

**2023 PRODUCT CATALOG** 

# Reference Materials

for clinical chemistry quality control

**LEADING DEVELOPMENT SINCE 1988** 

- **▼** METHOD EVALUATION
- **▼** CALIBRATION VERIFICATION
- **▼** TROUBLESHOOTING
- **▼** CALIBRATION
- RECOVERY STUDIES
- ▼ ROUTINE QUALITY CONTROL
- ▼ FREE DATA REDUCTION

# **CATALOG INDEX**

```
About Verichem Laboratories....1
9500 Matrix Plus™ Chemistry Reference Kit....2
9506 Matrix Plus<sup>™</sup> Chemistry Reference, Level F....2
9240 Serum ISE Standard Kit....2, 8
9200 Electrolyte Standard Kit....2
9000 Urine Chemistry Standard Kit....3
9020 Urine Uric Acid Standard Kit....3, 10
9480 Microprotein Standard Kit....3
9410 Enzyme ER™ Verifier Kit....3
9417 Enzyme ER™ Verifier, Level G....3
9550 Matrix Plus™ Cholesterol Reference Kit....4
9556 Matrix Plus™ Cholesterol, Level F....4
9460 Total Protein / Albumin Standard Kit....4
9466 Total Protein / Albumin Standard, Level F....4
9560 HDL Cholesterol Verifier Kit...4, 11
9450 Bilirubin Standard Kit....5
9436 Bilirubin Standard, Level F....5
9456 Tru-Zero™ Bilirubin Standard....5
9459 BR2 Bilirubin Calibrator....5
9210 Carbon Dioxide Standard Kit....6
9216 Carbon Dioxide Standard, Level F....6
9040 Ammonia / Iron Standard Kit....6
9046 Ammonia / Iron Standard, Level F....6
9670 Ethanol Standard Kit....6, 9
Data Reduction Services....7
Recommended Products For Your Analyzer....inside back cover
```

L/N 8900W - Revision 2023 Released January 2023



### MATRIX PLUS™ CHEMISTRY REFERENCE KIT

List Number 9500

(5 X 15 mL)

Price \$186.00

•	hiunil	standards	with	hovine	nrotein

- order 9240 Serum ISE Standard Kit for electrolyte ISE
- remarkable optical clarity, 21 month open stability
- suitable for most methods visible and UV, kinetic or endpoint
- known NIST verified targets for major wet chemistry analyzers
- constant protein content and pH across the concentration levels
- · no glycols, azides or surfactants
- · for calibration or calibration verification

		`	,		·
UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E
mg/dL	25	200	375	550	725
mg/dL	5.0	37.5	70.0	102.5	135.0
mg/dL	0.2	6.2	12.2	18.2	24.2
mg/dL	0.1	6.6	13.1	19.7	26.2
mg/dL	5.0	7.5	10.0	12.5	15.0
mg/dL	1.0	3.5	6.0	8.5	11.0
mg/dL	0.80	2.30	3.80	5.30	6.80
mEq/L	0.66	1.90	3.13	4.37	5.60
mg/dL	10	245	480	715	950
	mg/dL mg/dL mg/dL mg/dL mg/dL mg/dL mg/dL	mg/dL 25 mg/dL 5.0 mg/dL 0.2 mg/dL 0.1 mg/dL 5.0 mg/dL 1.0 mg/dL 0.80 mEq/L 0.66	mg/dL         25         200           mg/dL         5.0         37.5           mg/dL         0.2         6.2           mg/dL         0.1         6.6           mg/dL         5.0         7.5           mg/dL         1.0         3.5           mg/dL         0.80         2.30           mEq/L         0.66         1.90	mg/dL         25         200         375           mg/dL         5.0         37.5         70.0           mg/dL         0.2         6.2         12.2           mg/dL         0.1         6.6         13.1           mg/dL         5.0         7.5         10.0           mg/dL         1.0         3.5         6.0           mg/dL         0.80         2.30         3.80           mEq/L         0.66         1.90         3.13	mg/dL         25         200         375         550           mg/dL         5.0         37.5         70.0         102.5           mg/dL         0.2         6.2         12.2         18.2           mg/dL         0.1         6.6         13.1         19.7           mg/dL         5.0         7.5         10.0         12.5           mg/dL         1.0         3.5         6.0         8.5           mg/dL         0.80         2.30         3.80         5.30           mEq/L         0.66         1.90         3.13         4.37

<sup>\*</sup>Triglyceride values are obtained by gravimetric weight of glycerol expressed as triolein.

# MATRIX PLUS™ CHEMISTRY REFERENCE, LEVEL F

- identical matrix as Verichem 9500 MATRIX PLUS™ Chemistry Reference Kit for optimum linearity
- · protein based, ready-to-use liquid
- · no glycols, azides or surfactants
- · known NIST verified targets for major wet chemistry analyzers
- · for calibration or calibration verification

List Number 9506	(1 X 15	mL)	Price \$40.00
ANALYTE	UNITS	LEVEL F	
GLUCOSE	mg/dL	1000	
UREA NITROGEN	mg/dL	150	
CREATININE, PICRATE	mg/dL	30.0	
CREATININE, ENZYMATIC	mg/dL	32.7	
CALCIUM	mg/dL	20.0	
PHOSPHORUS	mg/dL	20.0	
MAGNESIUM	mg/dL	9.72	
TRIGIYCERINE*	ma/dl	1250	

<sup>\*</sup>Triglyceride values are obtained by gravimetric weight of glycerol expressed as triolein.

This product is not sold separately and must be purchased with 9500 Matrix Plus™ Chemistry Reference Kit.

# **SERUM ISE STANDARD KIT**

- protein-based, liquid gravimetric standards
- intended for calibration verification or calibration
- for direct ISE, diluted / indirect ISE and cesium flame
- glycol and surfactant free for maximum electrode protection
- extended range for high volume analyzers
- · NIST verified and lot certified

		B 1				004	_
	1CT	N	111	m	hΔi	r 924	(1)
L	JOL	ΙV	u		nci	J Z 7	·U

(5 X 15 mL)

Price \$162.00

ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E
SODIUM	mmol/L	50.0	87.5	125.0	162.5	200.0
POTASSIUM	mmol/L	1.00	3.25	5.50	7.75	10.00
CHLORIDE	mmol/L	50.0	87.5	125.0	162.5	200.0
LITHIUM	mmol/L	0.20	1.30	2.40	3.50	4.60

See full description on page 8 of this catalog.

## **ELECTROLYTE STANDARD KIT**

protein-based, liquid gravimetric standards

- intended for calibration verification or calibration
- suitable for most direct ISE, diluted ISE and cesium flame
- glycol and surfactant free for maximum electrode protection
- suitable for lithium direct ISE
- specifically designed for benchtop direct ISE

### List Number 9200

(5 X 15 mL)

Price \$184.00

4.50

ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E
SODIUM	mmol/L	100	118	136	154	172
POTASSIUM	mmol/L	1.75	4.50	7.25	10.00	12.75
CHLORIDE	mmol/L	60.0	88.5	117.0	145.5	174.0
LITHIUM	mmol/L	0.50	1.75	3.00	4.25	5.50

0.50

# ORDERING INFORMATION

by Mail:

Verichem Laboratories, Inc. 90 Narragansett Avenue Providence, RI 02907

by Fax:

401-467-1540

IONIZED CALCIUM

by Email: customerservice@verichemlabs.com

Minimum order is \$50.00. All orders shipped FedEx Air Service, F.O.B. Providence. Shipping costs are prepaid and added to each invoice. Handling charge of \$5.00 per order. Terms are net 30 days from date of invoice. No other items or conditions of sale binding unless authorized by a Verichem representative. Prices effective January 1, 2023 and subject to change without notice.

PAGE 2



ABORATORIES. INC.

Customer Service toll free (800) 552-5859

mmol/L\* \*Ionized Calcium values shown are approximate



# **ENZYME ER™ VERIFIER KIT**

List Number 9410

(6 X 5 mL)

Price \$298.00

	$\overline{}$
_	~
_	_
_	-
_	_
_	
_	-
_	_
$\overline{}$	
_	=
_	_
_	_
_	- @

- · protein-based, liquid, ready-to-use
- · intended for calibration verification of serum kinetic assays
- · known linear relation stated for all wet chemistry analyzers
- stable 18 months from date of manufacture
- · specifically designed for extended range systems
- · assay values included for AU, Roche Cobas and **Abbott Architect Chemistry Systems**
- normal range point for all enzymes

ANALYTE	UNITS*	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	LEVEL F
ASPARTATE AMINOTRANSFERASE (AST/GOT)	U/L,37°C	4	23	191	377	563	750
ALANINE AMINOTRANSFERASE (ALT/GPT)	U/L,37°C	3	15	127	252	376	500
ALKALINE PHOSPHATASE (ALP/AP)	U/L,37°C	8	45	381	755	1127	1500
LACTATE DEHYDROGENASE (LD/LDH)	U/L,37°C	6	36	305	604	901	1200
CREATINE PHOSPHOKINASE (CK/CPK)	U/L,37°C	10	60	508	1006	1502	2000
GAMMA GLUTAMYLTRANSFERASE (GGT/GGPT)	U/L,37°C	6	36	305	604	901	1200
ALPHA-AMYLASE (AMS/AMY)	U/L,37°C	10	60	508	1006	1502	2000
LIPASE (LP/LIP)	U/L,37°C	18	32	164	309	455	600
CHOLINESTERASE (CHE)	KU/L,37°C	0.1	0.5	3.8	7.5	11.3	15.0

<sup>\*</sup>Typical recovery for AU Chemistry Systems; values shown are approximate.

# ENZYME ER™ VERIFIER, LEVEL G

- protein-based, liquid, ready-to-use, 18 month stability
- intended to extend the range for calibration verification of **AU Chemistry AST only**
- · assay value included for all AU Systems

1 in+	Miller	hor	9417
1 181	1/11/11/1	mer	941/

**ANALYTE** 

MAGNESIUM

mg/dL

(1 X 5 mL)

Price \$20.00

ASPARTATE AMINOTRANSFERASE (AST/GOT)

UNITS\* U/L,37°C LEVEL G 1000

# **URINE CHEMISTRY STANDARD KIT**

- intended for calibration verification or calibration
- known NIST verified gravimetric concentrations
- · liquid, ready-to-use
- · synthetic matrix: free of surfactants, glycols, azide and other interfering substances
- · stable 24 months from date of manufacture
- · treat as patient specimen with any wet chemistry urine test

List Number 9	9000		(5 X 15 mL)		Price \$254.00	
ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E
SODIUM	mmol/L	10	110	210	310	410
POTASSIUM	mmol/L	2	52	102	152	202
CHLORIDE	mmol/L	20	115	210	305	400
UREA NITROGEN	mg/dL	20	365	710	1055	1400
CREATININE	mg/dL	5	80	155	230	305
CALCIUM	mg/dL	1.0	11.0	21.0	31.0	41.0
PHOSPHORUS	mg/dL	10	60	110	160	210

# **URINE URIC ACID STANDARD KIT**

- intended for calibration verification or calibration
- · known, gravimetric concentrations
- · frozen liquid, ready-to-use
- · synthetic matrix: free of surfactants, glycols, azide and other interfering substances
- · treat as patient specimen with any wet chemistry urine test

List Number 9020			(5 X 5	mL)	Price \$152.00		
ANALYTE	UNITS	LEVEL A	LEVEL B LEVEL C		LEVEL D	LEVEL E	
URIC ACID	mg/dL	1	26	51	76	101	

3.5

6.0

8.5

11.0

See full description on page 10 of this catalog.

1.0

# MICROPROTEIN STANDARD KIT

- · intended for calibration or calibration verification
- liquid, ready-to-use standards
- · human protein components for optimum reactivity
- · extremely stable formulation with 24 month shelf life at 2° to 8°C
- · certified gravimetric concentrations with exceptional lot-to-lot duplication
- suitable for any turbidimetric or colorimetric method
- · azide free

List Number	9480		(5 X	15 mL)	Price \$182.00	
ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E
TOTAL PROTEIN	mg/dL	10	60	110	160	210
HUMAN ALBUMIN	mg/dL	7	42	77	112	147

<sup>\*</sup>Typical recovery for AU Chemistry Systems; values shown are approximate.



### MATRIX PLUS™ CHOLESTEROL REFERENCE KIT

List Number 9550

(5 X 15 mL)

Price \$232.00

•	liquid	standards	with	bovine	protei

- · remarkable optical clarity
- · contains esterified and free cholesterol from bovine serum
- known concentrations verified against available NIST Standard Reference Material
- · for calibration or calibration verification
- constant protein content, pH and ionic strength across concentration levels
- · prepared without surfactants, glycol or azide
- · stable 21 months from date of manufacture

ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E
CHOLESTEROL	mg/dL	40	155	270	385	500
URIC ACID	mg/dL	2	7	12	17	22

# MATRIX PLUS™ CHOLESTEROL, LEVEL F

 identical matrix as Verichem 9550 MATRIX PLUS™ Cholesterol Reference Kit for optimum linearity

- · protein based, ready-to-use liquid
- · no glycols, azides or surfactants
- known concentrations verified against available NIST Standard Reference Material
- · stable 21 months from date of manufacture

List Number 9556 (1 X 15 mL) Price \$48.00

ANALYTE	UNITS	LEVEL F	
CHOLESTEROL	mg/dL	750	
URIC ACID	mg/dL	30	

This product is not sold separately and must be ordered with 9550 Matrix Plus™ Cholesterol Reference Kit.

# TOTAL PROTEIN / ALBUMIN STANDARD KIT

- for calibration verification or calibration
- prepared with human serum albumin
- · accurate, liquid standards containing purified proteins in saline
- stable 24 months from date of manufacture
- known concentrations verified against available NIST Standard Reference Material

List Number 9460			(5 X 1	5 mL)	Price \$184.00		
ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	
TOTAL PROTEIN	g/dL	1.5	4.0	6.5	9.0	11.5	
HUMAN AI BUMIN	n/dl	1.5	2.5	3.5	4.5	5.5	

## TOTAL PROTEIN / ALBUMIN STANDARD, LEVEL F

- identical matrix as Verichem 9460 Total Protein/Albumin Standard Kit for optimum linearity
- accurate, ready-to-use liquid standard
- prepared from highly purified proteins
- known concentrations verified against available NIST Standard Reference Material

List Number 9466	(1 X 15	mL)	Price \$38.00
ANALYTE	UNITS	LEVEL F	
TOTAL PROTEIN	g/dL	14.0	
HUMAN ALBUMIN	g/dL	6.5	

This product is not sold separately and must be ordered with 9460 Total Protein/Albumin Standard Kit.

## HDL CHOLESTEROL VERIFIER KIT

- intended for calibration verification of serum HDL cholesterol and LDL cholesterol
- liquid, ready-to-use, no manual dilution required
- treat as patient specimen with any indirect or direct wet method
- ultra-pure, protein matrix eliminates ambiguity and imprecision
- linear relation provided
- assigned values included for AU Chemistry Systems as well as all direct methods

List Number 9560	(6 X 5 mL)			Price \$380.00				
ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	LEVEL F	_
HDL CHOLESTEROL	mg/dL*	10	42	73	105	131	200	
LDL CHOLESTEROL	ma/dL*	20	83	147	210	263	400	

 ${}^{\star}$ Typical recovery, values shown are approximate.

See full description on page 11 of this catalog.





## **BILIRUBIN STANDARD KIT**

List Number 9450 (10 X 5 mL)

		•	•			
	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E
IN	ma/dl	0.5	5.5	10.5	15.5	20.5

Price \$178.00

- · protein-based, optically clear, liquid standards
- intended specifically for calibration verification
- known linear relation stated in product insert
- stable 5 days after opening when refrigerated
- kit includes two, five-level sets
- no glycols, azides or surfactants
- concentrations verified using pure crystalline bilirubin and Doumas reference method

ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E
TOTAL BILIRUBIN	mg/dL	0.5	5.5	10.5	15.5	20.5
DIRECT BILIRUBIN	mg/dL*	0.5	5.5	10.5	15.5	20.5

\*direct bilirubin values may vary with methodology and conditions of assay

Technical note: Reichert Technologies Bilirubinometer requires 9456 Tru-Zero™ Bilirubin Standard as the lowest level standard.

# BILIRUBIN STANDARD, LEVEL F

•	identical matrix as Verichem 9450 Bilirubin Standard Kit for	
	optimum linearity	

- · protein based, ready-to-use liquid
- · no glycols, azides or surfactants
- concentrations verified using pure crystalline bilirubin and Doumas reference method
- · stable 5 days after opening when refrigerated

List Number 9436	(2 X 5 mL)		Price \$40.00
ANALYTE	UNITS	LEVEL F	
TOTAL BILIBURIN	ma/dl	30.0	

This product is not sold separately and must be ordered with 9450 Bilirubin Standard Kit.

**TOTAL BILIRUBIN** 

# TRU-ZERO™ BILIRUBIN STANDARD

- · identical matrix as Verichem 9450 Bilirubin Standard Kit for optimum linearity
- · protein based, ready-to-use liquid
- · no glycols, azides or surfactants
- · no special procedures or diluents required
- · stable 5 days after opening when refrigerated

List Number 9456	(2 X 5 ml	L) Price \$30.00	
ANALYTE	UNITS	CONCENTRATION	

ANALYTE	UNITS	CONCENTRATION
TOTAL BILIRUBIN	mg/dL	0.0
DIRECT BILIRUBIN	mg/dL	0.0

# **BR2 BILIRUBIN CALIBRATOR**

 specifically designed for calibration of Advanced Instruments Model BR2 Bilirubin Stat-Analyzer

- · protein based, ready-to-use liquid
- · no glycols, azides or surfactants
- no special procedures or diluents required
- stable 5 days after opening when refrigerated

List Number 9459	(2 X 5 mL)	Price \$44.00
ANALYTE	UNITS COI	NCENTRATION

mg/dL

# FOR ADVANCED BR2 BILIRUBIN STAT-ANALYZER ONLY



"Verichem Laboratories is dedicated to all clinical chemists whose goal is to determine the absolute accuracy of their diagnostic test system.

Our ultimate goal is to provide clinical chemists with cost effective, ready-to-use, protein-based reference materials that are also serum-like, highly accurate and stable. For calibration verification, Verichem standards are used to determine a clinical system's bias to the true or known value, independent of consensus."

> Anthony J. DiMonte President Verichem Laboratories, Inc.

20.0



# **CARBON DIOXIDE STANDARD KIT**

List Number 9210

(5 X 15 mL)

Price \$80.00

Price \$18.00

LEVEL E

- · aqueous, ready-to-use standards
- intended for calibration verification or calibration
- suitable for most serum ISE or enzymatic methods
- prepared from reagent grade source materials

ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	_
CARBON DIOXIDE	mmol/L	5	10	20	30	40	

mmol/L

# CARBON DIOXIDE STANDARD, LEVEL F

List Number 9216 (1 X 15 mL)

ANALYTE UNITS

- identical non-protein matrix as Verichem 9210 Carbon Dioxide Standard Kit for optimum linearity
- ready-to-use liquid
- prepared from reagent grade standard source materials
- · suitable for most serum ISE or enzymatic methods

This product is not sold separately and must be ordered with 9210 Carbon Dioxide Standard Kit.

# **AMMONIA / IRON STANDARD KIT**

List Number 9040

**CARBON DIOXIDE** 

(5 X 15 ml)

Price \$136.00

- intended for calibration or calibration verification
- pH adjusted, non-protein matrix supports these critical trace analytes
- stable 24 months from date of manufacture at 2° to 8°C
- · contains only reagent grade source materials
- suitable for most enzymatic ammonia and iron color methods

LIST NUMBER 3040		(0 X 10	) IIIL)		που ψπ	30.00	
ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	
AMMONIA	μmol/L	6	235	464	693	922	
AMMONIA	mcg/dL	10	400	790	1180	1570	
TOTAL IRON	mca/dL	10	130	250	370	490	

# AMMONIA / IRON STANDARD, LEVEL F

- identical non-protein matrix as Verichem 9040 Ammonia/Iron Standard Kit for optimum linearity
- ready-to-use liquid
- · prepared from reagent grade standard source materials
- known concentrations verified against available NIST Standard Reference Material

List Number 9046	(1 )	( 15 mL)	Price \$22.00
ANALYTE	UNITS	LEVEL F	
AMMONIA	μmol/L	1175	
AMMONIA	mcg/dL	2000	
TOTAL IRON	mcg/dL	1000	

This product is not sold separately and must be ordered with 9040 Ammonia / Iron Standard Kit.

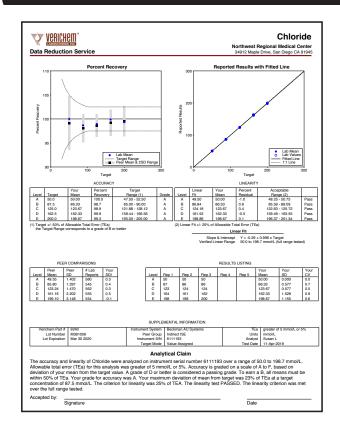
#### ETHANOL STANDARD KIT List Number 9670 (6 X 5 mL) Price \$244.00 ANALYTE LEVEL B LEVEL C **LEVEL E** UNITS LEVEL F protein-based, liquid standards intended for ethanol calibration verification or calibration ETHANOL mg/dL 12.0 77.3 96.0 311.9 482.4 600.0 suitable for most enzymatic methods LACTATE 3.2 20.6 25.6 83.2 128.6 160.0 mg/dL glycol and azide free **ACETAMINOPHEN** 48.0 241.2 300.0 6.0 38.7 156.0 contains known linear relation for acetaminophen, lactate mg/L and salicylate SALICYLATE ma/dL 2.0 12.9 16.0 52.0 100.0 80.4 • 18 month shelf life at 2° to 8°C

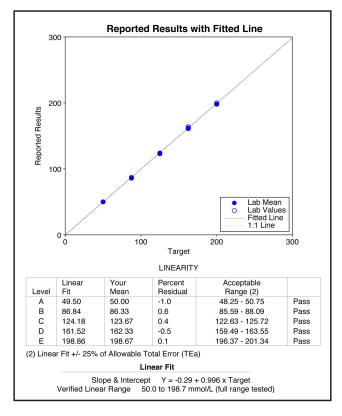
See full description on page 9 of this catalog.



Verichem has accomplished unprecedented technical achievements and continues to advance in linking definitive method value assignment with practicality. Clinical scientists worldwide have recognized the importance of Verichem premium quality control materials in routine monitoring of their chemistry systems.

# NEW AND IMPROVED WEB BASED DATA REDUCTION SERVICES





# LOG IN • ENTER RESULTS • SUBMIT • PRINT

- No software to download.
- Complete all-in-one program to satisfy CLIA and CAP requirements.
- Calibration Verification Experiments include:
  - 1. Accuracy
  - 2. Linearity
  - 3. Calibration Verification
  - 4. Reportable Range
- User-friendly and professional reports are ready to sign and file.
- Accuracy and Linearity Graph included on each report.

- Online peer group data allows instant comparison of your results with those of other labs. Abbott, Beckman and Roche lot-specific targets now available for enzyme tests.
- Target values are already loaded online. Just enter instrument results and get your reports printed instantly.
- Register with a secure password for access to the online program.
- Expert support is just a phone call away to answer questions about your reports or for help troubleshooting.

# EXTENSIVE DATABASE TO SUPPORT TROUBLESHOOTING PERFORMANCE ISSUES

# FREE INSTANT CALIBRATION VERIFICATION REPORTS

Register online at verichem-data-reduction.net

Questions? Contact us

Verichem Laboratories Customer Service phone: 800-552-5859 outside USA +1(401)461-0180 email: customerservice@verichemlabs.com

# NEW PRODUCT RELEASE



PRODUCT LIST NUMBER: 9240

PRODUCT NAME: SERUM ISE STANDARD KIT

INTENDED USE: The Verichem Serum ISE Standard Kit is an aqueous in vitro diagnostic product.

It is intended for calibration or calibration verification of clinical chemistry test systems.

**KIT SIZE:** Five concentration levels, fifteen milliliters each level.

**PRICE:** \$162.00 SHELF LIFE: 18 months

### DESCRIPTION

Verichem developed the Serum ISE Standard Kit to meet the range and matrix requirements of large volume analyzers. These standard reference materials may be treated as patient specimens with any wet chemistry ISE or color method.

Verichem's Serum ISE Standard kit is an advanced universal product design for critical evaluation and verification of serum electrolytes, including therapeutic lithium. The matrix is synthetic at pH 7.4 and contains no serum for a more stable and reproducible base. As with all Verichem products, the exclusion of serum in this formulation allows us to provide absolute known concentrations. This ready-to-use product is free of surfactants, glycols, azide and other interfering substances.

Target concentrations are equidistant and meet CLIA requirements for verification material with known values for the determination of clinical test system accuracy, sensitivity, linearity and reportable range. This set is the perfect complement to Verichem's impressive menu of known concentrations having no relation to consensus or assay. Each of these twenty absolute concentrations is verified using popular clinical methods and available Standard Reference Materials from the National Institute of Standards and Technology (NIST). A lot-specific Certificate of Analysis is included in each kit.

The Serum ISE Standard Kit contains one five-level set with fifteen milliliters each level, product insert, Certificate of Analysis and organizer tray. The fluids are packaged in translucent polyethylene dropper vials and stored at refrigerated temperatures (2° to 8°C). The vials are multiple dose and may be used numerous times until the expiration date on the kit.

ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	
SODIUM	mmol/L	50.0	87.5	125.0	162.5	200.0	
POTASSIUM	mmol/L	1.00	3.25	5.50	7.75	10.00	
CHLORIDE	mmol/L	50.0	87.5	125.0	162.5	200.0	
LITHIUM	mmol/L	0.20	1.30	2.40	3.50	4.60	

This innovative new product complements Verichem's complete line of fluids and software for calibration verification.

### ORDERING INFORMATION:

Fax to (401) 467-1540 or email your order to: **customerservice@verichemlabs.com** 



# PRODUCT INFORMATION FOR ALL SYSTEMS



PRODUCT LIST NUMBER: 9670

PRODUCT NAME: ETHANOL STANDARD KIT

INTENDED USE: The Verichem Ethanol Standard Kit is a protein based, in vitro diagnostic product. It is intended for

calibration or calibration verification of serum test systems for ethanol, lactate, salicylate and acetaminophen.

**KIT SIZE:** Six concentration levels, five milliliters each level.

**PRICE:** \$244.00

SHELF LIFE: 18 months

### **DESCRIPTION**

The Ethanol Standard Kit is another unprecedented product for calibration or calibration verification. This accurate, liquid reference material spans the entire clinical range for most serum test systems. These protein based standards may be treated as patient specimens with any wet chemistry method.

Verichem's Ethanol Standard kit is unique in design, incorporating the serum-like reactivity of a bovine protein base with the volumetric accuracy of an aqueous matrix. The matrix is bio-synthetic, containing no serum for maximum stability and lot-to-lot duplication. The exclusion of whole serum in this formulation allows Verichem to manufacture its Ethanol Standards as a standard reference material with known values. Concentrations are assigned by volumetric / gravimetric procedure and indicate weight per volume composition using absolute ethanol source material of known purity. This ready-to-use product is also free of surfactants, glycols, azide and other interfering substances.

Verichem's important design creates critical serum ethanol set points at or near decision cut-off concentrations of 0.01, 0.08 and 0.10 percent. The combination of unique matrix formulation and set point design are the key classic features for the absolute determination of clinical test system accuracy, sensitivity, linearity and reportable range. This set is the perfect complement to Verichem's impressive menu of known concentrations having no relation to consensus or assay. Each of the twenty four definitive concentrations is verified using popular clinical methods and available Standard Reference Materials from the National Institute of Standards and Technology (NIST) or available USP Reference Standards. A lot-specific Certificate of Analysis is included in each kit.

In addition to the ethanol component, Verichem's Ethanol Standard Kit contains gravimetric concentrations for lactate, salicylate and acetaminophen. All concentrations are obtained by volumetric dilution of two stock standards. The resultant dilutions possess constant pH and protein content for maximum linearity performance. Concentrations are provided in the product insert and may be used to determine accuracy, sensitivity, linearity and reportable range for these assays.

The Ethanol Standard Kit contains one six-level set with five milliliters each level, product insert, Certificate of Analysis and organizer tray. The fluids are packaged in translucent polyethylene dropper vials. Shelf life is 18 months from the date of manufacture at refrigerated temperatures (2° to 8°C)

ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	LEVEL F	
ETHANOL	mg/dL	12.0	77.3	96.0	311.9	482.4	600.0	
LACTATE	mg/dL	3.2	20.6	25.6	83.2	128.6	160.0	
ACETAMINOPHEN	mg/L	6.0	38.7	48.0	156.0	241.2	300.0	
SALICYLATE	mg/dL	2.0	12.9	16.0	52.0	80.4	100.0	

### ORDERING INFORMATION:

Fax to (401) 467-1540 or email your order to: customerservice@verichemlabs.com

This innovative product complements Verichem's complete line of fluids and software for calibration verification.



# NEW PRODUCT RELEASE



PRODUCT LIST NUMBER: 9020

PRODUCT NAME: URINE URIC ACID STANDARD KIT

INTENDED USE: The Verichem Urine Uric Acid Standard Kit is an aqueous, in vitro diagnostic product. It is intended for

calibration or calibration verification of urine test systems.

**KIT SIZE:** Five concentration levels, five milliliters each level.

PRICE: \$152.00 SHELF LIFE: 19 months

### DESCRIPTION

The Urine Uric Acid Standard Kit is another new addition to Verichem's menu. The product is the first absolute, liquid reference material for urine uric acid and spans the entire clinical range for urine tests. The aqueous, extended range standards may be treated as patient specimens with any wet chemistry system.

This unique new product includes a bio-synthetic matrix with urine-like reactivity. This product is a true, primary standard and meets CLIA requirements for calibration verification. Concentrations are assigned by gravimetric procedure and indicate weight per volume composition using uric acid source material of known purity. The formulation offers maximum stability and undetectable lot-to-lot variation. These uric acid standards are also free of surfactants, glycols, azide and other interfering substances.

The matrix formulation and set point design are the key classic features for determination of clinical test system accuracy, sensitivity, linearity and reportable range. Each of the five standard concentrations is verified using popular clinical methods and available Standard Reference Materials from the National Institute of Standards and Technology (NIST). A lot-specific Certificate of Analysis is included in each kit.

The Urine Uric Acid Standard Kit contains one, five-level set with five milliliters each level, product insert, Certificate of Analysis and organizer tray. The fluids are packaged in multiple dose, polyethylene dropper vials. Storage is frozen at -15 to -25°C and shipped on dry ice via next day air. The formulation is robust and can tolerate up to 10 freeze-thaw cycles without affecting accuracy or performance. Shelf life is currently 19 months from the date of manufacture and will be extended for future lots.

ANALYTE	UNITS	LEVEL A	LEVEL B	LEVEL C	LEVEL D	LEVEL E	
URIC ACID	mg/dL	1	26	51	76	101	

### ORDERING INFORMATION:

Fax to (401) 467-1540 or email your order to: customerservice@verichemlabs.com

This innovative product complements Verichem's complete line of fluids and software for calibration verification.



# PRODUCT INFORMATION FOR ALL SYSTEMS



PRODUCT LIST NUMBER: 9560

PRODUCT NAME: HDL CHOLESTEROL VERIFIER KIT

INTENDED USE: This liquid product is intended for calibration verification of serum HDL cholesterol and LDL cholesterol

test systems.

**KIT SIZE:** Six concentration levels, five milliliters each level

PRICE: \$380.00 SHELF LIFE: 14 months

### **DESCRIPTION**

Verichem HDL Cholesterol Verifier kit contains high density and low density lipoprotein cholesterol from human serum in a liquid stable format. Volumetric dilution of highest and lowest concentrations provides a known linear relation among this six level set which is intended for calibration verification of most HDL and LDL wet methods.

The serum-like matrix contains a critical blend of purified human serum albumin, human serum globulin and bovine gamma globulin in saline. Protein balance, pH and ion content is constant across all six levels for optimum linearity even with the most sensitive methods. This ready-to-use product is free of surfactants, glycols and azide.

The kit challenges linearity claims for most direct or indirect HDL and LDL cholesterol test systems. Value Assignment Sheet provides expected concentration recovery for all wet chemistry, direct reacting methods.

Verichem's breakthrough in lipoprotein purification and stabilization is now setting a higher standard for cardiac risk assessment. The HDL Cholesterol Verifier Kit will meet the demands of clinical chemists searching for a convenient, stable product for simultaneous evaluation of these important analytes.

The set point design and matrix formulation represent the cutting edge in lipoprotein reference material. Free of interfering substances, the matrix allows excellent performance with selective precipitation assays. As with all Verichem reference materials, the use of highly purified source components eliminates matrix variations common with serum based products. These inherent properties combine with Verichem's stringent manufacturing tolerances to produce a high quality verifier material with predictable recovery from lot to lot.

The HDL Cholesterol Verifier Kit contains one six-level set with five milliliters each level, product insert, Value Assignment Sheet and organizer tray. The fluids are packaged in translucent polyethylene dropper vials. Shelf life is fourteen months from the date of manufacture at freezer temperatures (-15° to -25°C).

ANALYTE	UNITS	LIST NO. 9561 LEVEL A	LIST NO. 9562 LEVEL B	LIST NO. 9563 LEVEL C	LIST NO. 9564 LEVEL D	LIST NO. 9565 LEVEL E	LIST NO. 9566 LEVEL F	
HDL CHOLESTEROL	mg/dL*	10	42	73	105	131	200	
LDL CHOLESTEROL	mg/dL*	20	83	147	210	263	400	

<sup>\*</sup>Typical recovery, values shown are approximate.

This innovative product complements Verichem's complete line of fluids and software for calibration verification.

## **ORDERING INFORMATION:**

Fax to (401) 467-1540 or email your order to: **customerservice@verichemlabs.com** 



# **VERICHEM PRODUCTS FOR YOUR ANALYZER (2022)**

Abbott Diagnostics:	ARCHITECT (all models)	All multi-level products compatible, Level (F) optional
	ALINITY (all models)	All multi-level products compatible, Level (F) optional
Beckman Coulter:	AU SYSTEMS (all models)	All multi-level products compatible, Level (F) optional
	DxC 700 AU	All multi-level products compatible, Level (F) optional
	UniCel DxC (all models)	All multi-level products compatible, Level (F) optional
Roche Diagnostics:	AVL 9180	9200 Electrolyte Standard Kit required
	COBAS C (all models)	All multi-level products compatible, Level (F) optional
	COBAS INTEGRA (all models)	All multi-level products compatible, Level (F) optional
Siemens Healthcare:	DIMENSION (RXL/EXL/Xpand)	All multi-level products compatible, Level (F) optional
	ATELLICA / ADVIA (all models)	All multi-level products compatible, Level (F) optional
	VISTA (all models)	All multi-level products compatible, Level (F) optional
		9200 Electrolyte Standard Kit required for VISTA only
Advanced Instruments:	BR2 BILIRUBIN STAT	9450 Bilirubin Standard Kit, 9436 Bilirubin Standard, Level F
		9459 BR2 Bilirubin, 9456 Tru-Zero™ Bilirubin Standard
Alfa Wassermann:	ACE Alera	All multi-level products compatible, Level (F) optional
EKF Diagnostics (Stanbio):	Altair / Excel	All multi-level products compatible, Level (F) optional
Horiba Medical:	PENTRA (all models)	All multi-level products compatible, Level (F) optional
		9200 Electrolyte Standard Kit required
Ortho Clinical:	VITROS	9200 Electrolyte Standard Kit only
Medica Corporation:	EasyLyte	9240 Serum ISE Standard Kit required
	EasyRA	All multi-level products compatible, Level (F) optional
	Lucytut	9200 Electrolyte Standard Kit only
Reichert Technologies:	UNISTAT Bilirubinometer	9450 Bilirubin Standard Kit, 9436 Bilirubin Standard, Level F
Thoronort roomiologicor		9456 Tru-Zero <sup>TM</sup> Bilirubin Standard required
		2 122 122 2010 2 maxim distribution
Abbott / Abaxis:	Piccolo Xpress	9450 Bilirubin Standard Kit, 9436 Bilirubin Standard, Level F
, is set / risunio.	50010 /101000	9456 Tru-Zero™ Bilirubin Standard
		o los las Esta Simusin Giandard



# Leading Development of Clinical Reference Materials since 1988

# •9200 Electrolyte Standard Kit

Pioneered the first 5-level liquid protein based gravimetric electrolyte standard.

#### 9450 Bilirubin Standard Kit

Introduced groundbreaking 5-level liquid standard set for bilirubin calibration verification without interfering glycol or surfactants.

## 9460 Total Protein / Albumin Standard Kit

First to market with gravimetrically prepared total protein / albumin multi-level set containing total protein and 100% human albumin in liquid format.

### •9500 Matrix Plus Chemistry Reference Kit

Formulated first liquid protein based chemistry reference materials with gravimetric target values and 1991 21 month refrigerated stability.

### 9550 Matrix Plus Cholesterol Reference Kit

Developed unprecedented liquid protein based total cholesterol reference material validated using the National Reference Method.

## •9480 Microprotein Standard Kit

Released innovative microprotein multi-level set containing 100% human source material with gravimetric concentrations for microalbumin and micro-total protein.

### •9000 Urine Chemistry Standard Kit

Completed formulation and marketed original liquid urine chemistry 5-level reference material with gravimetric target concentrations.

### 9560 HDL Cholesterol Verifier Kit

Developed formulation for liquid HDL / LDL cholesterol reference material with 100% human lipoprotein accommodating multiple freeze-thaw cycles without affecting performance.

# 9670 Ethanol Standard

Announced breakthrough design offering multi-level calibration verification kit containing pure ethanol as a gravimetric standard in protein base with NIST certification.

#### Verichem Data Reduction Service

Introduced web-based CLIA Data Reduction for instantaneous and comprehensive reports including peer comparison.

### •BR2 Bilirubin Calibrator

Custom designed protein-based liquid bilirubin calibrator for the BR2 Bilirubin STAT Analyzer standardized for the direct absorbance total bilirubin method.

### •9240 ISE Standard Kit

Created a liquid in vitro diagnostic product intended for calibration or calibration verification of serum electrolyte test systems.

## 9020 Urine Uric Acid Standard Kit

First gravimetrically prepared, liquid standard set for urine uric acid calibration verification.

1988

1988

1989

1998

1991

2002

2003

2008

2005

2015

2012

2015