

### Intended Use

For *in vitro* diagnostic use only.

The Chemistry Control is to be used for monitoring the accuracy and precision of clinical chemistry procedures. This control contains constituents commonly of interest in a general chemistry control, including common drugs and thyroids. The assayed multi-analyte control product is packaged with one level of analytes.

### Product Description

The quality control material is prepared from human serum with enzymes, nonprotein constituents, non-human protein, and bacteriostatic agents added. The constituents were adjusted to the levels listed in Expected Values.

### Precautions

**BIOHAZARD:** Human source material. Handle as if potentially infectious. Human serum was used in the manufacture of this product. Each donor unit used was tested by FDA-approved methods and found nonreactive for hepatitis B surface antigen (HBsAg), Hepatitis C (HCV), and HIV 1 and HIV 2. Because no known test method can offer complete assurance that infectious agents are absent, all products containing human source material should be handled in accordance with recommendations from Centers for Disease Control/National Institute of Health Manual, "Biosafety in Microbiological and Biomedical Laboratories, 1999."

### Storage and Stability

Ensure that you tightly seal the vials after reconstitution and use to prevent evaporation during storage. Ensure that you store the vials upright to prevent spills or leakage. CK and Bilirubin are sensitive to light. Store the vials away from light.

	Storage	Stability
Unreconstituted	2-8°C	Refer to the label on each vial and on the package for the expiration date.
Reconstituted	2-8°C	7 days Exceptions: ACP 3 days; ALT and ALP 5 days; ALP may increase with time.

### General Instructions for Use

Use the quality control material according to the directions accompanying the instrument or the assay procedure used. Treat the quality control material in the same manner as patient samples.

1. Remove the screw cap and gently remove the rubber stopper from the vial.
2. Pipette exactly 5.0 mL of distilled or deionized water to the vial using a volumetric pipette.
3. Replace the stopper in the vial, allow the vial to sit for 10 minutes.
4. Gently invert the vial three (3) times and swirl until the contents are homogenous.
5. Record the results according to your quality assurance program.

### Expected Results

Refer to the Expected Values table supplied for assay mean and ranges. Before use, verify that the vial lot number corresponds to the lot number listed on the Expected Values table.

The Expected Values and ranges are target values derived from inter laboratory data. The expected range values include variations of instrument and laboratory handling. The assay values were obtained using in-date Pointe Scientific reagents available at the time of testing. Updates to the listed values may be made based upon additional data that becomes available or, if necessitated by a modification to a test method. The mean values established for your laboratory should fall within the ranges shown in Expected Values; however laboratory means may vary during the life of the control. Each laboratory should establish its own mean and precision parameters.

### Limitations

The results obtained using the quality control material are dependant upon several factors: erroneous results can occur from improper storage, reconstitution errors, inadequate mixing, or sample handling errors associated with instrument or assay procedures. Do not use the quality control material if there is visible evidence of microbial growth in the vial or a lack of vacuum when opening the vial for the first time. For more information about procedural limitations, refer to your instrument manual or assay product insert.

### Disposing of Materials

Dispose of hazardous or biologically contaminated materials according to your institution's practices. Discard all materials in a safe and acceptable manner that is in compliance with all country, state, and local requirements.

### Technical Assistance

For technical assistance and customer service contact Pointe Scientific, Inc. at 800-445-9853 or 800-757-5313 or by fax at 734-483-1592.

**REF** C7592-100

**LOT** 718001 and 718002



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**IVD**



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# Chemistry Controls

LEVEL I and II CONTROL

Lot: 718001 / 718002

Exp: 3-10

## Expected Values

## Level I Control

## Lot: 718001 Exp: 3-10

ANALYTE	ASCA* AG II *	ATAC 8000	Chem Well	Cobas Mira	Hitachi	Olympus AU 400 / 640	Pointe 180	Pointe 360	RA 500/1000	Express 550	Selectra *	General Assay Range	Units
Acid Phos	-----	-----	-----	-----	5.3±1.0*	-----	2.9±0.6	-----	3.9±0.8	-----	-----	4.0±0.8	U/L
Albumin	2.8±0.3	3.2±0.3	3.4±0.4	3.0±0.3	3.2±0.3	3.2±0.3	3.3±0.3	3.1±0.3	3.0±0.3	2.9±0.3	3.0±0.3	3.1±0.3	g/dl
Alk Phos	66±21	80±24	77±24	76±21	65±19	61±18	93±28	77±24	77±23	110±33	80±24	78±23	U/L
ALT (SGPT)	29±6	39±8	43±8	34±7	33±7	35±7	51±10	35±7	31±6	39±8	38±8	37±8	U/L
Amylase	88±27	-----	-----	65±20	82±24	77±24	76±23	83±25	79±24	67±21	80±24	77±23	U/L
AST (SGOT)	46±10	48±10	56±11	44±8	43±8	41±8	61±12	41±9	42±8	48±10*	50±10	47±10	U/L
Direct Bilirubin	-----	0.4±0.4	-----	0.3±0.4	0.7±0.4	0.7±0.4	0.9±0.4	0.6±0.4	0.5±0.4	-----	0.5±0.4	0.6±0.4	mg/dl
Total Bilirubin	1.1±0.4	1.0±0.4	0.7±0.4	0.9±0.4	0.7±0.4	0.8±0.4	1.0±0.4	0.8±0.4	0.7±0.4	-----	0.9±0.4	0.9±0.4	mg/dl
BUN	13±2	14±2	14±2	12±2	13±2	13±2	12±2	15±2	10±2	15±2*	12±2	13±2	mg/dl
Calcium (CPC)	10.7±1.0	10.3±1.0	10.6±1.0	10.2±1.0	10.3±1.0	-----	9.7±1.0	-----	9.6±1.0	-----	-----	10.2±1.0	mg/dl
Calcium (AR-III)	-----	-----	10.7±1.0	9.7±1.0	-----	10.6±1.0	-----	9.8±1.0	-----	-----	10.1±1.0	10.2±1.0	mg/dl
Chloride	-----	-----	-----	104±5	**99±5	-----	92±5	-----	99±5	103±5*	-----	99±5	mEq/L
Cholesterol	122±12	123±12	119±12	116±12	123±12	120±12	120±12	130±13	119±12	129±13	123±13	122±13	mg/dl
Carbon Dioxide	-----	-----	18±5	15±5*	20±5	16±5	-----	14±5*	-----	-----	-----	17±5	mEq/L
CK/CPK	95±30	147±45	110±33	120±36	104±30	113±34	136±41	110±33	128±39	120±36	124±36	119±36	U/L
Creatinine	1.0±0.3	1.4±0.3	1.4±0.3	1.1±0.3	1.2±0.3	1.2±0.3	1.5±0.3	1.2±0.3	1.2±0.3	1.2±0.3	1.1 ±0.3	1.2±0.3	mg/dl
GGTP	22±7	-----	-----	25±7	23±7	19±6	42±12	28±8	21±6	36±8	25±7	27±8	U/L
Glucose Hex	91±9	92±9	91±10	99±10	97±10	98±10	91±9	105±10	98±10	-----	98±10	96±10	mg/dl
Glucose Ox	-----	-----	102±10	-----	98±10	-----	98±10	-----	103±10	-----	-----	100±10	mg/dl
HDL (auto)	-----	26±8	24±7	28±9	26±8	27±8	-----	-----	28±8	-----	23±7	26±8	mg/dl
HDL (Mg/Dex)	29±10	-----	-----	32±9*	-----	-----	33±10	-----	-----	-----	-----	33±10	mg/dl
HDL (PEG)	-----	-----	-----	46±15	-----	-----	49±15	-----	-----	-----	-----	47±15	mg/dl
Iron	-----	89±18	-----	90±18	85±17	83±16	101±20	101±20	86±17	-----	-----	91±18	µg/dl
Lactate	-----	-----	-----	1.1±0.2	1.2±0.2	-----	1.2±0.2	-----	1.2±0.2	-----	-----	1.2±0.2	mmol/L
LDH	-----	156±31	150±30	141±28	144±30	127±26	137±28	-----	145±29	84±16*	146±30	137±28	U/L
Lipase (color)	-----	-----	-----	-----	51±15	-----	66±20	-----	53±15	-----	-----	57±17	U/L
Magnesium	2.4±0.6	1.9±0.5	-----	2.0±0.5	2.1±0.5	2.1±0.5	2.2±0.6	2.1±0.5	1.8±0.5	2.0±0.5*	1.8±0.5	2.0±0.5	mg/dl
Phosphorus	3.7±0.4	3.6±0.4	3.5±0.3	3.9±0.4	3.5±0.4	3.5±0.4	3.4±0.4	3.9±0.4	3.4±0.4	-----	3.3±0.3	3.6±0.4	mg/dl
Potassium	-----	-----	-----	-----	**4.0±0.5	-----	3.7±0.5	-----	-----	-----	-----	3.9±0.5	mEq/L
Sodium	-----	-----	-----	-----	**147±4	-----	-----	-----	-----	-----	-----	147±4	mEq/L
TIBC direct	-----	-----	-----	-----	226±56	213±53	-----	-----	-----	-----	-----	220±55	µg/dl
Total Protein	4.6±0.5	4.5±0.5	4.6±0.5	4.3±0.4	4.6±0.5	4.4±0.5	4.5±0.5	5.3±0.5	4.6±0.5	4.9±0.5	4.3±0.4	4.6±0.5	g/dl
Trig-GPO	90±23	90±23	107±26	91±23	86±21	89±22	86±22	99±25	101±25	98±25	91±23	93±23	mg/dl
UIBC	-----	-----	-----	173±42	213±53	-----	-----	-----	-----	-----	-----	193±48	µg/dl
Uric Acid	6.7±1.1	-----	-----	7.0±1.2	-----	-----	6.5±1.1	-----	-----	-----	-----	6.7±1.2	mg/dl
Uric Acid Liquid	-----	7.3±1.2	7.9±1.3	7.0±1.2	6.7±1.1	7.4±1.3	-----	7.5±1.2	6.8±1.2	-----	7.2±1.2	7.2±1.2	mg/dl

\*Limited data used to determine mean.

\*\*ISE Values.

**Expected Values                      Level II Control                      Lot: 718002 Exp: 3-10**

ANALYTE	ASCA* AG II *	ATAC 8000	Chem Well	Cobas Mira	Hitachi	Olympus AU 400 / 640	Pointe 180	Pointe 360	RA 500/1000	Express 550	Selectra *	General Assay Range	Units
Acid Phos	-----	-----	-----	-----	48.0±10.0	-----	38.6±8.0	-----	34.2±7.0	-----	-----	40.0±8.0	U/L
Albumin	4.4±0.5	4.7±0.5	5.0±0.5	4.9±0.5	4.7±0.5	4.8±0.5	4.1±0.4	4.7±0.5	4.8±0.5	4.6±0.5	4.5±0.5	4.6±0.5	g/dl
Alk Phos	186±57	176±53	199±60	200±47	197±66	187±57	220±66	194±58	234±70	250±75	246±75	208±64	U/L
ALT (SGPT)	120±24	119±24	120±24	116±24	129±26	128±26	136±27	133±26	113±22	124±24	136±27	125±24	U/L
Amylase	592±180	-----	-----	492±147	601±180	543±162	580±174	592±180	582±174	518±155	600±180	567±170	U/L
AST (SGOT)	179±36	190±38	208±42	184±36	193±38	189±38	214±44	196±40	185±37	194±40*	208±40	195±40	U/L
Direct Bilirubin	-----	1.8±0.4	-----	1.4±0.4	1.7±0.4	2.4±0.5	2.2±0.4	1.5±0.4	1.2±0.4	-----	1.5±0.4	1.7±0.4	mg/dl
Total Bilirubin	7.9±1.5	7.0±1.4	5.8±1.2	6.1±1.2	7.2±1.4	8.2±1.6	7.6±1.5	7.3±1.4	5.7±1.2	-----	5.9±1.2	6.9±1.4	mg/dl
BUN	49±5	52±5	54±5	49±5	51±5	52±5	43±4	49±5	51±5	52±5*	45±5	50±5	mg/dl
Calcium (CPC)	13.7±1.0	11.7±1.0	13.9±1.0	13.0±1.0	12.9±1.0	-----	13.8±1.0	-----	11.9±1.0	-----	-----	13.0±1.0	mg/dl
Calcium (AR-III)	-----	-----	13.4±1.0	12.3±1.0	-----	13.4±1.0	-----	12.1 ±1.0	-----	-----	12.9±1.0	12.8±1.0	mg/dl
Chloride	-----	-----	-----	110±5	**112±5	-----	94±5	-----	109±5	113±5*	-----	108±5	mEq/L
Cholesterol	243±24	248±25	252±25	231±23	255±26	248±25	236±24	272±27	255±26	264±26	257±26	251±25	mg/dl
Carbon Dioxide	-----	-----	25±5	28±5*	28±5	30±5	-----	23±5*	-----	-----	-----	27±5	mEq/L
CK/CPK	451±135	661±198	581±174	560±168	510±152	550±165	694±208	537±161	632±190	584±174	619±185	580±174	U/L
Creatinine	6.6±1.0	7.4±1.0	8.0±1.2	7.0±1.0	7.3±1.1	7.4±1.1	7.2±1.0	7.3±1.1	7.0±1.0	7.4±1.1	6.5±1.0	7.2±1.0	mg/dl
GGTP	68±14	-----	-----	72±14	69±14	58±12	76±16	65±13	63±12	71±14	72±14	68±14	U/L
Glucose Hex	280±28	299±30	279±28	297±30	301±30	299±30	277±28	308±31	298±30	-----	294±29	293±29	mg/dl
Glucose Ox	-----	-----	322±32	-----	303±30	-----	308±31	-----	315±31	-----	-----	312±31	mg/dl
HDL (auto)	-----	38±12	35±11	50±15	42±12	49±15	-----	-----	51±15	-----	39±12	43±12	mg/dl
HDL (Mg/Dex)	56±15	-----	-----	65±20	-----	-----	90±27	-----	-----	-----	-----	78±24	mg/dl
HDL (PEG)	-----	-----	-----	82±24	-----	-----	89±27	-----	-----	-----	-----	85±25	mg/dl
Iron	-----	282±56	-----	293±58	275±54	271±54	267±53	274±54	273±54	-----	-----	276±54	µg/dl
Lactate	-----	-----	-----	3.2±0.5	3.3±0.4	-----	3.3±0.4	-----	3.3±0.4	-----	-----	3.3±0.4	mmol/L
LDH	-----	412±82	446±90	353±70	391±80	349±70	429±86	-----	400±80	300±60*	402±80	387±80	U/L
Lipase (color)	-----	-----	-----	-----	108±32	-----	105±31	-----	110±33	-----	-----	108±32	U/L
Magnesium	5.2±1.3	4.9±1.2	-----	4.5±1.1	5.1±1.3	5.2±1.3	4.8±1.2	4.8±1.2	4.6±1.2	4.8±1.2*	4.1±1.0	4.8±1.2	mg/dl
Phosphorus	7.9±0.8	8.4±0.9	8.1±0.8	8.9±0.9	8.1±0.8	7.6±0.8	7.3±0.8	8.8±0.9	7.9±0.8	-----	7.7±0.8	8.1±0.8	mg/dl
Potassium	-----	-----	-----	-----	**6.6±0.5	-----	6.3±0.5	-----	-----	-----	-----	6.5±0.5	mEq/L
Sodium	-----	-----	-----	-----	**145±4	-----	-----	-----	-----	-----	-----	145±4	mEq/L
TIBC direct	-----	-----	-----	-----	320±80	330±82	-----	-----	-----	-----	-----	325±81	µg/dl
Total Protein	7.2±0.7	7.0±0.7	7.3±0.7	6.7±0.7	7.0±0.7	6.8±0.7	7.1±0.7	8.0±0.8	7.4±0.7	7.8±0.8	6.9±0.7	7.2±0.7	g/dl
Trig-GPO	168±42	166±42	194±48	160±40	162±40	168±42	162±40	177±44	194±48	185±46	177±44	174±44	mg/dl
UIBC	-----	-----	-----	131±33	167±42*	-----	-----	-----	-----	-----	-----	149±37	µg/dl
Uric Acid	12.0 ±2.0	-----	-----	11.0±1.9	-----	-----	12.2±2.1	-----	-----	-----	-----	11.8±2.0	mg/dl
Uric Acid Liquid	-----	10.4±1.8	11.8±2.0	10.4±1.8	10.5±1.8	11.1±1.9	-----	11.2±1.9	10.5±1.8	-----	10.7±1.8	10.8±1.8	mg/dl

\*Limited data used to determine mean.

\*\*ISE Values.