

AQ2013-06 批次 FT₄ 檢驗院際品管結果報告

送檢批號：AQ2013-06 調查期間：2013 年 06 月 03 ~ 10 日 參加單位數：20

檢驗單位 代碼	確診醫院 代碼	檢體方 法編碼	檢體試 劑編碼	Sample S1				Sample S2			
				(ng/dL)	D ¹	Z ²	Da% ³	(ng/dL)	D ¹	Z ²	Da% ³
RH01b	RH01	2	5	1.55	-0.1	-0.5	-18%	1.17	0.0	-0.1	-4%
RH07b	RH07	2	3	1.67	0.0	0.4	13%	1.20	0.0	0.2	7%
RH14	RH14	2	3	1.96	0.3	2.6	87%	1.23	0.1	0.6	18%
CL009	CL009	2	5	1.49	-0.1	-1.0	-33%	1.13	-0.1	-0.6	-18%
CL010	CL010	2	6	1.80	0.2	1.4	46%	0.90	-0.3	-3.1	-99%
CL012	CL012	2	3	1.57	-0.1	-0.4	-13%	0.99	-0.2	-2.1	-67%
CL013	CL013	2	5	1.62	0.0	0.0	0%	1.15	0.0	-0.3	-11%
CL015	CL015	2	4	1.93	0.3	2.4	80%	1.12	-0.1	-0.7	-21%
Median of RIA Group				1.65				1.14			
Range of RIA Group				1.49 – 1.96				0.90 – 1.23			
Robust average ⁴ of RIA Group				1.70 (n = 8)				1.12 (n = 8)			
Robust SD ⁴ of RIA Group				0.20				0.11			
CV of RIA Group				11.8%				9.8%			
Median of European RIA labs				1.63 (n = 107)				1.17 (n = 104)			
Range of European labs (16% – 84%)				1.47 – 1.87				1.06 – 1.42			

RH01a	RH01	4	9	1.88	0.3	2.0	67%	1.39	0.2	2.3	74%
RH02c	RH02	4	1	1.41	-0.2	-1.6	-54%	0.93	-0.3	-2.8	-88%
RH06	RH06	4	9	1.70	0.1	0.6	21%	1.22	0.0	0.4	14%
RH07a	RH07	4	2	1.27	-0.4	-2.7	-90%	1.10	-0.1	-0.9	-28%
RH12	RH12	4	2	1.37	-0.3	-1.9	-64%	1.02	-0.2	-1.8	-56%
RH19	RH19	4	2	1.38	-0.2	-1.8	-62%	1.08	-0.1	-1.1	-35%
RH20	RH20	4	7	1.55	-0.1	-0.5	-18%	1.11	-0.1	-0.8	-25%
CL005	CL005	4	9	1.67	0.0	0.4	13%	1.23	0.1	0.6	18%
CL006a	CL006	4	7	1.57	-0.1	-0.4	-13%	1.35	0.2	1.9	60%
CL008	CL008	4	1	1.39	-0.2	-1.8	-59%	0.90	-0.3	-3.1	-99%
CL011	CL011	4	13	1.65	0.0	0.2	8%	1.17	0.0	-0.1	-4%
CL014b	CL014	4	1	1.42	-0.2	-1.5	-51%	0.93	-0.3	-2.8	-88%
Median of CLIA Group				1.49				1.11			
Range of CLIA Group				1.27 – 1.88				0.90 – 1.39			
Robust average ⁴ of CLIA Group				1.51 (n = 12)				1.12 (n = 12)			
Robust SD ⁴ of CLIA Group				0.19				0.18			
CV of CLIA Group				12.6%				16.1%			
Median of European labs				1.63 (n = 986)				1.19 (n = 947)			
Range of European CLIA labs (16% – 84%)				1.38 – 1.79				1.00 – 1.28			

Median of All Labs				1.57				1.13			
Range of All Labs				1.27 – 1.96				0.90 – 1.39			
Robust average ⁴ of All Labs				1.59 (n = 20)				1.11 (n = 20)			
Robust SD ⁴ of All Labs				0.21				0.15			
CV of All Labs				13.2%				13.5%			
Median of All European Labs				1.62				1.18			
Range of All European Labs (16% – 84%)				1.38 – 1.80				0.99 – 1.29			
Mean of All European Labs				1.60 (n = 1177)				1.16 (n = 1140)			
SD of All European Labs				0.20				0.15			
CV of All European Labs				12.7%				13.0%			

1. $D = X - X_a$
2. $Z_{score} = D / \sigma_{Targ}$
3. $Da\% \text{ (Your result from target as percentages of allowed deviation)} = D / (X_a \times MAD) \times 100\%$
4. Robust results were calculated by Algorithm A according to ISO 13528:2005 and IUPAC/CITAC Guide: Selection and use of proficiency testing scheme for a limited number of participants. Pure Appl Chem 2010;82:1099 – 135.
5. The Target value (X_a) is the median of the results of this control material used in European surveys.
6. Maximum allowable deviation (MAD) 24%, $\sigma_{Targ} = 8\% \times X_a$

	Sample S1	Sample S2
Target value (X_a) ⁵ (1 pmol/L = 0.0777 ng/dL)	1.62 ng/dL = 20.9 pmol/L (n = 1177)	1.18 ng/dL = 15.2 pmol/L (n = 1140)
Target SD (σ_{Targ}) ⁶	0.13	0.09

Method Name	Method Code	Laboratory
Radioimmunoassay (Competitive - type)	2	RH01b, RH07b, RH14, CL009, CL010, CL012, CL013, CL015,
Chemiluminescent Immunoassay (Competitive - type)	4	RH01a, RH02c, RH06, RH07a, RH12, RH19, RH20, CL005, CL006a, CL008, CL011, CL014b,

Reagent Kit	Reagent Code	Laboratory
Abbott Architect	1	CL008, CL014b, RH02c,
Beckman Coulter Access	2	RH07a, RH12, RH19,
Cisbio RIA-gnost	3	CL012, RH07b, RH14,
Diasorin	4	CL015,
Immunotech	5	CL009, CL013, RH01b,
MP	6	CL010,
Siemens ADVIA Centaur	7	CL006a, RH20,
Siemens Immulite 2000	9	CL005, RH01a, RH06, `
Roche	13	CL011,

備註：

1. 品管結果報告刊載於網際網路 <<http://cht.qap.tw>>
2. 若有任何問題請洽 預防醫學基金會 范美玲小姐
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備註說明：

1. D 值 = 檢驗值 (X) 與目標值 (Xa) 之差距。 ($D = X - X_a$)
2. $Z_{score} =$ 檢驗值差距 (D) 與目標標準差 (σ_{Targ}) 之比值。 ($Z_{score} = D / \sigma_{Targ}$)
3. Da% 為貴單位的檢驗值與目標值之差距，以最大允許偏差 (MAD) 的百分比表示。 $D / (X_a \times MAD) \times 100\%$
4. 穩健 (Robust) 運算結果乃根據 ISO 13528:2005 及 IUPAC/CITAC 指引中的演算法 (Algorithm A) 計算所得。(參考資料：*ISO 13528:2005 and IUPAC/CITAC Guide: Selection and use of proficiency testing scheme for a limited number of participants. Pure Appl Chem 2010;82:1099-135.*)
5. 目標值 (Xa) 為此品管檢體於歐洲地區大規模院際品管調查結果之中位數 (median)。
6. 最大允許偏差 (Maximum Allowable Deviation ; MAD) 為 24% ; 目標標準差 (σ_{Targ} ; Target SD) 為 8% x Xa