

**MEASURE Human Lyo L-2**  
**for MEASURE Reagent**

**Lot. 217AFB**

**(Blue Cap)**

2°C~8°C      EXP.    2027.08.

Manufacture Date : 2026.02.02.

Component	Analytical value	1SD	Acceptable range	Method/Instrument	Traceability
Albumin	55.8 g/L	1.86	50.2 - 61.4	BCG / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM613 (ERM DA470)
	5.58 g/dL	0.186	5.02 - 6.14		
ALT	142 U/L	4.73	128 - 156	JSCC at 37°C (IFCC w/o PaIP) / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM001d
	2.37 µkat/L	0.079	2.13 - 2.61		
ALP IFCC	258 U/L	12.9	219 - 297	IFCC at 37°C / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM001d (IFCC)
	4.31 µkat/L	0.215	3.66 - 4.95		
Amylase, total	378 U/L	18.90	321 - 435	IFCC at 37°C / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM001d
	6.31 µkat/L	0.316	5.37 - 7.26		
AST	214 U/L	7.13	193 - 235	JSCC at 37°C (IFCC w/o PaIP) / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM001d
	3.57 µkat/L	0.119	3.22 - 3.93		
Bilirubin, direct	39.8 µmol/L	2.656	31.9 - 47.8	Enzymatic / Hitachi-7180 ±3SD range by MEASURE Reagent	NIST
	2.33 mg/dL	0.132	1.86 - 2.80		
Bilirubin, total	72.5 µmol/L	2.42	65.3 - 79.8	Enzymatic / Hitachi-7180 ±3SD range by MEASURE Reagent	NIST
	4.24 mg/dL	0.141	3.82 - 4.66		
Cholesterol, total	5.85 mmol/L	0.195	5.27 - 6.44	CHOD-PAP / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM223 (SRM1951a)
	226 mg/dL	7.5	203 - 249		
HDL Cholesterol (*)	1.86 mmol/L	0.124	1.49 - 2.24	Direct enzymatic colorimetry / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM223 (SRM1951a)
	72.0 mg/dL	4.80	57.6 - 86.4		
LDL Cholesterol	3.78 mmol/L	0.189	3.21 - 4.35	Direct enzymatic colorimetry / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM223 (SRM1951a)
	146 mg/dL	7.30	124 - 168		
CK	306 U/L	15.30	260 - 352	JSCC at 37°C / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM001d
	5.11 µkat/L	0.256	4.34 - 5.88		
CK-MB	69.0 U/L	9.20	41.4 - 96.6	Immunological UV / Hitachi-7180 ±3SD range by MEASURE Reagent	Internal SOP
	1.15 µkat/L	0.154	0.69 - 1.61		
Creatinine	240 µmol/L	9.62	212 - 269	Enzymatic / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM521 (ID-MS)
	2.72 mg/dL	0.109	2.39 - 3.05		
GGT	154 U/L	6.16	136 - 172	JSCC at 37°C / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM001d
	2.57 µkat/L	0.309	2.26 - 2.88		
Glucose	10.2 mmol/L	0.340	9.19 - 11.2	HK/G6P-DH / Hitachi-7180 HDAOS-POD / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM521 (ID-MS/SRM917)
	184 mg/dL	6.13	166 - 202		
LDH IFCC	329 U/L	11.0	296 - 362	IFCC at 37°C / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM001d
	5.49 µkat/L	0.183	4.94 - 6.04		
Protein, total	89.5 g/L	2.98	80.6 - 98	Modified Biuret / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM613 (sm927)
	8.95 g/dL	0.298	8.06 - 9.8		
Trglyceride	1.00 mmol/L	0.033	0.90 - 1.10	GPO/PAP ±3SD range by MEASURE Reagent	JCCRM223 (ID-MS)
	87.6 mg/dL	2.92	78.8 - 96		
(TG-T)	4.63 mmol/L	0.154	4.17 - 5.09	GPO/PAP ±3SD range by MEASURE Reagent	JCCRM223 (ID-MS)
	406 mg/dL	13.53	365 - 447		
Urea Nitrogen	13.4 mmol/L	0.446	12.1 - 14.7	Urease-UV / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM521 (id-ms/srm912)
	37.4 mg/dL	1.25	33.7 - 41.1		
Uric acid	696 µmol/L	23.2	627 - 766	Uricase-POD / Hitachi-7180 ±3SD range by MEASURE Reagent	JCCRM521 (ID-MS)
	11.7 mg/dL	0.390	10.5 - 12.9		

Acceptable range : ± 3SD

HDL Cholesyerol value is Provisional value

LDH, ALP : As the method has already been switched to IFCC, it has been removed from this lot.

Glucose : Added values using the HK/G6P-DH method

**UMA Co.,Ltd.**

Tester	Quality Control Manager	Manufacturing Control Manager
		

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( Other Method )

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EXP. 2027.08.

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Component	Analytical value		U	Acceptable range	Method/Instrument	Traceability
ALT	158	U/L	17	141 - 175	IFCC 37°C with PalP	IFCC
	2.64	μkat/L	0.28	2.35 - 2.92		
Albumin	55.8	g/L	4.8	51.0 - 60.6	BCG	CRM470
	5.58	g/dL	0.38	5.20 - 5.96		
ALP	287	U/L	27	260 - 314	IFCC at 37°C	IFCC
	4.79	μkat/L	0.45	4.34 - 5.24		
Amylase, total	360	U/L	25	335 - 385	IFCC at 37°C	IFCC
	6.01	μkat/L	0.42	5.59 - 6.43		
Amylase, pancreas	186	U/L	15	171 - 201	Enzymatic colorimetry 37°C	
	3.11	μkat/L	0.25	2.86 - 3.36		
AST	230	U/L	20	210 - 250	IFCC 37°C with PalP	IFCC
	3.84	μkat/L	0.33	3.51 - 4.18		
Bilirubin, direct	15.6	μmol/L	1.6	14.0 - 17.2	Diazo	
	0.91	mg/dL	0.09	0.82 - 1.01		
Bilirubin, total	66.6	μmol/L	8.1	58.5 - 74.7	DPD	Doumas method
	3.89	mg/dL	0.47	3.42 - 4.37		
Calucium	3.07	mmol/L	0.15	2.92 - 3.22	NM-BAPTA	SRM909b
	12.3	mg/dL	0.60	11.70 - 12.91		
Chloride	126	mmol/L	6	120 - 132	Indirect ISE	Gravimetry
Cholesterol, total	5.72	mmol/L	0.47	5.25 - 6.19	CHOD/PAP	ID-MS
	221	mg/dL	18	203 - 239		
HDL Cholesterol	1.54	mmol/L	0.22	1.32 - 1.76	Direct enzymatic colorimetry	SRM1951a
	59.6	mg/dL	9	51.0 - 68.1		
LDL Cholesterol	3.27	mmol/L	0.34	2.93 - 3.61	Direct enzymatic colorimetry	SRM1951a
	126	mg/dL	13	113 - 140		
CK	341	U/L	44	297 - 385	IFCC at 37°C	IFCC
	5.69	μkat/L	0.73	4.96 - 6.43		
CK-MB	53.0	U/L	13	40.0 - 66.0	Immunological UV	ERM-AD455/IFCC
	0.89	μkat/L	0.22	0.67 - 1.10		
Copper	30.1	μmol/L	3	27.1 - 33.1	ICP-MS	SRM 3114
Creatinine	252	μmol/L	20	232 - 272	Enzymatic colorimetry	ID-MS
	2.85	mg/dL	0.23	2.62 - 3.08		
GGT	152	U/L	10	142 - 162	IFCC at 37°C	IFCC
	2.54	μkat/L	0.17	2.37 - 2.71		
GLDH	8.95	U/L	1.0	7.95 - 10.0	DGKC 37°C	
	0.15	μkat/L	0.02	0.13 - 0.17		
Glucose	10.4	mmol/L	0.9	9.50 - 11.3	HK/G6P-DH	ID-MS
	187	mg/dL	16	171 - 204		
Iron	34.8	μmol/L	2.7	32.1 - 37.5	Ascorbate/FerroZine	SRM937
	194	μg/dL	15.1	179 - 209		
Lactate	6.35	mmol/L	0.4	5.95 - 6.75	LOD/POD	Primery reference material
	57.2	mg/dL	3.6	53.6 - 60.8		
LDH	316	U/L	40	276 - 356	IFCC at 37°C	IFCC
	5.28	μkat/L	0.67	4.61 - 5.95		
Lipase	96.8	U/L	11	85.8 - 108	Enzymatic colorimetry 37°C	Roche reagent manual measurement
	1.62	μkat/L	0.18	1.43 - 1.80		
Lithium	1.93	mmol/L	0.05	1.88 - 1.98	Colorimetry	
	1.34	mg/dL	0.03	1.30 - 1.37		
Magnesium	1.46	mmol/L	0.11	1.35 - 1.57	Xylidyl-blue	Gravimetry
	3.55	mg/dL	0.27	3.28 - 3.82		
Phosphorus	2.88	mmol/L	0.17	2.71 - 3.05	Ammonium phosphomolybdate	Primary reference material
	8.92	mg/dL	0.53	8.39 - 9.45		
Potassium	5.95	mmol/L	0.34	5.61 - 6.29	Indirect ISE	Gravimetry SRM927c
Protein total	86.8	g/L	8	78.8 - 95	Biuret	
Sodium	8.68	g/dL	0.8	7.88 - 9.48	Indirect ISE	Gravimetry
	152	mmol/L	6	146 - 158		
Theophylline	121	μmol/L			KIMS	Gravimetry
Total Bile Acid	121	μmol/L	21	100 - 142	Enzymatic endpoint	
	47.2	mg/L	8.19	39.0 - 55.4		
Trglyceride	4.47	mmol/L	0.4	4.07 - 4.87	GPO/PAP	ID-MS
	396	mg/dL	35	360 - 431		

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EXP. 2027.08.

Manufacture Date : 2026.02.02.

Component	Analytical value	U	Acceptable range	Method/Instrument	Traceability
UIBC	42.6 μmol/L	5.8	36.8 - 48.4	FeroZine®	Primary reference material
	238 μg/dL	32	205 - 270		
Urea	13.5 mmol/L	1.2	12.3 - 14.7	Urease/GLZDH	SRM909b
	37.8 mg/dL	3.4	34.5 - 41.2		
Uric acid	665 μmol/L	62	603 - 727	Uricase/POD	ID-MS
	11.2 mg/dL	1.04	10.1 - 12.2		
Zinc	36.0 μmol/L	2.1	33.9 - 38.1	ICP-MS	SRM 3168a
	235 μg/dL	14	222 - 249		

\* ( u ) : uncertainty      Acceptable range : ± 3SD

The following component will be removed from this lot and later, because the manufacturer's assigned values are not available.

Apo-A, Apo-B CHE, Estoradiol, Ferritin, Folate, HBDH, β-HCG, Homocystaine, IgA, IgG, IgM, NEFA, Osmolality, Phospholipids, Progesterone, f-T3,T3,f-T4,T4,Testosteron, Transferrin, TSH,