

## 醫學檢驗部公告 (2019年2月)

### 一、公告定量檢驗項目之量測不確定度

依據 ISO15189 實驗室認證規範執行之。

- 1.量測不確定度(Uncertainty of Measurement, MU)：係指一量測結果的分散程度、可能誤差或可能存在的範圍區間。
- 2.依據 ISO15189 實驗室認證規範要求，實驗室應提供使用者量測不確定度之估計值，以幫助使用者評鑑檢驗可信度或影響報告結果。醫學檢驗部定量檢驗項目之量測不確定度如附件。
- 3.範例：

實驗室 Glucose 之兩品管濃度平均值分別為 86 mg/dL 與 285 mg/dL，公告之量測不確定度估計值分別為為 2.2% (1.9 mg/dL)及 2.4% (6.84 mg/dL)。若有病人空腹血糖數值為 129 mg/dL，則病人真正結果可能落在 127.1 – 130.9 mg/dL ( $129 \pm 2.2\%$ )之間；若有血糖數值為 328 mg/dL，病人真正結果可能落在 320.1 – 335.9 mg/dL ( $328 \pm 2.4\%$ )之間。

醫學檢驗部 定量檢驗量測不確定度一覽表(生化檢驗及血液氣體分析)

公告日期：2019年2月

表單編號：EDCP-QP-0807/02

	檢驗項目	目標值	擴充量測不確定度	量測不確定度估算值		檢驗項目	目標值	擴充量測不確定度	量測不確定度估算值
1	ALB	3.95	3.6%	3.8~4.1	45	K	3.79	2.27%	3.7~3.9
2		2.78	3.2%	2.7~2.9	46		5.96	1.98%	5.8~6.1
3	ALCOH	41.2	6.4%	38.6~43.8	47	Lac	38.91	5.8%	36.7~41.2
4		251.74	4.4%	240.7~262.8	48		8.94	8.6%	8.2~9.7
5	ALK-P	256.7	4.6%	244.9~268.5	49	LDH	172.6	6.4%	161.6~183.6
6		955.1	3.8%	918.8~991.4	50		379.5	3.8%	365.1~393.9
7	AMY	168.9	2.8%	164.2~173.6	51	LDL-C	141.69	9.6%	128.1~155.3
8		893.8	2.6%	870.6~917	52		52.49	9.2%	47.7~57.3
9	BMG	1482	9%	1348.6~1615.3	53	Lipase	215.7	7.6%	199.3~232.1
10		6529	5.4%	6176.4~6881.6	54		345	8%	317.4~372.6
11	BUN	15.58	3.6%	15~16.1	55	M-ALB	2.358	10.8%	2.1~2.6
12		46.78	3.6%	45.1~48.5	56		9.181	5.6%	8.7~9.7
13	CA	9.08	3%	8.8~9.4	57	MG	2.14	12.4%	1.9~2.4
14		12.38	3%	12~12.8	58		4.53	9.6%	4.1~5
15	GLU	83.7	2.2%	81.9~85.5	59	MYOGLN	97.13	11.6%	85.9~108.4
16		277.8	2.4%	271.1~284.5	60		300.24	7.8%	276.8~323.7
17	CK	136.7	2.6%	133.1~140.3	61	NA	144.00	1.67%	141.6~146.4
18		399.4	2.6%	389~409.8	62		123.50	1.78%	121.3~125.7
19	Cl	101.3	1.8%	99.5~103.1	63	NH3	66.47	8.24%	61~72
20		83.9	2%	82.2~85.6	64		456.76	2.54%	445.2~468.3
21	CRE	2.39	4.4%	2.3~2.5	65	r-GTP	57.2	2.6%	55.7~58.7
22		5.46	3.4%	5.3~5.6	66		152.1	2.4%	148.4~155.8
23	CRP	8.13	9.6%	7.3~8.9	67	T-CHO	261.46	2.8%	254.1~268.8
24		24.8	4.4%	23.7~25.9	68		104.06	3%	100.9~107.2
25	D-Bil	0.32	5%	0.3~0.3	69	TG	168.82	3.2%	163.4~174.2
26		1.723	3.6%	1.7~1.8	70		87.99	4%	84.5~91.5
27	FE	218	2.2%	213.2~222.8	71	TP	6.84	3%	6.6~7
28		57.4	4.4%	54.9~59.9	72		4.49	4.6%	4.3~4.7
29	Ferritin	104.23	6.8%	97.1~111.3	73	UA	4.75	2.6%	4.6~4.9
30		399.32	4.2%	382.5~416.1	74		9.48	2.2%	9.3~9.7
31	GOT	39.6	4.4%	37.9~41.3	75	U-Ca	6.79	4.8%	6.5~7.1
32		198.5	3.6%	191.4~205.6	76		9.714	4.4%	9.3~10.1
33	GPT	32.3	5.4%	30.6~34	77	U-Cl	100.46	1.6%	98.9~102.1
34		102.2	4.6%	97.5~106.9	78		183.45	1.6%	180.5~186.4
35	HDL	64.6	5%	61.4~67.8	79	U-CRTN	57.79	4.4%	55.2~60.3
36		26.1	5%	24.8~27.4	80		119.42	5.6%	112.7~126.1
37	HsCRP	9.15	4.6%	8.7~9.6	81	UIBC	83.8	19%	67.9~99.7
38		26.55	3.8%	25.5~27.6	82		151.5	12.4%	132.7~170.3
39	ICG	0.11	25.4%	0.1~0.1	83	U-K	30.34	1.4%	29.9~30.8
40		0.5	6.2%	0.5~0.5	84		68.99	1.46%	68~70
41	T-Bil	1.176	4.6%	1.1~1.2	85	U-Na	76.4	3%	74.1~78.7
42		4.838	4%	4.6~5	86		159.94	1.4%	157.7~162.2
43	IP	3.58	4.2%	3.4~3.7	87	U-P	25.74	4.6%	24.6~26.9
44		7.37	3%	7.1~7.6	88		51.78	3.4%	50~53.5

醫學檢驗部 定量檢驗量測不確定度一覽表(生化檢驗及血液氣體分析)

公告日期：2019 年 2 月

表單編號：EDCP-QP-0807/02

	檢驗項目	目標值	擴充量測不確定度	量測不確定度估算值		檢驗項目	目標值	擴充量測不確定度	量測不確定度估算值
89	U-TP	18.1	9.12%	16.4~19.8	140	Cortisol	4.192	8.8%	3.8~4.6
90		63.35	5.2%	60.1~66.6	141		15.45	5.6%	14.6~16.3
91	U-UA	9.57	2.6%	9.3~9.8	142		31.35	7.2%	29.1~33.6
92		16.65	2.6%	16.3~17	143	64.9	13.4%	56.2~73.6	
93	U-UN	431.82	3.8%	415.4~448.2	144	Estradiol	203.7	5.8%	191.9~215.5
94		709.71	4.6%	677.1~742.4	145		465.9	5.2%	441.7~490.1
95	Amphetamine	417.69	12.6%	365.1~470.3	146	Free T4	0.5629	7.4%	0.5~0.6
96		710.6	12.4%	622.5~798.7	147		1.57	4.4%	1.5~1.6
97	Benzodiazepine	151.2	16.6%	126.1~176.3	148		3.01	9%	2.7~3.3
98		242.8	18.8%	197.2~288.4	149	4.458	6.8%	4.2~4.8	
99	Hapto	117.67	4.4%	112.5~122.8	150	FSH	17.717	6.4%	16.6~18.9
100		82.47	4%	79.2~85.8	151		37.954	7.4%	35.1~40.8
101	IgA	92.84	8.4%	85~100.6	152	hCG_STAT	3.503	15.8%	2.9~4.1
102		177.8	6.8%	165.7~189.9	153		20.54	9%	18.7~22.4
103	IgE	82.73	18.4%	67.5~98	154		356.2	7%	331.3~381.1
104		501	4.8%	477~525	155	0.0125	16.2%	0~0	
105	IgG	1190.8	3.2%	1153~1229	156	hs TroponinI	0.0581	9.4%	0.1~0.1
106		2499.6	4.2%	2395~2605	157		2.5387	8%	2.3~2.7
107	IgM	51.13	5%	48.6~53.7	158	LH	3.072	7.6%	2.8~3.3
108		95.05	3.6%	91.6~98.5	159		14.199	8.2%	13~15.4
109	Opiates	241.9	15%	205.6~278.2	160		40.861	8.4%	37.4~44.3
110		401.6	14.2%	344.6~458.6	161	3.12	7%	2.9~3.3	
111	PreALB	21.12	5.2%	20~22.2	162	Prolactin	10.294	8.2%	9.4~11.1
112		15.29	6.2%	14.3~16.2	163		37.85	8.6%	34.6~41.1
113	RF	20.28	11.2%	18~22.6	164	SCC	2	12.6%	1.7~2.3
114		45.17	5.2%	42.8~47.5	165		10.1	12.8%	8.8~11.4
115	C3	72.22	4.6%	68.9~75.5	166		50.3	11.8%	44.4~56.2
116		132.47	3.2%	128.2~136.7	167	70.8	8.8%	64.6~77	
117	C4	12.33	4.2%	11.8~12.8	168	T3	167.88	3.6%	161.8~173.9
118		21.63	3.4%	20.9~22.4	169		345.69	9.2%	313.9~377.5
119	CHE	1453.1	5.2%	1378~1529	170	TSH	0.0479	14.6%	0~0.1
120		2062.5	2.8%	2004.8~2120.3	171		3.4327	11%	3.1~3.8
121	ADA	30.2	10%	27.2~33.2	172		19.602	17.8%	16.1~23.1
122		98	3.4%	94.7~101.3	173	6.685	6.6%	6.2~7.1	
123	Testosterone	4.268	8.8%	3.9~4.6	174	TT4	11.998	6.2%	11.3~12.7
124		8.86	16.4%	7.4~10.3	175		0.23	46.9%	0.12~0.33
125	BNP	88.5	13%	77~100	176	_HBsAg	3.61	7.8%	3.3~3.9
126		458.8	13.8%	395.5~522.1	177	0.00	430%	0~0.02	
127		3279.6	6.4%	3070~3489	178	_HBsAg Auto	0.223	13%	0.19~0.25
128	CA125	12.75	6.6%	11.9~13.6	179		173.6	13.2%	150.7~196.5
129		31.83	5.4%	30.1~33.5	180		0.06	43.4%	0.03~0.09
130		65.14	5.8%	61.4~68.9	181		4.973	22.2%	3.9~6.1
131	CA153	11.081	8.8%	10.1~12.1	182	_HIV	3.845	21.2%	3~4.7
132		37	9.4%	33.5~40.5	183		3.039	11.8%	2.7~3.4
133		78.45	10.2%	70.4~86.5	184		4.088	7.8%	3.8~4.4
134	CEA	2.726	14%	2.3~3.1	185	AFP	65.177	7.8%	60.1~70.3
135		15.186	8%	14~16.4	186		116.9	8.8%	106.6~127.2
136		38.54	6.6%	36~41.1	187	Anti-HBcII	0.14	30.00%	0.1~0.18
137	CKMB	4.2	9%	3.8~4.6	188		2.54	7%	2.4~2.7
138		14.66	7.4%	13.6~15.7					
139		42.36	7.8%	39.1~45.7					

醫學檢驗部 定量檢驗量測不確定度一覽表(生化檢驗及血液氣體分析)

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189	Anti-HBe	2	13.2%	1.7~2.3	242	Cyclosporin	92.5	27.8%	66.8~118.2
190		0.479	16.4%	0.4~0.6	243		335.37	26.2%	247.5~423.2
191	Anti-HBs	0	337.5%	0~0.35	244	Digoxin	901.64	27.4%	654.6~1149
192		12.55	11.8%	11.1~14	245		0.6717	16.8%	0.6~0.8
193	Anti-HCV	75.7	11%	67.4~84	246	iPTH	1.556	10.6%	0.4~1.7
194		0.07	32%	0~0.09	247		3.598	6.6%	3.4~3.8
195	Anti-Tg	3.685	13.2%	3.2~4.2	248	Pheno	8.524	16.2%	7.1~9.9
196		18.384	16.8%	15.3~21.5	249		52.914	12.2%	46.5~59.4
197	Anti-TPO	46.311	14%	39.8~52.8	250	Pheny	202.6	12.2%	177.9~227.3
198		34.864	15.4%	29.5~40.2	251		7.371	14.6%	6.3~8.4
199	CA199	20.354	12.2%	17.9~22.8	252	Sirolimus	13.012	12.8%	11.3~14.7
200		35.734	12%	31.4~40	253		58.158	11.4%	51.5~64.8
201	CMV IgG	39.875	11.4%	35.3~44.4	254	Tacrolimus	5.262	10.8%	4.7~5.8
202		38.936	17.6%	32.1~45.8	255		14.746	10.4%	13.2~16.3
203	CMV IgM	68.977	11.6%	61~77	256	Theophylline	25.581	14%	22~29.2
204		175.88	11.4%	155.8~195.9	257		5.244	17.2%	4.3~6.1
205	Free PSA	0.1	145.0%	0~0.2	258	Valp	10.72	12.4%	9.4~12
206		28.7	15.2%	24.3~33.1	259		21.47	19.2%	17.3~25.6
207	HAVAAb IgG	149.1	13%	129.7~168.5	260	Vancomycin	3.847	12.8%	3.4~4.3
208		0.2	28.0%	0.11~0.19	261		9.346	9.8%	8.4~10.3
209	HAVAAb IgM	2.06	14.4%	1.8~2.4	262	Toxo IgG	19.48	11.2%	17.3~21.7
210		0.879	8.4%	0.8~1	263		4.35	14.2%	3.7~5
211	C-peptide	3.824	10%	3.4~4.2	264	Ketone	11.181	13.4%	9.7~12.7
212		7.218	10.2%	6.5~8	265		22.77	17%	18.9~26.6
213	Total HCY	0.3998	7.8%	0.37~0.43	266	MTX_原倍	12.63	8.4%	11.6~13.7
214		2.075	9.4%	1.9~2.3	267		0.078	18.2%	0.1~0.1
215	HAVAAb IgG	13.156	9.4%	11.9~14.4	268	MTX_稀釋	26.10	14.6%	22.3~29.9
216		0.13	68.81%	0.04~0.23	269		10	11.2%	8.9~11.1
217	HAVAAb IgM	1.746	18.4%	1.4~2.1	270	NSE	57.8	19.8%	46.4~69.2
218		0.13	66.15%	0.04~0.22	271		569.2	16.2%	477~661.4
219	HBcAb IgM	1.736	18.8%	1.41~2.06	272	Osmolality	9.848	12.6%	8.6~11.1
220		0.06	23.895%	0~0.08	273		51.677	9.2%	46.9~56.4
221	HBcAg	3.1892	10.4%	2.9~3.5	274	PCT	288.9	1.4%	284.9~292.9
222		0.31	30.3%	0.22~0.4	275		781.6	3.2%	756.6~806.6
223	Progesterone	3.7417	13.2%	3.2~4.2	276	Rubella IgM	0.26	15%	0.2~0.3
224		0.88	13.2%	0.8~1	277		10.148	7.8%	9.4~10.9
225	ProGRP	9.81	10%	8.8~10.8	278	Carba	0.8	25.60%	0.6~0.94
226		20.87	9%	19~22.7	279		3.24	13.4%	2.8~3.7
227	Rebulla IgG	40.5	10.8%	36.1~44.9	280				
228		155	7.2%	143.8~166.2	281				
229	Total PSA	2466.9	8.8%	2250~2684	282				
230		0	760%	0~0.086	283				
231	Total PSA	25.9	13.4%	22.4~29.4	284				
232		306.9	15.6%	259~354.8	285				
233	VitD	0.522	7.6%	0.5~0.6	286				
234		3.17	8.6%	2.9~3.4	287				
235	Carba	21.286	10.2%	19.1~23.5	288				
236		15	9.2%	13.6~16.4	289				
237	Carba	22.19	9.4%	20.1~24.3	290				
238		37.14	9.8%	33.5~40.8	291				
239	Carba	4.504	11%	4~5	292				
240		10.454	11.2%	9.3~11.6					
241		15.571	13%	13.5~17.6					

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293	Ca <sup>2+</sup>	6.25	2.02%	6.1~6.4					
294		4.60	2.60%	4.5~4.7					
295		2.37	4.83%	2.3~2.5					
296	Cl	87	1.6%	85.6~88.4					
297		99.8	2.4%	97.4~102.2					
298		119.5	1.8%	117.3~121.7					
299	FCOHb	22.71	0.95%	21.8~23.7					
300		10.59	2.97%	7.6~13.6					
301		2.83	4.59%	0~7.4					
302	FHHb	17.87	0.95%	16.9~18.8					
303		8.21	3.09%	5.1~11.3					
304		2.00	5%	0~7					
305	FMetHb	11.87	0.88%	11~12.7					
306		5.76	2.64%	3.1~8.4					
307		1.69	4.85%	0~6.5					
308	FO <sub>2</sub> Hb	47.55	0.98%	46.6~48.5					
309		75.44	0.92%	74.5~76.4					
310		93.53	0.30%	93.2~93.8					
311	K	3.00	2.67%	2.92~3.08					
312		4.73	3.09%	4.58~4.88					
313		7.00	2.00%	6.86~7.14					
314	Na	122.80	1.27%	121.2~124.4					
315		139.30	2.66%	135.6~143					
316		159.10	1.17%	157.2~161					
317	pCO <sub>2</sub>	63.1	3%	61.2~65					
318		42.5	3.8%	40.9~44.1					
319		26.5	3.2%	25.7~27.3					
320	pH	7.2147	0.0%	7.214~7.215					
321		7.435	0.0%	7.434~7.436					
322		7.5611	0.0%	7.56~7.562					
323	pO <sub>2</sub>	61.30	11.4%	49.9~72.7					
324		103.00	5.6%	97.4~108.6					
325		153.70	2.4%	151.3~156.1					
326	tHb	7.4	1.4%	7.3~7.5					
327		12	3.4%	11.6~12.4					
328		17.67	1.2%	17.5~17.9					

醫學檢驗部 定量檢驗量測不確定度一覽表(血液/血凝/特殊檢驗/一般檢驗/病毒量)

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	檢驗項目	目標值	擴充量測不確定度	量測不確定度估算值		檢驗項目	目標值	擴充量測不確定度	量測不確定度估算值
1	Microbilirubin	3.2	11.8%	2.8~3.6	45	MONO%	13.1	18.0%	10.7~15.5
2		17.7	6.8%	16.5~18.9	46		11.7	12.2%	10.3~13.1
3	OB (EIA 定量)	77	18.8%	62.5~91.5	47		13.0	13.4%	11.3~14.7
4		147	7.0%	136.7~157.3	48	9.6	15.0%	8.2~11	
5	WBC	672	5.0%	638.4~705.6	49	EO%	10.6	15.0%	9~12.2
6		3.0	4.0%	2.9~3.1	50		11.4	12.8%	9.9~12.9
7	RBC	7.0	2.8%	6.8~7.2	51	BASO%	4.8	8.0%	4.4~5.2
8		16.2	2.3%	15.8~16.5	52		4.7	5.4%	4.4~5
9	HGB	2.3	1.8%	2.2~2.3	53	NRBC#	4.8	5.4%	4.5~5.1
10		4.3	1.8%	4.2~4.4	54		0.1	14.2%	0.1~0.2
11	HCT	5.2	2.0%	5.1~5.3	55	PT	0.4	10.0%	0.4~0.5
12		6.0	1.6%	5.9~6.1	56		1.0	6.2%	0.9~1
13	MCV	11.8	1.2%	11.7~11.9	57	APTT	10.9	1.7%	10.7~11.1
14		16.8	1.0%	16.6~17	58		29.1	3.8%	28~30.2
15	MCH	17.2	2.8%	16.7~17.7	59	Fibrinogen	25.4	2.4%	24.8~26
16		34.1	2.2%	33.3~34.9	60		45.94	1.8%	45.1~46.8
17	MCHC	47.2	2.4%	46.1~48.3	61	D-Dimer	277.5	2.6%	270.2~284.8
18		75.2	1.8%	73.8~76.6	62		81.39	13.5%	70.4~92.4
19	MCH	79.4	1.4%	78.3~80.5	63	FDP	0.32	10.8%	0.3~0.4
20		90.2	1.2%	89.1~91.3	64		2.65	12.3%	2.3~3
21	MCHC	26.1	2.4%	25.5~26.7	65	HbA1C	7.92	9.2%	7.2~8.7
22		27.6	2.2%	27~28.2	66		25.54	9.3%	23.2~27.9
23	PLT	32.0	2.2%	31.3~32.7	67	ESR	5.09	4.7%	4.9~5.3
24		34.7	3.0%	33.7~35.7	68		9.88	4.9%	9.4~10.4
25	RDW-SD	34.7	2.4%	33.9~35.5	69	Anti Beta2-glycoprotein	8.9	5.8%	8.4~9.4
26		35.5	2.8%	34.5~36.5	70		18.9	2.7%	18.4~19.4
27	RDW-CV	83.0	16.8%	69.1~96.9	71	Anti Cardiolipin IgG	65.5	2.0%	64.2~66.8
28		247.0	6.2%	231.7~262.3	72		57.15	13.0%	49.7~64.6
29	RET%	570.0	5.4%	539.2~600.8	73	Anti Cardiolipin IgM	46.7	15.6%	39.4~54
30		48.3	1.8%	47.4~49.2	74		47.65	8.4%	43.6~51.7
31	NEUT%	47.2	1.4%	46.5~47.9	75	Anti CCP	45.5	16.6%	37.9~53.1
32		48.4	2.0%	47.4~49.4	76		41.85	15.2%	35.5~48.2
33	LYMPH%	18.0	1.6%	17.7~18.3	77	Anti dsDNA	41.85	15.2%	35.5~48.2
34		16.6	1.6%	16.3~16.9	78	ENA-I SSA (Ro)	64.5	12.8%	56.2~72.8
35	LYMPH%	14.8	1.4%	14.6~15	79	ENA-I SSB (La)	34	10.0%	30.6~37.4
36		5.3	6.0%	5~5.6	80	p-ANCA (MPS)	22.65	19.2%	18.3~27
37	LYMPH%	2.2	7.4%	2~2.4	81	c-ANCA (PRS)	12.7	23.8%	9.7~15.7
38		0.8	12.4%	0.7~0.9	82	ENA-III Jo-1	40.2	6.8%	37.5~42.9
39	LYMPH%	39.4	5.2%	37.4~41.4	83	ENA-III Scl-70	123.8	7.0%	115.1~132.5
40		44.1	4.4%	42.2~46	84	ENA-II Sm	28.79	10.2%	25.9~31.7
41	LYMPH%	48.0	3.6%	46.3~49.7	85	ENA-II RNP	47.4	9.4%	42.9~51.9
42		33.2	7.6%	30.7~35.7	86	Anti-CTD	10.1	11.8%	8.9~11.3
43	LYMPH%	28.9	5.6%	27.3~30.5	87				
44		22.8	8.0%	21~24.6	88				

醫學檢驗部 定量檢驗量測不確定度一覽表(血液/血凝/特殊檢驗/一般檢驗/病毒量)

公告日期：2019年 2 月

表單編號：EDCP-QP-0807/02

	檢驗項目	目標值	擴充量測 不確定度	量測不確定 度估算值		檢驗項目	目標值	擴充量測不 確定度	量測不確定 度估算值
89	HBV viral load- High PC log (IU/mL)	6.39	2.8%	6.2~6.6					
90	HBV viral load- Low PC log (IU/mL)	2.38	7.5%	2.2~2.6					
91	HCV viral load- High PC log (IU/mL)	6.15	1.9%	6~6.3					
92	HCV viral load- Low PC log (IU/mL)	2.18	5.5%	2.1~2.3					
93	HIV viral load- High PC log (copies/mL)	5.29	2.0%	5.2~5.4					
94	HIV viral load- Low PC log (copies/mL)	2.63	6.9%	2.4~2.8					