

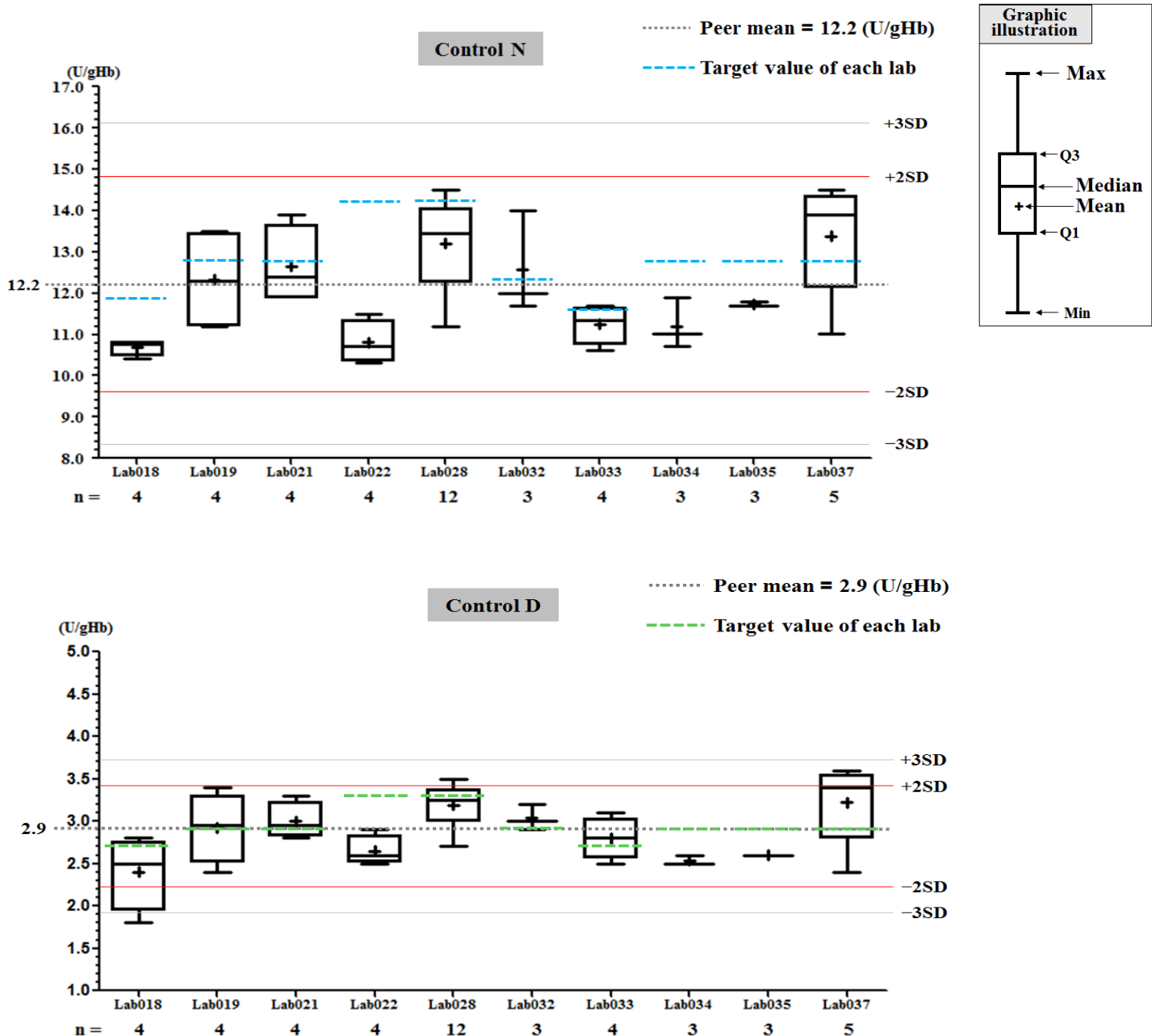
Summary Report of IQC program for G6PD Quantitative Test - AMP Group - July 2016 -

I. The statistic results of all laboratories in this month

G6PD	Control N (Lot No.:AC1203N)	Control D (Lot No.:AC1203D)
Labs	10	10
Received results number (n)	46	46
Median	1.9 (U/gHb)	2.9 (U/gHb)
Mean	12.2 (U/gHb)	2.9 (U/gHb)
SD	1.3	0.4
CV	10.7%	13.8%
Range of G6PD	10.3 ~ 14.5 (U/gHb)	1.8 ~ 3.6 (U/gHb)
Range of Hb	2.0 ~ 2.8 (g/dL)	2.3 ~ 3.2 (g/dL)

*The statistic results are calculated from all labs reported in this month

II. The distribution of G6PD reported for each lab in this survey



QC Chart of Internal Quality Control (IQC)for G6PD Quantitative Test

Select LotNo : AC1203N (2014-01-01 ~ 2100-12-31) [Change](#)

[Print Table](#)

Lab037

	Control N		Control D	
QC Control Lot No.	AC1203N		AC1203D	
Duration of the Analyzing	Month (2016/07)	CUM (2015/09/11~2016/07/31)	Month (2016/07)	CUM (2015/09/11~2016/07/31)
Runs (N)	5	26	5	26
Mean (U/gHb)	13.4	12.6	3.2	3.0
SD	1.4	1.2	0.5	0.4
CV (%)	10.4	9.5	15.6	13.3
Target Value (U/gHb)	12.8	12.8	2.9	2.9
Total Error (%)	25.6	20.6	41.6	30.1
TEa (%)	20	20	20	20
σ	1.5	1.9	0.6	1.2

Bias (%) = [(| Mean - Target |) / Target] x 100%

TE : Total Error(%) = Bias (%) + 2 x CV (%)

σ (Sigma) = [TEa% - Bias (%)] / CV (%)

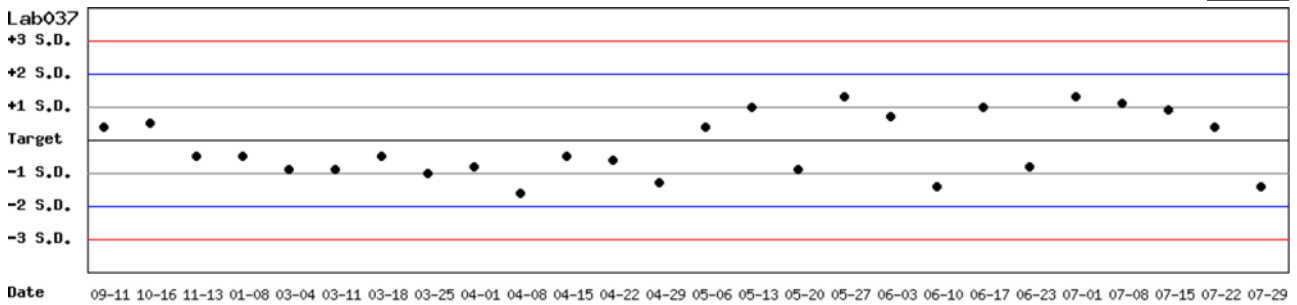
Month : 2016 07 [Change](#) ; Cumulative : from 2015 09 11 to 2016 07 31 [Change](#)

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Control N SDI QC Chart

Lot No.: AC1203N ; Duration : 2015-09-11 to 2016-07-31 ; Target : 12.8 ; SD : 1.28

Lab037



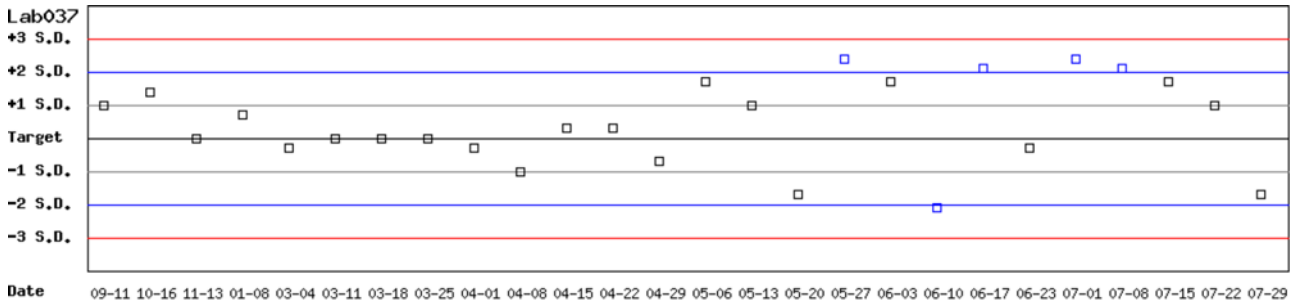
Month : 2016 07 [Change](#) ; Cumulative : from 2015 09 11 to 2016 07 31 [Change](#)

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Control D SDI QC Chart

Lot No.: AC1203D ; Duration : 2015-09-11 to 2016-07-31 ; Target : 2.9 ; SD : 0.29

Lab037



Month : 2016 07 [Change](#) ; Cumulative : from 2015 09 11 to 2016 07 31 [Change](#)

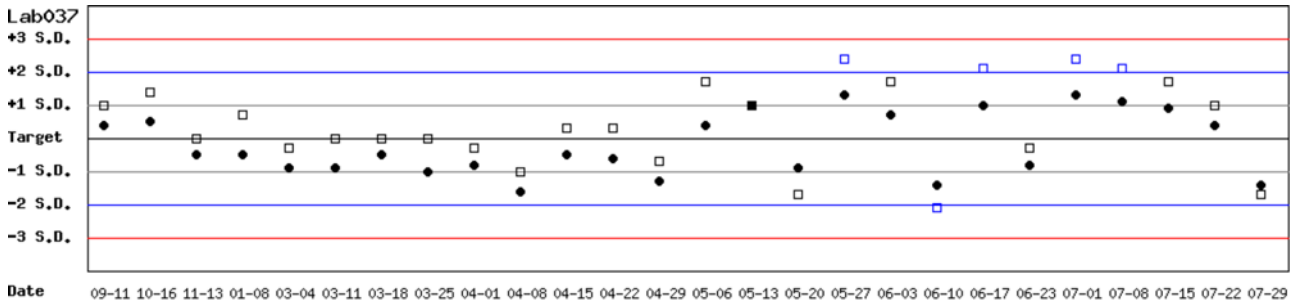
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Control N and Control D SDI QC Chart

Lot No.: AC1203N ; Duration : 2015-09-11 to 2016-07-31 ; Target : 12.8 ; SD : 1.28 (●)

Lot No.: AC1203D ; Duration : 2015-09-11 to 2016-07-31 ; Target : 2.9 ; SD : 0.29 (□)

Lab037



Month : 2016 | 07 | ; Cumulative : from 2015 | 09 | 11 | to 2016 | 07 | 31 |

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Peer Group Statistics (Table 1)

Select LotNo : AC1203N (2014-01-01 ~ 2100-12-31) Change

Select Reagent Kit : 2 - AMP Change

[Print Table 1](#)

Monthly

Month : 2016 07 Change

UnitID [↑]	Reagent Kit (Code) [↑]	Control N (Lot No.: AC1203N)								Control D (Lot No.: AC1203D)							
		Target (U/gHb)	Mean (U/gHb)	n for Mean	SD	CV (%)	TE (%)	TEa (%)	σ	Target (U/gHb)	Mean (U/gHb)	n for Mean	SD	CV (%)	TE (%)	TEa (%)	σ
Lab018	2	11.9	10.7	4	0.2	1.9	13.8	20	5.2	2.7	2.4	4	0.4	16.7	44.4	20	0.5
Lab019	2	12.8	12.3	4	1.2	9.8	23.4	20	1.6	2.9	2.9	4	0.4	13.8	27.6	20	1.4
Lab021	2	12.8	12.7	4	1.0	7.9	16.5	20	2.4	2.9	3.0	4	0.2	6.7	16.8	20	2.5
Lab022	2	14.2	10.8	4	0.5	4.6	33.2	20	-0.9	3.3	2.7	4	0.2	7.4	33.0	20	0.2
Lab028	2	14.2	13.2	12	1.0	7.6	22.2	20	1.7	3.3	3.2	12	0.2	6.3	15.5	20	2.7
Lab032	2	12.3	12.6	3	1.3	10.3	23.1	20	1.7	2.9	3.0	3	0.2	6.7	16.8	20	2.5
Lab033	2	11.6	11.3	4	0.5	4.4	11.4	20	4.0	2.7	2.8	4	0.2	7.1	18.0	20	2.3
Lab034	2	12.8	11.2	3	0.6	5.4	23.2	20	1.4	2.9	2.5	3	0.1	4.0	21.8	20	1.6
Lab035	2	12.8	11.7	3	0.1	0.9	10.3	20	>6	2.9	2.6	3	0.0	0.0	10.3	20	>6
Lab037	2	12.8	13.4	5	1.4	10.4	25.6	20	1.5	2.9	3.2	5	0.5	15.6	41.6	20	0.6
Total	-	-	12.2	46	1.3	10.7	-	-	-	-	2.9	46	0.4	13.8	-	-	-

Bias (%) = [(| Mean - Target |) / Target] x 100%

TE : Total Error(%) = Bias (%) + 2 × CV (%)

σ (Sigma) = [TEa% - Bias (%)] / CV (%)

[TOP](#)

Cumulative

Cumulative : from 2014 02 01 to 2016 07 31 Change

UnitID [↑]	Reagent Kit (Code) [↑]	Control N (Lot No.: AC1203N)								Control D (Lot No.: AC1203D)							
		Target (U/gHb)	Mean (U/gHb)	n for Mean	SD	CV (%)	TE (%)	TEa (%)	σ	Target (U/gHb)	Mean (U/gHb)	n for Mean	SD	CV (%)	TE (%)	TEa (%)	σ
Lab017	2	14.2	13.8	36	1.6	11.6	26.0	20	1.5	3.3	3.9	36	1.4	35.9	90.0	20	0.1
Lab018	2	11.9	10.9	97	1.4	12.8	34.1	20	0.9	2.7	2.6	97	1.0	38.5	80.6	20	0.4
Lab019	2	12.8	12.2	127	1.2	9.8	24.4	20	1.6	2.9	2.8	127	0.4	14.3	32.0	20	1.2
Lab021	2	12.8	13.9	67	0.7	5.0	18.7	20	2.3	2.9	3.4	67	0.2	5.9	29.0	20	0.5
Lab022	2	14.2	11.6	49	1.2	10.3	39.0	20	0.2	3.3	2.9	49	0.4	13.8	39.7	20	0.6
Lab024	2	11.6	11.1	58	1.2	10.8	25.9	20	1.5	2.7	2.7	58	0.3	11.1	22.2	20	1.8
Lab026	2	11.6	11.5	212	1.6	13.9	28.7	36	2.5	2.7	2.8	212	0.5	17.9	39.4	36	1.8
Lab027	2	12.3	11.8	147	1.6	13.6	31.2	20	1.2	2.9	2.7	147	0.5	18.5	43.9	20	0.7
Lab028	2	14.2	13.7	270	1.2	8.8	21.0	20	1.9	3.3	3.3	270	0.5	15.2	30.3	20	1.3
Lab031	2	12.8	10.4	89	1.5	14.4	47.6	20	0.1	2.9	2.5	89	0.5	20.0	53.8	20	0.3
Lab032	2	12.3	11.5	222	1.9	16.5	39.5	20	0.8	2.9	2.7	222	0.5	18.5	43.9	20	0.7
Lab033	2	11.6	12.0	116	1.0	8.3	20.1	20	2.0	2.7	2.9	116	0.3	10.3	28.1	20	1.2
Lab034	2	12.8	12.4	65	0.7	5.6	14.4	20	3.0	2.9	3.0	65	0.2	6.7	16.8	20	2.5
Lab035	2	12.8	12.4	55	0.7	5.6	14.4	20	3.0	2.9	2.8	55	0.3	10.7	24.9	20	1.5
Lab037	2	12.8	12.5	31	1.2	9.6	21.5	20	1.8	2.9	3.0	31	0.4	13.3	30.1	20	1.2
Lab038	2	12.8	12.7	55	1.0	7.9	16.5	20	2.4	2.9	3.1	55	0.5	16.1	39.2	20	0.8
Lab040	2	12.8	11.7	5	0.5	4.3	17.1	20	2.7	2.9	2.5	5	0.1	4.0	21.8	20	1.6
Total	-	-	12.1	1701	1.7	14.0	-	-	-	-	2.9	1701	0.6	20.7	-	-	-

Bias (%) = [(| Mean - Target |) / Target] x 100%

TE : Total Error(%) = Bias (%) + 2 × CV (%)

σ (Sigma) = [TEa% - Bias (%)] / CV (%)

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Reagent Kit	Reagent Code
AMP	2

Peer Group Statistics (Table 2)

Select LotNo : AC1203N (2014-01-01 ~ 2100-12-31) Change

Select Reagent Kit : 2 - AMP Change

Print Table 2

Control N Month vs. Cumulative

Control N (Lot No.: AC1203N)																	
Month (2016/07)										CUM (2014/02/01~2016/07/31)							
UnitID †	Reagent Kit (Code) †	Target (U/gHb)	Mean (U/gHb)	n for Mean	SD	CV (%)	TE (%)	TEa (%)	σ	Target (U/gHb)	Mean (U/gHb)	n for Mean	SD	CV (%)	TE (%)	TEa (%)	σ
Lab017	2	14.2	-	0	-	-	-	20	-	14.2	13.8	36	1.6	11.6	26.0	20	1.5
Lab018	2	11.9	10.7	4	0.2	1.9	13.8	20	5.2	11.9	10.9	97	1.4	12.8	34.1	20	0.9
Lab019	2	12.8	12.3	4	1.2	9.8	23.4	20	1.6	12.8	12.2	127	1.2	9.8	24.4	20	1.6
Lab021	2	12.8	12.7	4	1.0	7.9	16.5	20	2.4	12.8	13.9	67	0.7	5.0	18.7	20	2.3
Lab022	2	14.2	10.8	4	0.5	4.6	33.2	20	-0.9	14.2	11.6	49	1.2	10.3	39.0	20	0.2
Lab024	2	11.6	-	0	-	-	-	20	-	11.6	11.1	58	1.2	10.8	25.9	20	1.5
Lab026	2	11.6	-	0	-	-	-	36	-	11.6	11.5	212	1.6	13.9	28.7	36	2.5
Lab027	2	12.3	-	0	-	-	-	20	-	12.3	11.8	147	1.6	13.6	31.2	20	1.2
Lab028	2	14.2	13.2	12	1.0	7.6	22.2	20	1.7	14.2	13.7	270	1.2	8.8	21.0	20	1.9
Lab031	2	12.8	-	0	-	-	-	20	-	12.8	10.4	89	1.5	14.4	47.6	20	0.1
Lab032	2	12.3	12.6	3	1.3	10.3	23.1	20	1.7	12.3	11.5	222	1.9	16.5	39.5	20	0.8
Lab033	2	11.6	11.3	4	0.5	4.4	11.4	20	4.0	11.6	12.0	116	1.0	8.3	20.1	20	2.0
Lab034	2	12.8	11.2	3	0.6	5.4	23.2	20	1.4	12.8	12.4	65	0.7	5.6	14.4	20	3.0
Lab035	2	12.8	11.7	3	0.1	0.9	10.3	20	>6	12.8	12.4	55	0.7	5.6	14.4	20	3.0
Lab037	2	12.8	13.4	5	1.4	10.4	25.6	20	1.5	12.8	12.5	31	1.2	9.6	21.5	20	1.8
Lab038	2	12.8	-	0	-	-	-	20	-	12.8	12.7	55	1.0	7.9	16.5	20	2.4
Lab040	2	12.8	-	0	-	-	-	20	-	12.8	11.7	5	0.5	4.3	17.1	20	2.7
Total	-	-	12.2	46	1.3	10.7	-	-	-	-	12.1	1701	1.7	14.0	-	-	-

Bias (%) = [(| Mean - Target |) / Target] x 100%
 TE : Total Error(%) = Bias (%) + 2 x CV (%)
 σ (Sigma) = [TEa% - Bias (%)] / CV (%)

Month : 2016 07 Change

Cumulative : from 2014 02 01 to 2016 07 31 Change

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Control D Month vs. Cumulative

Control D (Lot No.: AC1203D)																	
Month (2016/07)										CUM (2014/02/01~2016/07/31)							
UnitID †	Reagent Kit (Code) †	Target (U/gHb)	Mean (U/gHb)	n for Mean	SD	CV (%)	TE (%)	TEa (%)	σ	Target (U/gHb)	Mean (U/gHb)	n for Mean	SD	CV (%)	TE (%)	TEa (%)	σ
Lab017	2	3.3	-	0	-	-	-	20	-	3.3	3.9	36	1.4	35.9	90.0	20	0.1
Lab018	2	2.7	2.4	4	0.4	16.7	44.4	20	0.5	2.7	2.6	97	1.0	38.5	80.6	20	0.4
Lab019	2	2.9	2.9	4	0.4	13.8	27.6	20	1.4	2.9	2.8	127	0.4	14.3	32.0	20	1.2
Lab021	2	2.9	3.0	4	0.2	6.7	16.8	20	2.5	2.9	3.4	67	0.2	5.9	29.0	20	0.5
Lab022	2	3.3	2.7	4	0.2	7.4	33.0	20	0.2	3.3	2.9	49	0.4	13.8	39.7	20	0.6
Lab024	2	2.7	-	0	-	-	-	20	-	2.7	2.7	58	0.3	11.1	22.2	20	1.8
Lab026	2	2.7	-	0	-	-	-	36	-	2.7	2.8	212	0.5	17.9	39.4	36	1.8
Lab027	2	2.9	-	0	-	-	-	20	-	2.9	2.7	147	0.5	18.5	43.9	20	0.7
Lab028	2	3.3	3.2	12	0.2	6.3	15.5	20	2.7	3.3	3.3	270	0.5	15.2	30.3	20	1.3
Lab031	2	2.9	-	0	-	-	-	20	-	2.9	2.5	89	0.5	20.0	53.8	20	0.3
Lab032	2	2.9	3.0	3	0.2	6.7	16.8	20	2.5	2.9	2.7	222	0.5	18.5	43.9	20	0.7
Lab033	2	2.7	2.8	4	0.2	7.1	18.0	20	2.3	2.7	2.9	116	0.3	10.3	28.1	20	1.2
Lab034	2	2.9	2.5	3	0.1	4.0	21.8	20	1.6	2.9	3.0	65	0.2	6.7	16.8	20	2.5
Lab035	2	2.9	2.6	3	0.0	0.0	10.3	20	>6	2.9	2.8	55	0.3	10.7	24.9	20	1.5
Lab037	2	2.9	3.2	5	0.5	15.6	41.6	20	0.6	2.9	3.0	31	0.4	13.3	30.1	20	1.2
Lab038	2	2.9	-	0	-	-	-	20	-	2.9	3.1	55	0.5	16.1	39.2	20	0.8
Lab040	2	2.9	-	0	-	-	-	20	-	2.9	2.5	5	0.1	4.0	21.8	20	1.6
Total	-	-	2.9	46	0.4	13.8	-	-	-	-	2.9	1701	0.6	20.7	-	-	-

Bias (%) = [(| Mean - Target |) / Target] x 100%
 TE : Total Error(%) = Bias (%) + 2 x CV (%)
 σ (Sigma) = [TEa% - Bias (%)] / CV (%)

Month : 2016 07 Change

Cumulative : from 2014 02 01 to 2016 07 31 Change

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Reagent Kit	Reagent Code
AMP	2