

Daily Analysis Runlog For Sequence/QC Batch ID # LB94375

Review By

Review On

SubDirectory

LB94375

Test :

Cyanide

STD. NAME	STD REF.#
ICAL Standard	WP63362,WP63363,WP63364,WP63365,WP63366,WP63367,WP63368
ICV Standard	W1542
CCV Standard	WP63369
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP62802
Chk Standard	WP63371,WP59958,WP60878

Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	04/04/18 08:21		OK
2	5.0PPBCN	5.0PPBCN	CAL2	04/04/18 08:21		OK
3	10PPBCN	10PPBCN	CAL3	04/04/18 08:21		OK
4	50PPBCN	50PPBCN	CAL4	04/04/18 08:21		OK
5	100PPBCN	100PPBCN	CAL5	04/04/18 08:21		OK
6	250PPBCN	250PPBCN	CAL6	04/04/18 08:21		OK
7	500PPBCN	500PPBCN	CAL7	04/04/18 08:21		OK
8	ICV1	ICV1	ICV	04/04/18 13:09		OK
9	ICB1	ICB1	ICB	04/04/18 13:09		OK
10	CCV1	CCV1	CCV	04/04/18 13:09		OK
11	CCB1	CCB1	CCB	04/04/18 13:09		OK
12	PB107980BL	PB107980BL	MB	04/04/18 13:09		OK
13	PB107980BS	PB107980BS	LCS	04/04/18 13:09		OK
14	J2197-01	DRUM-STONES	SAM	04/04/18 13:09		OK
15	J2197-01DUP	DRUM-STONESDUP	DUP	04/04/18 13:09		OK
16	J2197-01MS	DRUM-STONESMS	MS	04/04/18 13:09	MS Recovery Fail	OK
17	J2197-01MSD	DRUM-STONESMSD	MSD	04/04/18 13:09	MSD Recovery Fail	OK
18	J2197-04	SP	SAM	04/04/18 13:09		OK
19	J2199-01	S6-A	SAM	04/04/18 13:16		OK
20	J2202-01	FK-GF-02-014-A	SAM	04/04/18 13:16		OK
21	J2202-03	FK-GF-02-014-B	SAM	04/04/18 13:16		OK

Daily Analysis Runlog For Sequence/QC Batch ID # LB94375

Review By			Review On			
SubDirectory		LB94375		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP63362,WP63363,WP63364,WP63365,WP63366,WP63367,WP63368				
ICV Standard		W1542				
CCV Standard		WP63369				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP62802				
Chk Standard		WP63371,WP59958,WP60878				
22	CCV2	CCV2	CCV	04/04/18 13:16		OK
23	CCB2	CCB2	CCB	04/04/18 13:16		OK
24	J2204-01	FK-BPM-01-F02-F02	SAM	04/04/18 13:16		OK
25	J2207-01	SP-1	SAM	04/04/18 13:16		OK
26	J2212-01	SP-1-A	SAM	04/04/18 13:16		OK
27	J2212-07	SP-1-B	SAM	04/04/18 13:16		OK
28	J2203-01	FK-BPM-01-D02-D02	SAM	04/04/18 13:16		OK
29	PB107978BL	PB107978BL	MB	04/04/18 13:16		OK
30	PB107978BS	PB107978BS	LCS	04/04/18 13:23		OK
31	J2197-06	DRUM-WATER	SAM	04/04/18 13:23		OK
32	J2197-06DUP	DRUM-WATERDUP	DUP	04/04/18 13:23		OK
33	J2197-06MS	DRUM-WATERMS	MS	04/04/18 13:23		OK
34	CCV3	CCV3	CCV	04/04/18 13:23		OK
35	CCB3	CCB3	CCB	04/04/18 13:23		OK
36	J2197-06MSD	DRUM-WATERMSD	MSD	04/04/18 13:23		OK
37	CCV4	CCV4	CCV	04/04/18 13:23		OK
38	CCB4	CCB4	CCB	04/04/18 13:57		OK



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	DRUM-STONES	SDG No.:	LB94375
Lab Sample ID:	J2197-01	Matrix:	Solid
Level (low/med):	low	% Solid:	88.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.032	U	1	0.037		0.28	mg/Kg	04/04/2018	04/04/2018	9012B



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	SP	SDG No.:	LB94375
Lab Sample ID:	J2197-04	Matrix:	Solid
Level (low/med):	low	% Solid:	87.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.012	U	1	0.038		0.29	mg/Kg	04/04/2018	04/04/2018	9012B



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	DRUM-WATER	SDG No.:	LB94375
Lab Sample ID:	J2197-06	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.00065	U	1	0.003		0.005	mg/L	04/04/2018	04/04/2018	9012B



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	S6-A	SDG No.:	LB94375
Lab Sample ID:	J2199-01	Matrix:	Solid
Level (low/med):	low	% Solid:	88.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.022	U	1	0.037		0.28	mg/Kg	04/04/2018	04/04/2018	9012B

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	FK-GF-02-014-A	SDG No.:	LB94375
Lab Sample ID:	J2202-01	Matrix:	Solid
Level (low/med):	low	% Solid:	91.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.039	J	1	0.034		0.26	mg/Kg	04/04/2018	04/04/2018	9012B



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	FK-GF-02-014-B	SDG No.:	LB94375
Lab Sample ID:	J2202-03	Matrix:	Solid
Level (low/med):	low	% Solid:	90.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.041	J	1	0.035		0.27	mg/Kg	04/04/2018	04/04/2018	9012B



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	FK-BPM-01-D02-D02A-E02-E02A	SDG No.:	LB94375
Lab Sample ID:	J2203-01	Matrix:	Solid
Level (low/med):	low	% Solid:	89

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.086	J	1	0.036		0.27	mg/Kg	04/04/2018	04/04/2018	9012B



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	FK-BPM-01-F02-F02A-G02-G02A	SDG No.:	LB94375
Lab Sample ID:	J2204-01	Matrix:	Solid
Level (low/med):	low	% Solid:	88.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.018	U	1	0.036		0.28	mg/Kg	04/04/2018	04/04/2018	9012B

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	SP-1	SDG No.:	LB94375
Lab Sample ID:	J2207-01	Matrix:	Solid
Level (low/med):	low	% Solid:	89

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.1	J	1	0.037		0.28	mg/Kg	04/04/2018	04/04/2018	9012B



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	SP-1-A	SDG No.:	LB94375
Lab Sample ID:	J2212-01	Matrix:	Solid
Level (low/med):	low	% Solid:	87.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.026	U	1	0.036		0.27	mg/Kg	04/04/2018	04/04/2018	9012B

Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	SP-1-B	SDG No.:	LB94375
Lab Sample ID:	J2212-07	Matrix:	Solid
Level (low/med):	low	% Solid:	88.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.016	U	1	0.036		0.27	mg/Kg	04/04/2018	04/04/2018	9012B



Report of Analysis

Client:		Date Collected:	4/3/2018 12:00:00 AM
Project:	LB94375	Date Received:	4/3/2018 12:00:00 AM
Client Sample ID:	SP-1-B	SDG No.:	LB94375
Lab Sample ID:	J2212-07	Matrix:	Solid
Level (low/med):	low	% Solid:	88.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
-----	-----------	-------	------	----	-----	-----	------------	-------	-----------	-----------	----------

Color Before:

Clarity Before:

Texture:

Color After:

Clarity After:

Artifacts:

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB94375

SDG No.: LB94375

Contract: _____ Lab Code: CHEM

Case No.: LB94375

SAS No.: LB94375

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	Qual	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Cyanide	0.094	0.099	94.9		85 - 115		04/04/2018	13:09	LB94375



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB94375

SDG No.: LB94375

Contract: _____ Lab Code: CHEM

Case No.: LB94375

SAS No.: LB94375

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	Qual	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV1	Cyanide	0.25	0.25	100		90 - 110		04/04/2018	13:09	LB94375
CCV2	Cyanide	0.25	0.25	100		90 - 110		04/04/2018	13:16	LB94375
CCV3	Cyanide	0.25	0.25	100		90 - 110		04/04/2018	13:23	LB94375
CCV4	Cyanide	0.25	0.25	100		90 - 110		04/04/2018	13:23	LB94375



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB94375

SDG No.: LB94375

Contract:

Lab Code: CHEM

Case No.: LB94375

SAS No.: LB94375

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	0.00033	+/-0.005	U		0.005		04/04/2018	13:09	LB94375

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	0.00023	+/-0.005	U		0.005		04/04/2018	13:09	LB94375
CCB2	Cyanide	0.0003	+/-0.005	U		0.005		04/04/2018	13:16	LB94375
CCB3	Cyanide	0.00044	+/-0.005	U		0.005		04/04/2018	13:23	LB94375
CCB4	Cyanide	-0.00018	+/-0.005	U		0.005		04/04/2018	13:57	LB94375



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB94375

SDG No.: LB94375

Contract: Lab Code: CHEM

Case No.: LB94375

SAS No.: LB94375

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
-----------	---------	----------------	---------------------	--------------	-----	------	---	------------------	------------------	---------------



GENCHEM
- 3b -
PREPARATION BLANK SUMMARY

Client: LB94375

SDG No.: LB94375

Instrument: Konelab 20

Sample ID	Analyte	Result (mg/L)	Acceptance Limit	Conc Qual	LOD mg/L	CRQL mg/L	M	Analysis Date	Analysis Time	Run
PB107978BL	Cyanide	WATER		Batch Number:		PB107978		Prep Date:	04/04/2018	
		-0.0001	<0.005	U		0.005		04/04/2018	13:16	LB94375
Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB107980BL	Cyanide	SOLID		Batch Number:		PB107980		Prep Date:	04/04/2018	
		0.0062	<0.24	U		0.24		04/04/2018	13:09	LB94375



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB94375 level: low sdg no.: LB94375
contract: lab code: CHEM case no.: LB94375 sas no.: LB94375
matrix: Solid sample id: J2197-01 client id: DRUM-STONESMS
Percent Solids for Sample: 88.3 Spiked ID: J2197-01MS Percent Solids for Spike Sample: 88.3

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.4		0.037	U	2.2	63.6	*	



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB94375 level: low sdg no.: LB94375
contract: lab code: CHEM case no.: LB94375 sas no.: LB94375
matrix: Solid sample id: J2197-01 client id: DRUM-STONESMSD
Percent Solids for Sample: 88.3 Spiked ID: J2197-01MSD Percent Solids for Spike Sample: 88.3

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.4		0.037	U	2.2	63.6	*	



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB94375 level: low sdg no.: LB94375
contract: lab code: CHEM case no.: LB94375 sas no.: LB94375
matrix: WATER sample id: J2197-06 client id: DRUM-WATERMS
Percent Solids for Sample: 0 Spiked ID: J2197-06MS Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/L	75 - 125	0.038		0.003	U	0.04	95		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB94375 level: low sdg no.: LB94375
contract: lab code: CHEM case no.: LB94375 sas no.: LB94375
matrix: WATER sample id: J2197-06 client id: DRUM-WATERMSD
Percent Solids for Sample: 0 Spiked ID: J2197-06MSD Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/L	75 - 125	0.038		0.003	U	0.04	95		



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB94375 level: low sdg no.: LB94375
contract: lab code: CHEM case no.: LB94375 sas no.: LB94375
matrix: Solid sample id: J2197-01 client id: DRUM-STONESMS
Percent Solids for Sample: 88.3 Spiked ID: J2197-01MS Percent Solids for Spike Sample: 88.3

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.4		0.037	U	2.2	63.6	*	



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB94375 level: low sdg no.: LB94375
contract: lab code: CHEM case no.: LB94375 sas no.: LB94375
matrix: Solid sample id: J2197-01 client id: DRUM-STONESMSD
Percent Solids for Sample: 88.3 Spiked ID: J2197-01MSD Percent Solids for Spike Sample: 88.3

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.4		0.037	U	2.2	63.6	*	



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB94375 level: low sdg no.: LB94375
contract: lab code: CHEM case no.: LB94375 sas no.: LB94375
matrix: WATER sample id: J2197-06 client id: DRUM-WATERMS
Percent Solids for Sample: 0 Spiked ID: J2197-06MS Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/L	75 - 125	0.038		0.003	U	0.04	95		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB94375 level: low sdg no.: LB94375
contract: lab code: CHEM case no.: LB94375 sas no.: LB94375
matrix: WATER sample id: J2197-06 client id: DRUM-WATERMSD
Percent Solids for Sample: 0 Spiked ID: J2197-06MSD Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/L	75 - 125	0.038		0.003	U	0.04	95		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB94375 Level: LOW SDG No.: LB94375
Contract: _____ Lab Code: CHEM Case No.: LB94375 SAS No.: LB94375
Matrix: Solid Sample ID: J2197-01 Client ID: DRUM-STONESDUP
Percent Solids for Sample: 88.3 Duplicate ID J2197-01DUP Percent Solids for Spike Sample: 88.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.037	U	0.038	J	200.0		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB94375 **Level:** LOW **SDG No.:** LB94375
Contract: **Lab Code:** CHEM **Case No.:** LB94375 **SAS No.:** LB94375
Matrix: Solid **Sample ID:** J2197-01MS **Client ID:** DRUM-STONESMSD
Percent Solids for Sample: 88.3 **Duplicate ID** J2197-01MSD **Percent Solids for Spike Sample:** 88.3

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.4		1.4		0		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB94375 **Level:** LOW **SDG No.:** LB94375
Contract: **Lab Code:** CHEM **Case No.:** LB94375 **SAS No.:** LB94375
Matrix: WATER **Sample ID:** J2197-06 **Client ID:** DRUM-WATERDUP
Percent Solids for Sample: 0 **Duplicate ID** J2197-06DUP **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.003	U	0.00067	U			

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB94375 **Level:** LOW **SDG No.:** LB94375
Contract: **Lab Code:** CHEM **Case No.:** LB94375 **SAS No.:** LB94375
Matrix: WATER **Sample ID:** J2197-06MS **Client ID:** DRUM-WATERMSD
Percent Solids for Sample: 0 **Duplicate ID** J2197-06MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/L	20	0.038		0.038		0		



GENCHEM

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB94375 SDG No.: LB94375
Contract: Lab Code: CHEM Case No.: LB94375 SAS No.: LB94375

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB107980BS Cyanide	mg/Kg	5	4.7		94	85 - 115	
