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# QA/QC results for week 5

Background subtract data and flag applied

CRESIB

13th May 2014

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# 1 Summary

- Background method applied: subtract.
- Week: 5.
- Operators number: 3.
- Plates number: 3.

Distribution Operator/Plate:

	m067_37	m067_38	m067_39	m067_40	m067_41	m067_42	m067_43	m067_44	m067_45
1	1	0	0	1	0	0	1	0	0
2	0	0	1	0	1	0	0	1	0
4	0	1	0	0	0	1	0	0	1

## 2.4 Summary LLOD and HLOD (MFI information) over the week

	Blank			LLOD			HLOD			N.Plates
	Min	Median	Max	Min	Median	Max	Min	Median	Max	
EGF	28.5	41.2	50.5	28.8	42.7	50.5	17090	22510	25000	9
EOTAXIN	19.0	28.5	37.0	20.0	28.5	37.0	20670	25000	25000	9
FGF	18.5	26.0	32.5	19.9	26.5	32.5	5067	5799	7192	9
G-CSF	6.0	7.0	10.0	6.5	8.0	11.0	12710	16660	20290	9
GMCSF	5.0	6.0	7.5	5.0	6.0	7.5	25000	25000	25000	9
HGF	7.0	8.5	10.0	8.0	8.9	11.0	25000	25000	25000	9
IFNa	5.0	6.5	8.5	5.7	6.9	8.6	16520	20510	25000	9
IFNg	5.0	6.5	8.5	5.5	7.0	8.5	25000	25000	25000	9
IL10	6.5	8.0	9.5	6.5	8.0	9.5	25000	25000	25000	9
IL12	6.0	7.0	9.0	6.0	8.0	10.0	20940	25000	25000	9
IL13	6.5	8.0	10.0	6.8	8.8	10.7	18300	25000	25000	9
IL15	22.5	29.8	42.5	22.7	29.8	42.5	5992	6989	25000	9
IL17	9.5	11.5	15.5	9.5	11.6	15.5	25000	25000	25000	9
IL1B	19.8	25.0	31.0	20.9	26.0	31.0	15940	23510	25000	9
IL1RA	42.8	58.0	81.5	42.8	60.0	81.5	8995	14140	25000	9
IL2	13.0	17.2	22.0	13.2	17.3	22.0	25000	25000	25000	9
IL2R	8.0	10.0	13.5	9.0	11.0	13.5	25000	25000	25000	9
IL4	7.5	9.0	11.0	7.6	9.1	11.1	19780	25000	25000	9
IL5	5.0	6.0	7.5	5.0	6.0	7.5	25000	25000	25000	9
IL6	12.5	16.5	21.5	12.5	16.7	21.5	25000	25000	25000	9
IL7	32.5	43.0	55.2	32.5	43.8	55.2	18420	25000	25000	9
IL8	50.0	65.0	94.5	50.6	65.1	94.5	15630	25000	25000	9
IP10	6.0	7.0	9.8	6.5	8.0	10.6	23680	25000	25000	9
MCP1	11.0	13.5	19.0	12.0	13.5	20.8	25000	25000	25000	9
MIG	5.5	6.5	9.5	5.9	7.2	9.5	25000	25000	25000	9
MIP1A	7.0	10.0	12.0	7.9	10.0	13.0	9884	10850	13590	9
MIP1B	11.5	14.2	20.0	12.3	15.2	20.1	25000	25000	25000	9
RANTES	48.5	58.5	74.5	51.0	59.8	74.5	8437	9008	10560	9
TNFa	6.0	8.5	10.5	6.0	8.5	10.5	25000	25000	25000	9
VEGF	37.0	49.5	60.8	38.0	49.5	61.2	8442	9676	15650	9

## 4 Distribution of outliers

### 4.1 Number of flags identified by plate

	m067_37	m067_38	m067_39	m067_40	m067_41	m067_42	m067_43	m067_44	m067_45
EGF	1	0	0	1	1	0	0	0	0
EOTAXIN	0	0	0	0	0	0	0	0	0
FGF	0	0	0	0	0	0	0	0	0
G-CSF	0	0	0	0	0	1	0	0	0
GMCSF	0	0	0	0	0	0	0	0	0
HGF	0	0	0	0	0	0	0	0	0
IFNa	0	0	0	0	0	0	0	0	0
IFNg	0	0	1	0	0	1	1	1	1
IL10	0	0	0	0	0	0	0	0	0
IL12	0	0	1	0	0	0	0	0	0
IL13	0	0	0	0	1	1	0	0	0
IL15	0	1	0	0	0	0	0	0	0
IL17	0	0	0	0	0	0	0	0	0
IL1B	0	0	0	0	1	1	0	0	0
IL1RA	0	0	1	0	0	0	0	0	0
IL2	0	1	0	0	1	0	0	1	0
IL2R	0	0	0	0	0	0	0	0	0
IL4	0	1	0	0	1	0	1	0	0
IL5	0	0	0	0	0	0	0	0	0
IL6	0	0	0	0	0	0	0	0	0
IL7	0	0	0	0	0	0	0	0	0
IL8	0	1	0	0	0	1	0	0	0
IP10	0	0	0	0	1	0	0	0	0
MCP1	0	1	0	1	0	0	0	0	0
MIG	0	0	0	0	0	0	0	0	0
MIP1A	1	0	1	0	1	0	0	1	0
MIP1B	1	0	1	1	0	0	0	0	0
RANTES	0	1	0	0	0	0	0	0	0
TNFa	0	1	0	0	0	0	0	0	0
VEGF	1	0	0	0	1	1	0	0	0

## 4.3 Number of outliers identified after flag by plate

	m067_37	m067_38	m067_39	m067_40	m067_41	m067_42	m067_43	m067_44	m067_45
EGF	0	0	0	0	0	0	0	0	0
EOTAXIN	0	0	0	0	0	0	0	0	0
FGF	0	0	0	0	0	0	0	0	0
G-CSF	0	0	0	0	0	0	0	0	0
GMCSF	0	0	0	0	0	0	0	0	0
HGF	0	0	0	0	0	0	0	0	0
IFNa	0	0	0	0	0	0	0	0	0
IFNg	0	0	0	0	0	0	0	0	0
IL10	0	0	0	0	0	0	0	0	0
IL12	0	0	0	0	0	0	0	0	0
IL13	0	0	0	0	0	0	0	0	0
IL15	0	0	0	0	0	0	0	0	0
IL17	0	0	0	0	0	0	0	0	0
IL1B	0	0	0	0	0	0	0	0	0
IL1RA	0	0	0	0	0	0	0	0	0
IL2	0	0	0	0	0	0	0	0	0
IL2R	0	0	0	0	0	0	0	0	0
IL4	0	0	0	0	0	0	0	0	0
IL5	0	0	0	0	0	0	0	0	0
IL6	0	0	0	0	0	0	0	0	0
IL7	0	0	0	0	0	0	0	0	0
IL8	0	0	0	0	0	0	0	0	0
IP10	0	0	0	0	0	0	0	0	0
MCP1	0	0	0	0	0	0	0	0	0
MIG	0	0	0	0	0	0	0	0	0
MIP1A	0	0	0	0	1	0	0	0	0
MIP1B	0	0	0	0	0	0	0	0	0
RANTES	0	0	0	0	0	0	0	0	0
TNFa	0	0	0	0	0	0	0	0	0
VEGF	0	0	0	0	0	0	0	0	0

## 5 Qualification and fitness of Standard Curve

Analyte	N.Plates	$R^2 \leq 0.95$	Mod.Fit $\leq 0.05$	B pval $\leq 0.05$	N.Convergence	N.LL5 conv.	N.LL4 conv.
EGF	9	0	1	9	9	9	0
EOTAXIN	9	0	0	9	9	9	0
FGF	9	0	0	8	9	9	0
G-CSF	9	0	0	9	9	9	0
GMCSF	9	0	0	9	9	9	0
HGF	9	0	0	8	9	9	0
IFNa	9	0	0	9	9	9	0
IFNg	9	0	0	9	9	9	0
IL10	9	0	0	9	9	9	0
IL12	9	0	2	8	9	9	0
IL13	9	0	0	9	9	8	1
IL15	9	0	0	6	9	9	0
IL17	9	0	0	8	9	9	0
IL1B	9	0	0	9	9	9	0
IL1RA	9	0	0	8	9	9	0
IL2	9	0	0	9	9	9	0
IL2R	9	0	0	9	9	9	0
IL4	9	0	0	9	9	8	1
IL5	9	0	0	9	9	9	0
IL6	9	0	0	8	9	8	1
IL7	9	0	0	8	9	9	0
IL8	9	0	0	8	9	9	0
IP10	9	0	0	9	9	8	1
MCP1	9	0	1	9	9	9	0
MIG	9	0	0	7	9	8	1
MIP1A	9	0	0	9	9	9	0
MIP1B	9	0	0	9	9	9	0
RANTES	9	0	1	9	9	9	0
TNFa	9	0	0	9	9	9	0
VEGF	9	0	0	8	9	9	0



## 6 Operator assesment

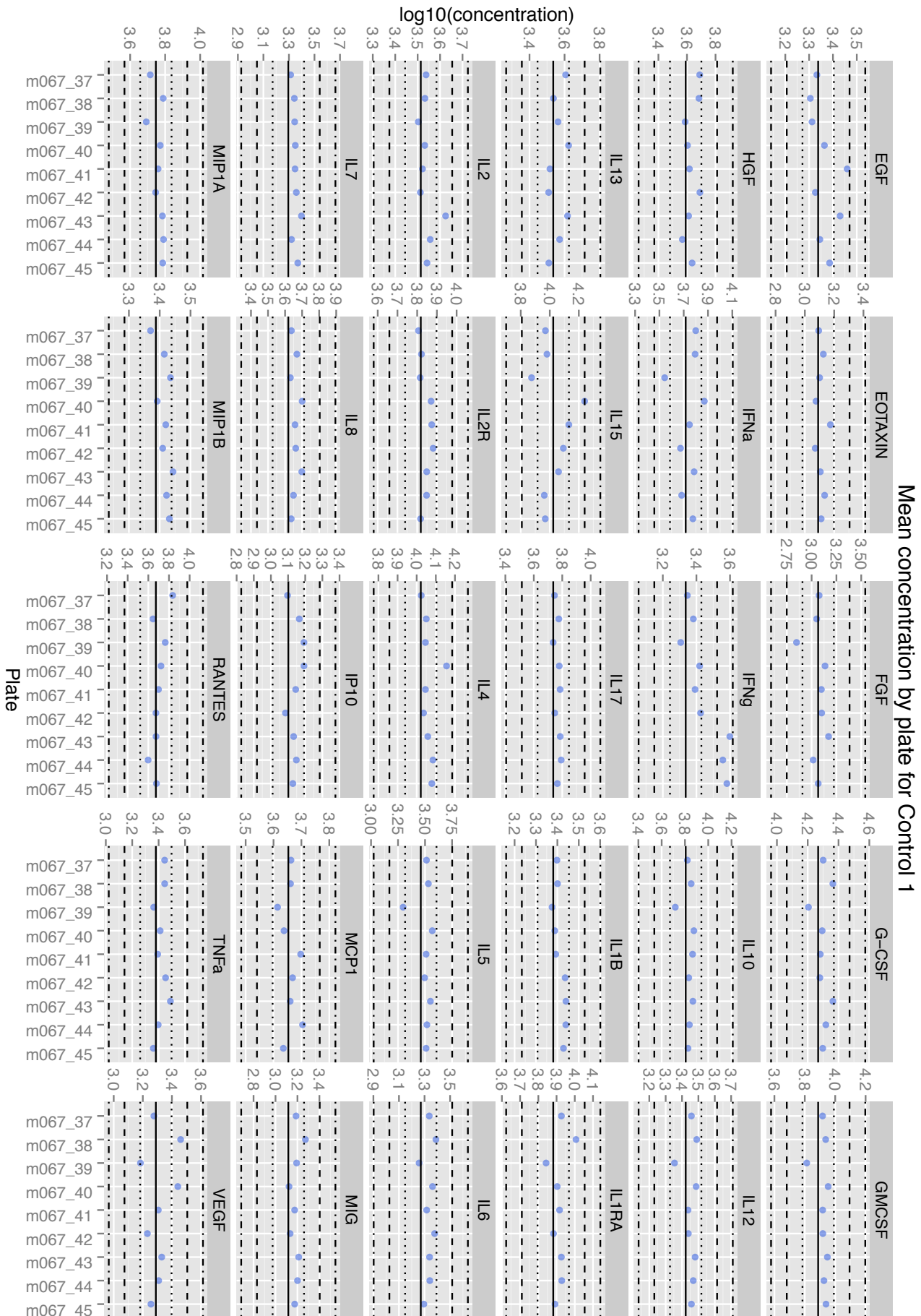
### 6.1 Intra-operator agreement

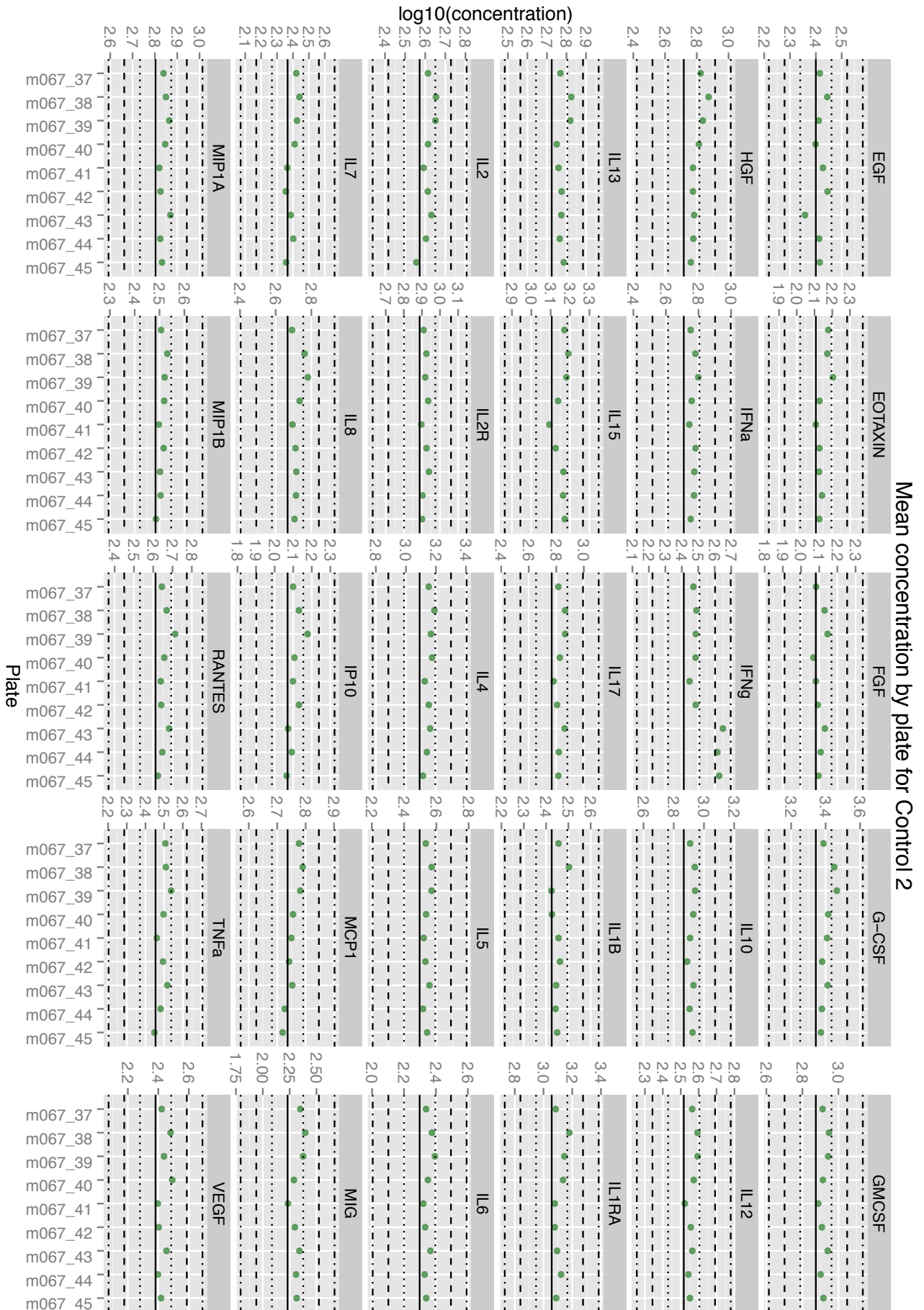
#### 6.1.1 Intraclass Correlation Coefficient (agreement) results by operator

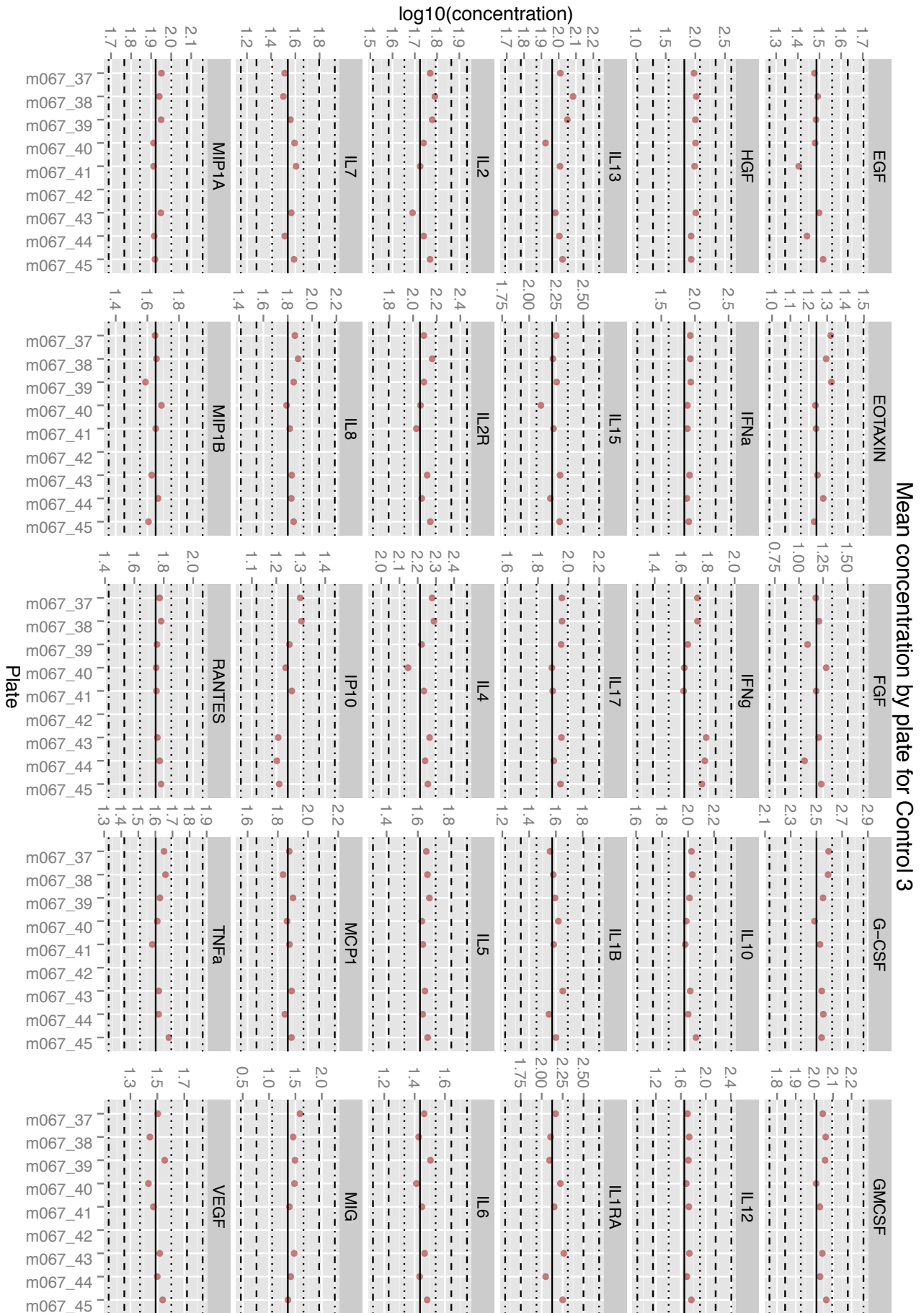
	Operator1			Operator2			Operator3		
	N.Plates	Min	Overall	N.Plates	Min	Overall	N.Plates	Min	Overall
EGF	3	1.000	1.000	3	0.999	0.999	3	1.000	1.000
EOTAXIN	3	0.997	0.999	3	0.987	0.995	3	0.999	0.999
FGF	3	0.998	0.999	3	0.994	0.998	3	0.993	0.996
G.CSF	3	0.996	0.998	3	0.989	0.997	3	0.999	0.999
GMCSF	3	0.999	1.000	3	0.998	0.999	3	0.998	0.999
HGF	3	0.995	0.995	3	0.991	0.993	3	0.972	0.979
IFNa	3	0.999	0.999	3	0.998	0.999	3	0.999	0.999
IFNg	3	0.999	1.000	3	0.998	0.999	3	0.999	1.000
IL10	3	0.999	0.999	3	0.995	0.998	3	1.000	1.000
IL12	3	0.995	0.996	3	0.996	0.997	3	0.993	0.992
IL13	3	0.999	1.000	3	0.996	0.999	3	0.999	0.999
IL15	3	0.999	0.999	3	0.994	0.998	3	0.997	0.997
IL17	3	0.999	0.999	3	0.997	0.999	3	0.999	0.999
IL1B	3	0.996	0.999	3	0.998	0.999	3	0.995	0.996
IL1RA	3	0.997	0.997	3	0.993	0.997	3	0.992	0.993
IL2	3	0.999	0.999	3	0.998	0.999	3	0.999	0.999
IL2R	3	1.000	1.000	3	0.999	0.999	3	0.997	0.998
IL4	3	0.999	0.999	3	0.998	0.999	3	0.998	0.998
IL5	3	0.999	0.999	3	0.998	0.999	3	0.999	1.000
IL6	3	0.999	0.999	3	0.997	0.999	3	0.999	0.999
IL7	3	0.988	0.993	3	0.994	0.998	3	0.992	0.993
IL8	3	0.998	0.998	3	0.995	0.997	3	0.998	0.997
IP10	3	0.999	1.000	3	0.997	0.999	3	0.999	1.000
MCP1	3	0.997	0.999	3	0.991	0.996	3	0.998	0.999
MIG	3	0.994	0.997	3	0.995	0.996	3	0.989	0.993
MIP1A	3	0.999	0.999	3	0.992	0.998	3	0.999	0.999
MIP1B	3	1.000	1.000	3	0.997	0.998	3	0.998	0.998
RANTES	3	0.999	0.999	3	0.988	0.996	3	0.996	0.997
TNFa	3	0.999	0.999	3	0.997	0.999	3	0.997	0.997
VEGF	3	0.998	0.999	3	0.987	0.997	3	0.995	0.996

## 7 Assay random and systematic variability

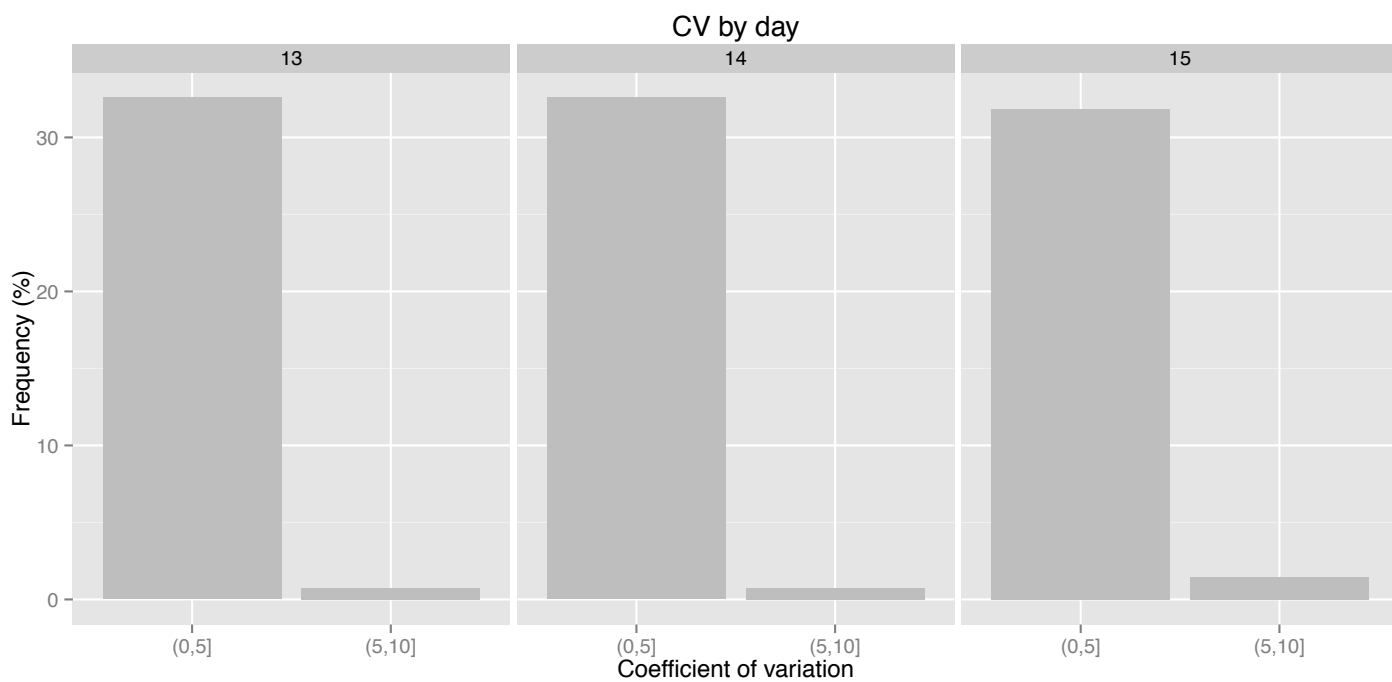
### 7.1 Mean concentration for controls by plate and analyte







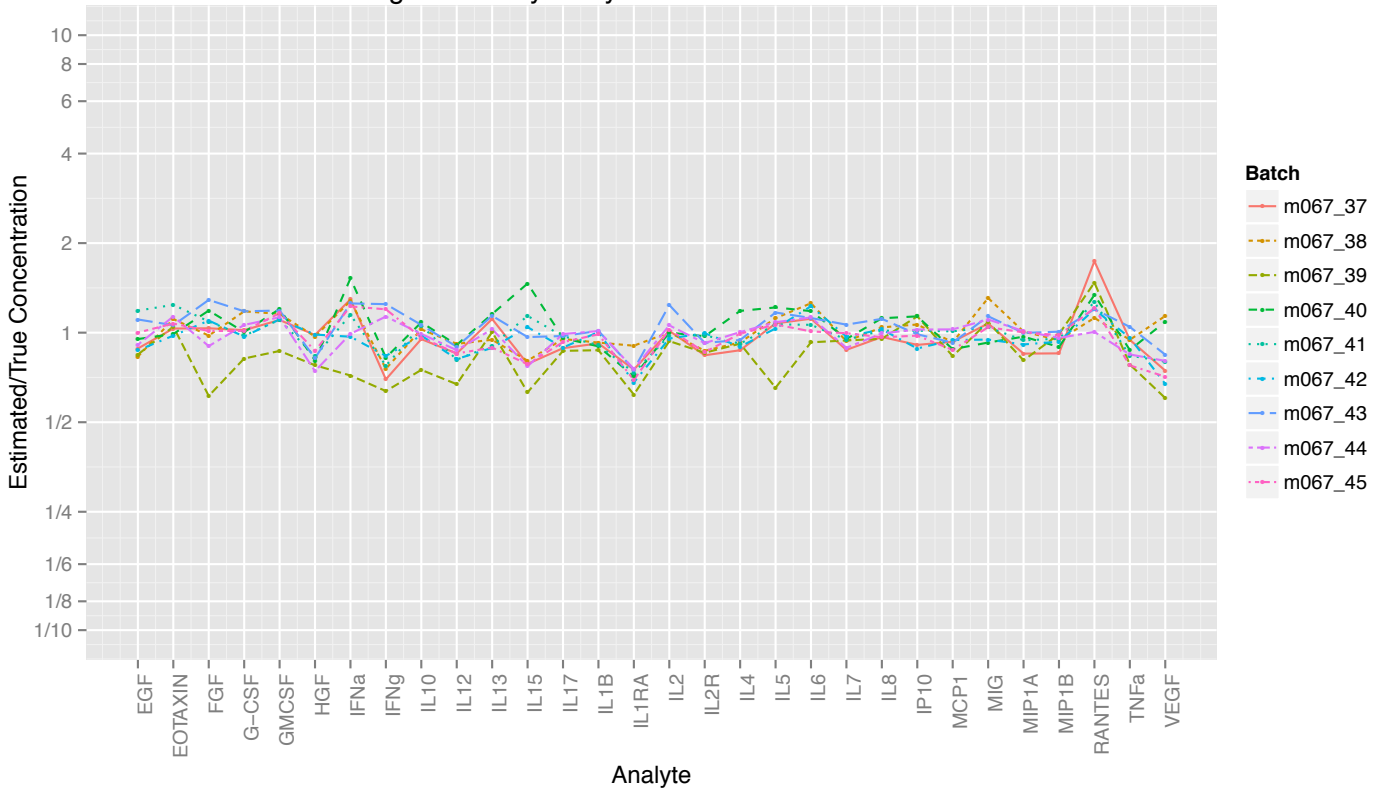
## 7.2 Coefficient of variation by day



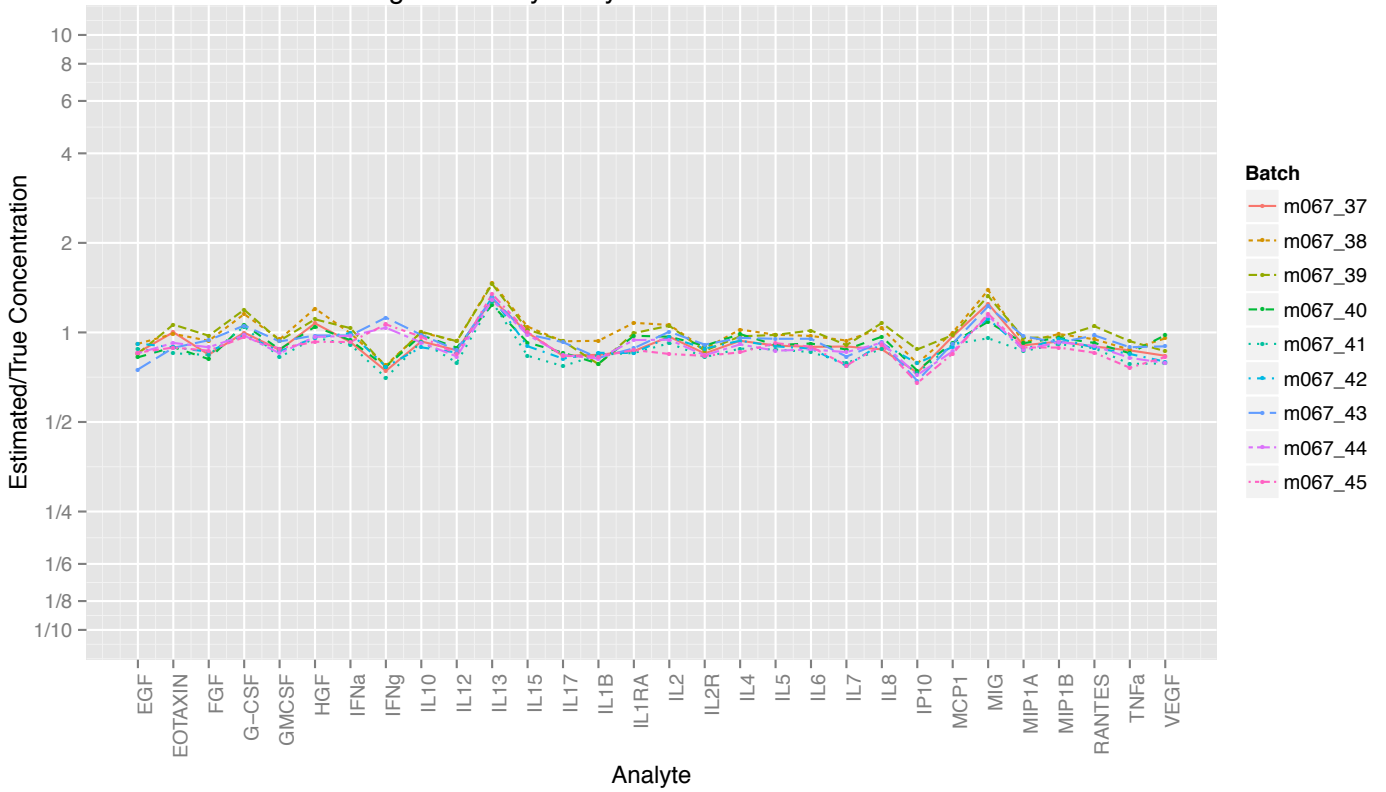
Day	CV categories					
	(0,5]	(5,10]	(10,15]	(15,20]	(20,30]	(30,Inf]
13	88	2	0	0	0	0
14	88	2	0	0	0	0
15	86	4	0	0	0	0

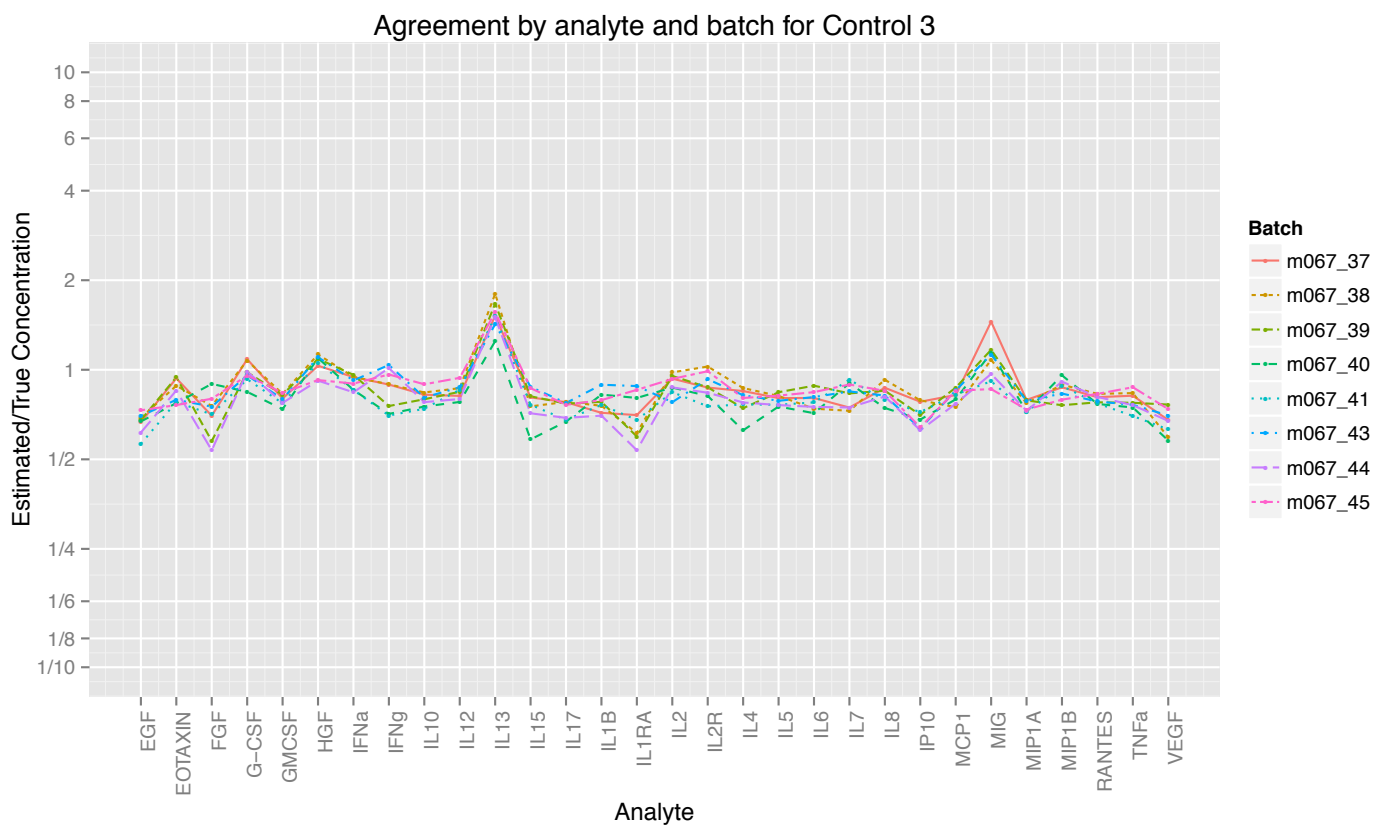
### 7.5 Agreement for positive controls

Agreement by analyte and batch for Control 1



Agreement by analyte and batch for Control 2





## 8.6 Standard curve and Residuals plots by analyte and stimulation

Standard curve plot information:

- Orange point: positive control.
- Black filled point: standard curve value.
- Green line: background.
- Non-filled black point: values from standard samples not included in the estimation of the curve (flagged).

Residuals plot information:

- Black line: 0 value reference.
- Dashed line:  $\pm 2.5$  value (outlier limit).
- Black filled point: standardized residual value of the fitted point.





