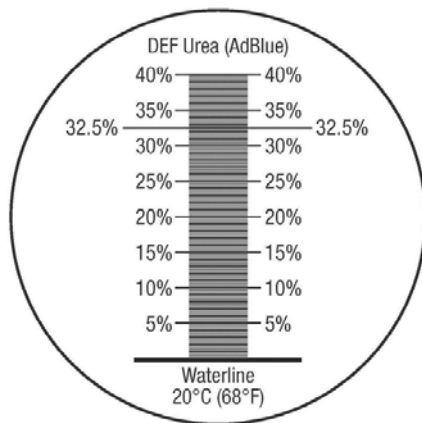
RF502 ADBLUE (DEF) Refractometer

Scale: 0.5% line graduations

32.5% Indicated Scale

15-40% Waterline & 20

Deg C



RF500 ADBLUE (DEF) Refractometer

ADBlue (DEF) excepting the battery battery acid, coolant and windscreen fluids. The measure range of urea is 30%-35%.

Range:

Ethylene Glycol: -25°C- -50°C

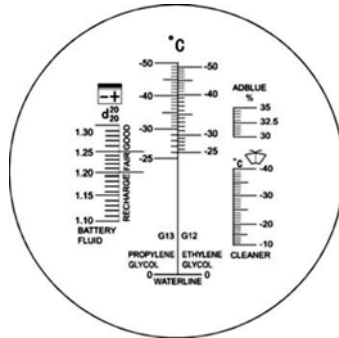
Propylene Glycol: -25°C- -50°C

Battery: 1.100-1.300sg

Adblue(UREA) 30%-35%



RF505 Illuminated Refractometer for ADBLue (DEF)

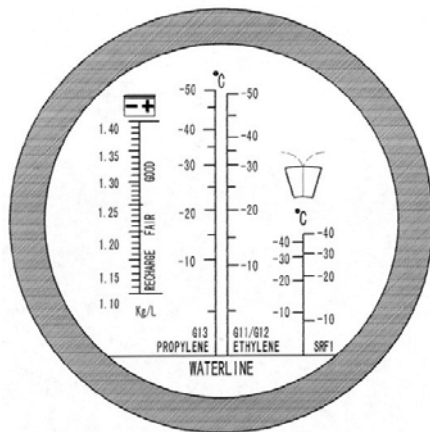


Plastic Coolant and Battery Acid Tester REF400P

This model can be used for measuring the freezing point of either ethylene glycol or propylene glycol based cooling system. It can be used for checking the strength of electrolyte solution in batteries.

Measuring range: -50 °C-0 °C , - 40 °C-0 °C , 1.10-1.40sg

Minimum scale: 5 °C 0.01sg



Brake Fluid Conductivity Meter



This meter gives an immediate indication of brake fluid boiling point, an excellent predictor of brake fluid health. The more moisture in brake fluid, the lower the boiling point and the higher the conductivity reading. The better the brake fluid, the lower the conductivity reading. LEDs on the BF-11 tell the technician whether the brake fluid is good, deteriorating, or needs changing. This tool tests DOT 3, 4, and 5.1.

Brake-Scan----Digital Brake Fluid Tester(Refractometer)



MODEL	SCALES	RANGE	DIVISIONS	ACCURACY
Brake-Scan (C)	DOT3/C	100-700°C	1°C	±10°C
	DOT3(High Temp)/C	90-500°C	1°C	±10°C
	DOT4/C	100-300°C	1°C	±10°C
	DOT4(Plus)/C	100-300°C	1°C	±10°C