This document was too large to scan as a whole document, therefore it required breaking into smaller sections.

DOCUMENT NUMBER: SD-WM-DP-139

SECTION 2 OF 5

TITLE: FINAL REPORT FOR TANK 241-B-101 PUSH MODE CORES 90 + 91

DATE: 11/06/95

ORIGINATOR: SCHREIBER RD

CO: WHC

RECIPIENT:

CO:

REFERENCES: ECN-625769

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LABCORE Data Entry Template for Worklist# 2182

Analyst: DCD **Instrument:** BA001 _____ **Book #** 65N8-A

Method: LA-564-101 Rev/Mod F-1 WHC-SD-WM-DP-139, REV. 1

Worklist Comment: % Water T-106 and B101 - Do NOT run in replicate.

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				WATER-01	SOLID	59.74	60.3	N/A	%
95000103	T-106	2	SAMPLE	S95T001343	0		WATER-01	SOLID	N/A	14.18		%
95000103	T-106	3	DUP	S95T001343	0		WATER-01	SOLID	14.18	14.59	N/A	%
95000109	T-106	4	SAMPLE	S95T001457	0		WATER-01	SOLID	N/A	19.39		%
95000109	T-106	5	DUP	S95T001457	0		WATER-01	SOLID	19.39	20.49	N/A	%
95000091	B-101	6	SAMPLE	S95T001541	0		WATER-01	SOLID	N/A	23.45		%
95000091	B-101	7	DUP	S95T001541	0		WATER-01	SOLID	23.45	23.25	N/A	%
95000091	B-101	8	SAMPLE	S95T001543	0		WATER-01	SOLID	N/A	40.78		%
95000091	B-101	9	DUP	S95T001543	0		WATER-01	SOLID	40.78	41.26	N/A	%
95000093	B-101	10	SAMPLE	S95T001547	0		WATER-01	SOLID	N/A	28.44		%
95000093	B-101	11	DUP	S95T001547	0		WATER-01	SOLID	28.44	28.03	N/A	%

Final page for worklist # 2182

David A Dunham 9-15-95
Analyst Signature Date

Susie M. Dalton 9-14-95
Analyst Signature Date

Steve Potter 9-14-95

Reviewed RW Schwab 9/15/95

Data Entry Comments:

See Wts on back of worklist. SMF

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

#1 STD
W1 15.3987 g
W2 16.7620 g
W3 15.9526 g
W4 ~~15.8678~~ 9/14/95
15.9403 g

#2 S95T001343
W1 15.3889 g
W2 15.6089
W3 15.5794
W4 15.5777

#3 ~~S95T001343~~ S95T001343 S.P. 9-14-95
DUP
W1 15.3931 g
W2 15.5480
W3 15.5268
W4 15.5254

#4 S95T001457
W1 15.6229 g
W2 15.7936
W3 15.7616
W4 15.7605

#5 S95T001457
DUP
W1 15.4285 g
W2 15.5627
W3 15.5359
W4 15.5352

#6 S95T001541
W1 15.3135 g
W2 15.7054
W3 15.6143
W4 15.6135

#7 S95T001541
DUP
W1 15.3063 g
W2 15.7484
W3 15.6463
W4 15.6456

#8 S95T001543
W1 15.5218 g
W2 16.2179
W3 15.9348
W4 15.9340

#9 S95T001543
DUP
W1 15.2773 g
W2 16.1265
W3 15.7770
W4 15.7761

#10 S95T001547
W1 15.4514 g
W2 15.5980
W3 15.5569
W4 15.5563

#11 S95T001547
DUP
W1 15.4134 g
W2 15.6182
W3 15.5614
W4 15.5608

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-139, REV. 1

% WATER : LA-564-101 (F-~~0~~ 1) PWS 11/2/95

Type	Tare Weight (W1) grams	STANDARD: 15.3987	REPLICATE:
STANDARD	Gross Weight (W2) grams	16.7620	
Work List	First Residue Weight (W3) grams	15.9526	
2182	Second Residue Weight (W4) grams	15.9403	
Test Code	Percent Difference	0.0772	N/A
	QC Check	Pass	N/A
Matrix	Percent Weight Loss	60.27	N/A
LIQUID			
Sample #			
STANDARD			
Instrument Code			
BA001			
Analyst			
DAVE DUNHAM			
Date			
09/15/95			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.0
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O =	60.3

Data Entry by:	Steve Peterson	Date:	09/14/95
Approved by:	Ray Schroeder	Date:	9/15/95

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-~~145~~, REV. 1
139 10/09/95

% WATER : LA-564-101 (F-0) RWS 11/2/95

Type	Tare Weight (W1) grams	SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2) grams	15.7054	15.7484
Work List	First Residue Weight (W3) grams	15.6143	15.6463
2182	Second Residue Weight (W4) grams	15.6135	15.6456
TestCode	Percent Difference	0.0051	0.0045
	QC Check	Pass	Pass
Matrix	Percent Weight Loss	23.45	23.25
LIQUID			
Sample #			
S95T001541 & DUPE			
Instrument Code			
BA001			
Analyst			
DAVE DUNHAM			
Date			
09/15/95			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.0
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O (Average) =	23.4

Data Entry by:	Steve Peter	Date:	09/14/95
Approved by:	Rw Schroeder	Date:	9/15/95

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP- 45, REV. 1
139 HW 10/09/95

% WATER : LA-564-101 (F-~~0~~1) RWS 11/2/95

		SAMPLE	REPLICATE
Type	Tare Weight (W1) grams	15.5218	15.2773
SAMPLE	Gross Weight (W2) grams	16.2179	16.1265
Work List	First Residue Weight (W3) grams	15.9348	15.7770
2182	Second Residue Weight (W4) grams	15.9340	15.7761
Test Code	Percent Difference	0.0050	0.0057
	QC Check	Pass	Pass
Matrix	Percent Weight Loss	40.78	41.26
LIQUID			
Sample #			
S95T001543 & DUPE			
Instrument Code			
BA001			
Analyst			
DAVE DUNHAM			
Date			
09/15/95			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.0
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O (Average) =	41.0

Data Entry by:	Stan Peterson	Date:	09/14/95
Approved by:	Ron Schroeder	Date:	9/15/95

Form 564101L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-~~143~~ 139, REV. 1 11/09/95

% WATER : LA-564-101 (F-~~0~~ 1) RWS 11/2/95

		SAMPLE	REPLICATE
Type	Tare Weight (W1) grams	15.4514	15.4134
SAMPLE	Gross Weight (W2) grams	15.5980	15.6182
Work List	First Residue Weight (W3) grams	15.5569	15.5614
2182	Second Residue Weight (W4) grams	15.5563	15.5608
Test Code	Percent Difference	0.0039	0.0039
	QC Check	Pass	Pass
Matrix	Percent Weight Loss	28.44	28.03
LIQUID			
Sample #			
S95T001547 & DUPE			
Instrument Code			
BA001			
Analyst			
DAVE DUNHAM			
Date			
09/15/95			
Time			

(If it is necessary to do a 3rd heating then substitute the last weight measured for W4 and the second to last weight measured for W3 in the calculations above.)

Sample = W2 - W1	= Gross Weight - Tare Weight
Weight = W2 - W4	= Gross Weight - Residue Weight
Percent Difference	= Absolute Value of [(W3-W4)/W4]*100.0
QC Check "Pass" if % Difference	= < +/- 0.1500%
Percent Water Weight Loss	= [(W2-W4)/(W2-W1)]*100 = % H2O
Percent Water (Average)	= [(% H2O for A) + (% H2O for B)] / 2

RESULT

% H2O (Average) =	28.2

Data Entry by:	Stan Peterson	Date:	09/14/95
Approved by:	RW Schroeder	Date:	9/15/95

Form 564101L1 Rev. 1.2

LABCORE Data Entry Template for Worklist# 2108

Analyst: DCD **Instrument:** IC01 IC01 **Book #** 106N9A

Method: LA-533-105 Rev/Mod D-0

Worklist Comment: B101 IC on liquid samples. JMF WHC-SD-WM-DP-139, REV. 1

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				@IC-01	F-02	LIQUID		<.062	N/A	ug/mL
		1	BLNK				@IC-01	CL-02	LIQUID		<.083	N/A	ug/mL
		1	BLNK				@IC-01	NO2-02	LIQUID		<.547	N/A	ug/mL
		1	BLNK				@IC-01	BR-02	LIQUID		<.632	N/A	ug/mL
		1	BLNK				@IC-01	NO3-02	LIQUID		<.699	N/A	ug/mL
		1	BLNK				@IC-01	PO4-02	LIQUID		<.596	N/A	ug/mL
		1	BLNK				@IC-01	SO4-02	LIQUID		<.678	N/A	ug/mL
		1	BLNK				@IC-01	OXALATE2	LIQUID		<.496	N/A	ug/mL
		2	STD				@IC-01	F-02	LIQUID		64.2	N/A	ug/mL
		2	STD				@IC-01	CL-02	LIQUID		79.7	N/A	ug/mL
		2	STD				@IC-01	NO2-02	LIQUID		560.5	N/A	ug/mL
		2	STD				@IC-01	BR-02	LIQUID		588.1	N/A	ug/mL
		2	STD				@IC-01	NO3-02	LIQUID		630.7	N/A	ug/mL
		2	STD				@IC-01	PO4-02	LIQUID		554.9	N/A	ug/mL
		2	STD				@IC-01	SO4-02	LIQUID		643	N/A	ug/mL
		2	STD				@IC-01	OXALATE2	LIQUID		567.3	N/A	ug/mL
95000091	B-101	3	SAMPLE	S95T001542	0		@IC-01	F-02	LIQUID	N/A	2.38e2	1.32e2	ug/mL
95000091	B-101	3	SAMPLE	S95T001542	0		@IC-01	CL-02	LIQUID	N/A	6.68e2	1.76e2	ug/mL

Data Entry Comments:

SAMPLE		DF	Sample size
S95T000 1542	SAM+DUP	2121	100-10-500-10
S95T000 1542	SPIKE	2121	100-10-500-9.9 + .100spk
S95T000 1542	SAM+DUP	10201	100-10-100-10

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2108

DUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST		MATRIX	ACTUAL	FOUND	DL	UNIT
95000091	B-101	3 SAMPLE	S95T001542	0	@IC-01	NO2-02		LIQUID	N/A	1.30e5	~~7.13e3~~ 5.58e3 gmF 9/13/95	ug/mL
95000091	B-101	3 SAMPLE	S95T001542	0	@IC-01	BR-02		LIQUID	N/A	<1.34e3	1.34e3	ug/mL
95000091	B-101	3 SAMPLE	S95T001542	0	@IC-01	NO3-02		LIQUID	N/A	3.72e5	7.13e3	ug/mL
95000091	B-101	3 SAMPLE	S95T001542	0	@IC-01	PO4-02		LIQUID	N/A	7.23e3	1.26e3	ug/mL
95000091	B-101	3 SAMPLE	S95T001542	0	@IC-01	SO4-02		LIQUID	N/A	2.23e4	1.44e3	ug/mL
95000091	B-101	3 SAMPLE	S95T001542	0	@IC-01	OXALATE2		LIQUID	N/A	<1.05e3	1.05e3	ug/mL
95000091	B-101	4 DUP	S95T001542	0	@IC-01	F-02		LIQUID	2.38e2	2.38e2	N/A	ug/mL
95000091	B-101	4 DUP	S95T001542	0	@IC-01	CL-02		LIQUID	6.68e2	7.04e2	N/A	ug/mL
95000091	B-101	4 DUP	S95T001542	0	@IC-01	NO2-02		LIQUID	1.30e5	1.33e5	N/A	ug/mL
95000091	B-101	4 DUP	S95T001542	0	@IC-01	BR-02		LIQUID	<1.34e3	<1.34e3	N/A	ug/mL
95000091	B-101	4 DUP	S95T001542	0	@IC-01	NO3-02		LIQUID	3.72e5	3.80e5	N/A	ug/mL
95000091	B-101	4 DUP	S95T001542	0	@IC-01	PO4-02		LIQUID	7.23e3	7.53e3	N/A	ug/mL
95000091	B-101	4 DUP	S95T001542	0	@IC-01	SO4-02		LIQUID	2.23e4	2.32e4	N/A	ug/mL
95000091	B-101	4 DUP	S95T001542	0	@IC-01	OXALATE2		LIQUID	<1.05e3	<1.05e3	N/A	ug/mL
95000091	B-101	5 SPK	S95T001542	0	@IC-01	F-02		LIQUID		91.1	N/A	ug/mL
95000091	B-101	5 SPK	S95T001542	0	@IC-01	CL-02		LIQUID		105.2	N/A	ug/mL
95000091	B-101	5 SPK	S95T001542	0	@IC-01	NO2-02		LIQUID		112.0	N/A	ug/mL
95000091	B-101	5 SPK	S95T001542	0	@IC-01	BR-02		LIQUID		86.2	N/A	ug/mL
95000091	B-101	5 SPK	S95T001542	0	@IC-01	NO3-02		LIQUID		102.5	N/A	ug/mL
95000091	B-101	5 SPK	S95T001542	0	@IC-01	PO4-02		LIQUID		106.8	N/A	ug/mL
95000091	B-101	5 SPK	S95T001542	0	@IC-01	SO4-02		LIQUID		114.1	N/A	ug/mL

Data Entry Comments:

		DF	SAMPLE SIZE
S95T001542	SPIKE	10201	100-10-100-9.9+.100 SPIKE
S95T001550	SAM + DUP	2121	100-10-500-10
S95T001550	SPIKE	2121	100-10-500-9.9+.100 SPIKE

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2108

ROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000091	B-101	5	SPK	S95T001542	0		@IC-01	OXALATE2	LIQUID		101.1	N/A	ug/mL
95000093	B-101	6	SAMPLE	S95T001550	0		@IC-01	F-02	LIQUID	N/A	2.61e2	1.32e2	ug/mL
95000093	B-101	6	SAMPLE	S95T001550	0		@IC-01	CL-02	LIQUID	N/A	5.80e2	1.76e2	ug/mL
95000093	B-101	6	SAMPLE	S95T001550	0		@IC-01	NO2-02	LIQUID	N/A	1.31e5	5.58e3	ug/mL
95000093	B-101	6	SAMPLE	S95T001550	0		@IC-01	BR-02	LIQUID	N/A	1.74e3	1.34e3	ug/mL
95000093	B-101	6	SAMPLE	S95T001550	0		@IC-01	NO3-02	LIQUID	N/A	3.37e5	7.13e3	ug/mL
95000093	B-101	6	SAMPLE	S95T001550	0		@IC-01	PO4-02	LIQUID	N/A	4.73e3	1.26e3	ug/mL
95000093	B-101	6	SAMPLE	S95T001550	0		@IC-01	SO4-02	LIQUID	N/A	2.12e4	1.44e3	ug/mL
95000093	B-101	6	SAMPLE	S95T001550	0		@IC-01	OXALATE2	LIQUID	N/A	<1.05e3	1.05e3	ug/mL
95000093	B-101	7	DUP	S95T001550	0		@IC-01	F-02	LIQUID	2.61e2	2.45e2	N/A	ug/mL
95000093	B-101	7	DUP	S95T001550	0		@IC-01	CL-02	LIQUID	5.80e2	6.02e2	N/A	ug/mL
95000093	B-101	7	DUP	S95T001550	0		@IC-01	NO2-02	LIQUID	1.31e5	1.32e5	N/A	ug/mL
95000093	B-101	7	DUP	S95T001550	0		@IC-01	BR-02	LIQUID	1.74e3	1.77e3	N/A	ug/mL
95000093	B-101	7	DUP	S95T001550	0		@IC-01	NO3-02	LIQUID	3.37e5	3.36e5	N/A	ug/mL
95000093	B-101	7	DUP	S95T001550	0		@IC-01	PO4-02	LIQUID	4.73e3	4.88e3	N/A	ug/mL
95000093	B-101	7	DUP	S95T001550	0		@IC-01	SO4-02	LIQUID	2.12e4	2.12e4	N/A	ug/mL
95000093	B-101	7	DUP	S95T001550	0		@IC-01	OXALATE2	LIQUID	<1.05e3	<1.05e3	N/A	ug/mL
95000093	B-101	8	SPK	S95T001550	0		@IC-01	F-02	LIQUID		66.5	N/A	ug/mL
95000093	B-101	8	SPK	S95T001550	0		@IC-01	CL-02	LIQUID		106.4	N/A	ug/mL
95000093	B-101	8	SPK	S95T001550	0		@IC-01	NO2-02	LIQUID		103.2	N/A	ug/mL
95000093	B-101	8	SPK	S95T001550	0		@IC-01	BR-02	LIQUID		79.6	N/A	ug/mL
95000093	B-101	8	SPK	S95T001550	0		@IC-01	NO3-02	LIQUID		99.2	N/A	ug/mL

Data Entry Comments:

		D.F.	sample size
S95T061550	SAMP + DUP	10201	100 - 10 - 100 - 10
S95T001550	SPIKE	10201	100 - 10 - 100 - 99 + .100 spike

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2108

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000093	B-101	8 SPK	S95T001550	0	@IC-01	PO4-02		LIQUID		106.0	N/A	ug/mL
95000093	B-101	8 SPK	S95T001550	0	@IC-01	SO4-02		LIQUID		117.6	N/A	ug/mL
95000093	B-101	8 SPK	S95T001550	0	@IC-01	OXALATE2		LIQUID		100.0	N/A	ug/mL

Final page for worklist # 2108

David C Dunham 9-5-95
Analyst Signature Date

Analyst Signature Date

Entered & Verified 9/13/95 JMFuge

Data Entry Comments:
S95T001542 also contains Br, but the quantity is just under 1.34e3 ug/ml detection limit. JMF

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LAB LEADER INFO	
Method:	La-533-105 d-0
Matrix:	liquid
Test Code:	@ic-01
Work List #:	2108
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/mL
Spike Book Number:	106N9A
Spike Sample #:	2
Prepared By:	Jann Frye
Prepared Date:	09/13/95
Chemist:	Jann Frye
Analyst:	Dave Dunham
Analysis Date:	09/05/95
Time Complete:	07:46 AM
Instrument Code:	ic01
Rerun:	0
Sample Prep:	direct
Sample Point:	
Sample Type	
STANDARD	106N9A
SAMPLE 1	S95T001542
DUPLICATE 1	S95T001542dup
SAMPLE 2	S95T001550
DUPLICATE 2	S95T001550dup
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001550spk
SPIKE DUPLICATE	

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.062	<.083	<.547	<.699	<.596	<.678	<.632	<.496
Standard Data (µg/mL)	64.2	79.7	560.5	630.7	554.9	643	588.1	567.3
Sample 1 Data (µg/mL)	2.38E+02	6.68E+02	1.30E+05	3.72E+05	7.23E+03	2.23E+04	<.632	<.496
Sample 1 Dilution Factor	2121	2121	10201	10201	2121	2121	2121	2121
Sample 1 Prep DF	1	1	1	1	1	1	1	1
Duplicate 1 Data (µg/mL)	2.38E+02	7.04E+02	1.33E+05	3.80E+05	7.53E+03	2.32E+04	<.632	<.496
Duplicate 1 Dilution Factor	2121	2121	10201	10201	2121	2121	2121	2121
Duplicate 1 Prep DF	1	1	1	1	1	1	1	1
Sample 2 Data (µg/mL)	2.61E+02	5.80E+02	1.31E+05	3.37E+05	4.73E+03	2.12E+04	1.74E+03	<.496
Sample 2 Dilution Factor	2121	2121	10201	10201	2121	2121	2121	2121
Sample 2 Prep DF	1	1	1	1	1	1	1	1
Duplicate 2 Data (µg/mL)	2.45E+02	6.02E+02	1.32E+05	3.36E+05	4.88E+03	2.12E+04	1.77E+03	<.496
Duplicate 2 Dilution Factor	2121	2121	10201	10201	2121	2121	2121	2121
Duplicate 2 Prep DF	1	1	1	1	1	1	1	1
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 2 (µg/mL)	1.05E+03	2.28E+03	1.85E+05	3.89E+05	1.64E+04	3.62E+04	1.10E+04	1.17E+04
Spike + Dup 2 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.50	10.50	10.10	10.10	10.50	10.50	10.50	10.50
Std. Conc. (µg/mL)	59	79	519	614	546	631	575	591
Detection Limit	0.062	0.083	0.547	0.699	0.596	0.678	0.632	0.496
Matrix Detection Limit 1	1.32E+02	1.76E+02	5.58E+03	7.13E+03	1.26E+03	1.44E+03	1.34E+03	1.05E+03
Matrix Detection Limit 2	1.32E+02	1.76E+02	5.58E+03	7.13E+03	1.26E+03	1.44E+03	1.34E+03	1.05E+03
Matrix Detection Limit 3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Matrix Detection Limit 4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	108.8%	100.9%	108.0%	102.7%	101.6%	101.9%	102.3%	97.6%
Sample 1 in µg/mL	2.38E+02	6.68E+02	1.30E+05	3.72E+05	7.23E+03	2.23E+04	<1340.47	<1052.02
Duplicate 1 in µg/mL	2.38E+02	7.04E+02	1.33E+05	3.80E+05	7.53E+03	2.32E+04	<1340.47	<1052.02
Duplicate 1 RPD	0.2%	5.3%	2.3%	2.2%	4.1%	3.8%	N/A	N/A
Sample 2 in µg/mL	2.61E+02	5.80E+02	1.31E+05	3.37E+05	4.73E+03	2.12E+04	1.74E+03	<1052.02
Duplicate 2 in µg/mL	2.45E+02	6.02E+02	1.32E+05	3.36E+05	4.88E+03	2.12E+04	1.77E+03	<1052.02
Duplicate 2 RPD	6.0%	3.8%	0.5%	0.4%	3.2%	0.2%	1.6%	N/A
Spike % Recovery	66.5%	106.4%	103.2%	99.2%	106.0%	117.6%	79.6%	100.0%

Data Entry by: Jann Frye Date: 09/13/95
Approved by: Jann Frye Date: 9/13/95

Form DIONEX.WB1 Rev. 1.3

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001542 & S95T001550		
TEST CODE:	@ic-01	ANALYST:	Dave Dunham
INSTRUMENT:	ic01	ANALYSIS DATE:	09/05/95
WORK LIST #:	2108	SAMPLE POINT:	
BATCH ID:		SAMPLE PREP:	direct

Result Units µg/mL	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
106N9A	108.8%	100.9%	108.0%	102.7%	101.6%	101.9%	102.3%	97.6%
S95T001542	2.38E+02	6.68E+02	1.30E+05	3.72E+05	7.23E+03	2.23E+04	<1340.47	<1052.02
S95T001542dup	2.38E+02	7.04E+02	1.33E+05	3.80E+05	7.53E+03	2.32E+04	<1340.47	<1052.02
Duplicate 1 RPD	0.2%	5.3%	2.3%	2.2%	4.1%	3.8%	N/A	N/A
S95T001550	2.61E+02	5.80E+02	1.31E+05	3.37E+05	4.73E+03	2.12E+04	1.74E+03	<1052.02
S95T001550dup	2.45E+02	6.02E+02	1.32E+05	3.36E+05	4.88E+03	2.12E+04	1.77E+03	<1052.02
Duplicate 2 RPD	6.0%	3.8%	0.5%	0.4%	3.2%	0.2%	1.6%	N/A
S95T001550spk	66.5%	106.4%	103.2%	99.2%	106.0%	117.6%	79.6%	100.0%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Form Completed By:	Jason Eye	Date:	9/13/95
Chemist Approval:	Jason Eye	Date:	9/13/95

WHC-SD-WM-DP- 139, REV. 1

LAB LEADER INFO	
Method:	La-533-105 d-0
Matrix:	liquid
Test Code:	@ic-01
Work List #:	2108
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/mL
Spike Book Number:	106N9A
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	09/13/95
Chemist:	Jann Frye
Analyst:	Dave Dunham
Analysis Date:	09/05/95
Time Complete:	07:48 AM
Instrument Code:	ic01
Rerun:	0
Sample Prep:	direct
Sample Point:	
Sample Type	
STANDARD	106N9A
SAMPLE 1	S95T001542
DUPLICATE 1	S95T001542dup
SAMPLE 2	S95T001550
DUPLICATE 2	S95T001550dup
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001542spk
SPIKE DUPLICATE	

PRINT

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.062	<.083	<.547	<.699	<.596	<.678	<.632	<.496
Standard Data (µg/mL)	64.2	79.7	560.5	630.7	554.9	643	588.1	567.3
Sample 1 Data (µg/mL)	2.38E+02	6.68E+02	1.30E+05	3.72E+05	7.23E+03	2.23E+04	<.632	<.496
Sample 1 Dilution Factor	2121	2121	10201	10201	2121	2121	2121	2121
Sample 1 Prep DF	1	1	1	1	1	1	1	1
Duplicate 1 Data (µg/mL)	2.38E+02	7.04E+02	1.33E+05	3.80E+05	7.53E+03	2.32E+04	<.632	<.496
Duplicate 1 Dilution Factor	2121	2121	10201	10201	2121	2121	2121	2121
Duplicate 1 Prep DF	1	1	1	1	1	1	1	1
Sample 2 Data (µg/mL)								
Sample 2 Dilution Factor								
Sample 2 Prep DF								
Duplicate 2 Data (µg/mL)								
Duplicate 2 Dilution Factor								
Duplicate 2 Prep DF								
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 1 (µg/mL)	1.32E+03	2.35E+03	1.89E+05	4.35E+05	1.90E+04	3.69E+04	1.00E+04	1.19E+04
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.50	10.50	10.10	10.10	10.50	10.50	10.50	10.50
Std. Conc. (µg/mL)	59	79	619	614	546	631	575	581
Detection Limit	0.062	0.083	0.547	0.699	0.596	0.678	0.632	0.496
Matrix Detection Limit 1	1.32E+02	1.76E+02	5.68E+03	7.13E+03	1.26E+03	1.44E+03	1.34E+03	1.05E+03
Matrix Detection Limit 2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Matrix Detection Limit 3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Matrix Detection Limit 4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	108.8%	100.9%	108.0%	102.7%	101.6%	101.9%	102.3%	97.6%
Sample 1 in µg/mL	2.38E+02	6.68E+02	1.30E+05	3.72E+05	7.23E+03	2.23E+04	<1340.47	<1052.02
Duplicate 1 in µg/mL	2.38E+02	7.04E+02	1.33E+05	3.80E+05	7.53E+03	2.32E+04	<1340.47	<1052.02
Duplicate 1 RPD	0.2%	5.3%	2.3%	2.2%	4.1%	3.8%	N/A	N/A
Sample 2 in µg/mL	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
Duplicate 2 in µg/mL	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
Duplicate 2 RPD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Spike % Recovery	91.1%	105.2%	112.0%	102.5%	106.8%	114.1%	85.2%	101.1%

Data Entry by: Jann Frye Date: 09/13/95
Approved by: Jann Frye Date: 9/13/95

Form DIONEX.WB1 Rev. 1.3

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001542 & S95T001550		
TEST CODE:	@ic-01	ANALYST:	Dave Dunham
INSTRUMENT:	ic01	ANALYSIS DATE:	09/05/95
WORK LIST #:	2108	SAMPLE POINT:	
BATCH ID:		SAMPLE PREP:	direct

Result Units µg/mL	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
106N9A	108.8%	100.9%	108.0%	102.7%	101.6%	101.9%	102.3%	97.6%
S95T001542	2.38E+02	6.68E+02	1.30E+05	3.72E+05	7.23E+03	2.23E+04	<1340.47	<1052.02
S95T001542dup	2.38E+02	7.04E+02	1.33E+05	3.80E+05	7.53E+03	2.32E+04	<1340.47	<1052.02
Duplicate 1 RPD	0.2%	5.3%	2.3%	2.2%	4.1%	3.8%	N/A	N/A
S95T001550	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
S95T001550dup	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00
Duplicate 2 RPD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S95T001542spk	91.1%	105.2%	112.0%	102.5%	106.8%	114.1%	86.2%	101.1%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Form Completed By:	Joann Faye	Date:	9/13/95
Chemist Approval:	Joann Faye	Date:	9/13/95

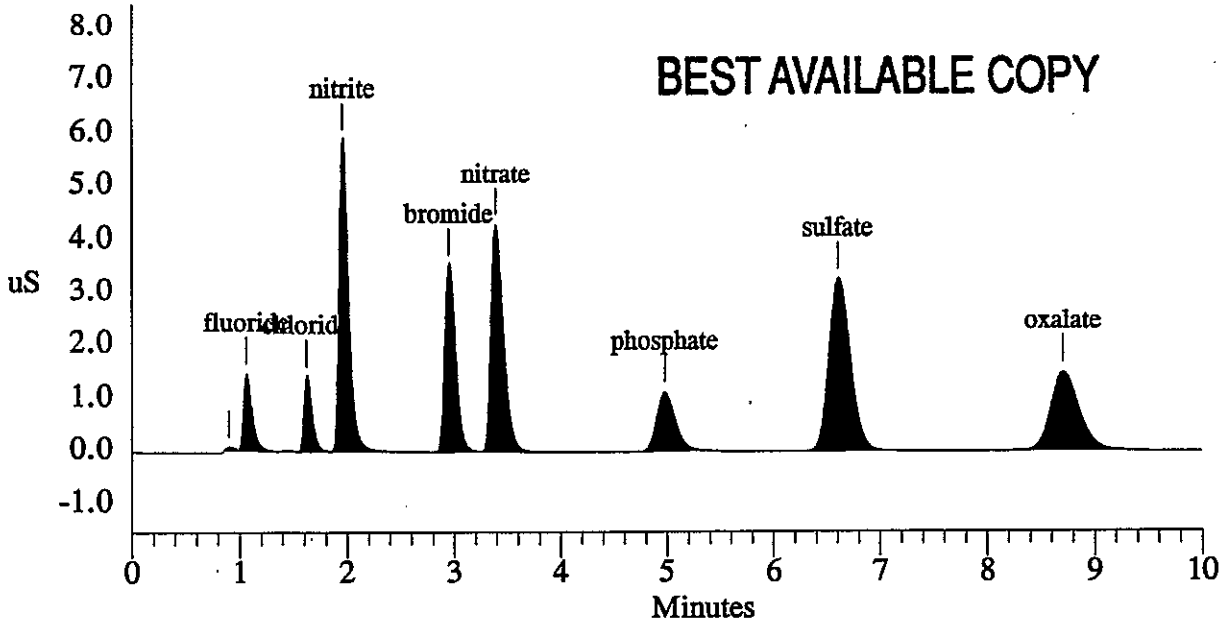
Sample Name: 106N9-A Date: 09/05/1995 03:32:43
Data File : C:\DX\DATA\95090501.D07
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 7 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	66	318	2	
2	1.06	fluoride	64.288	1443	8097	2	0.00
3	1.62	chloride	79.710	1410	7592	1	-1.82
4	1.96	nitrite	560.585	5887	35858	1	-2.49
5	2.95	bromide	588.188	3535	25172	1	-0.67
6	3.39	nitrate	630.798	4283	34859	1	1.19
7	4.98	phosphate	554.988	1117	13872	1	-1.19
8	6.61	sulfate	643.070	3274	46018	1	-1.20
9	8.71	oxalate	567.397	1478	27640	1	-1.02
		Totals	3689.023	22494	199426		

File: 95090501.D07 Sample: 106N9-A



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 84 TO 98.

WHC-SD-WM-DP-139, REV. 1

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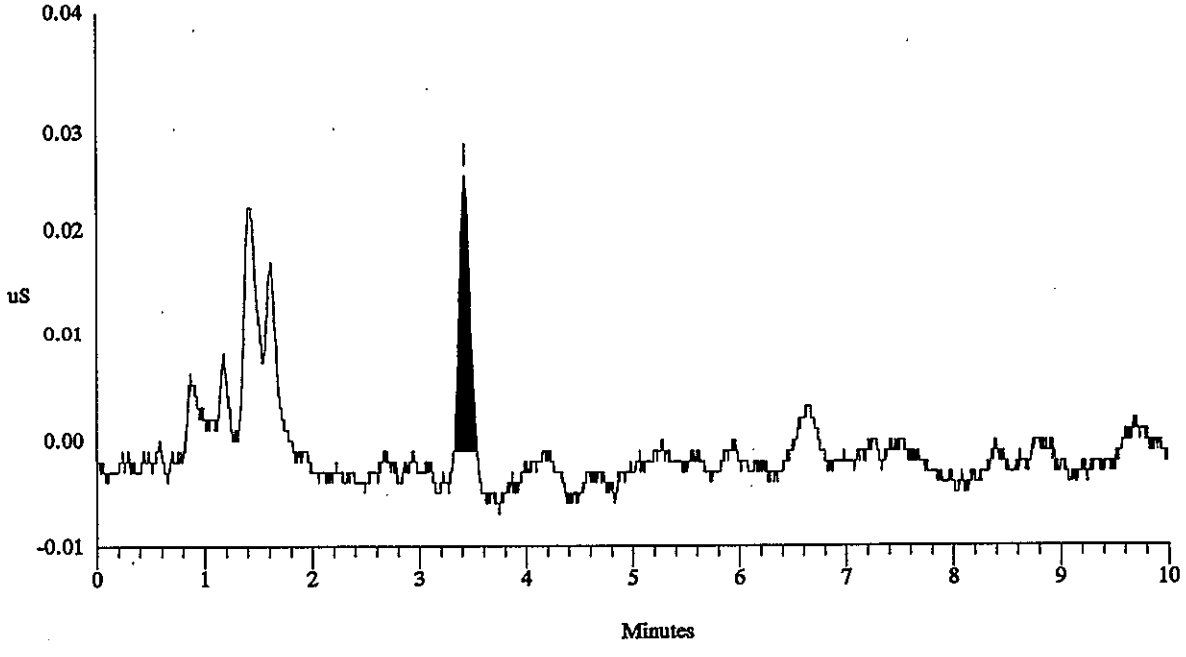
==============================================================================
| Sample Name: BLANK                          Date: 09/05/1995 02:26:44       |
| Data File   : C:\DX\DATA\95090501.D03                                       |
| Method      : C:\DX\METHOD\KIT.MET                                          |
| ACI Address: 1  System: 1  Inject#: 3                   Detector:CDM-1      |
| Analyst     : Denise Dunham  Column: AG4A/AS4A anion column/SRS             |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
		Totals	0.000	0	0		

File: 95090501.D03 Sample: BLANK



WHC-SD-WM-DP-139, REV. 1

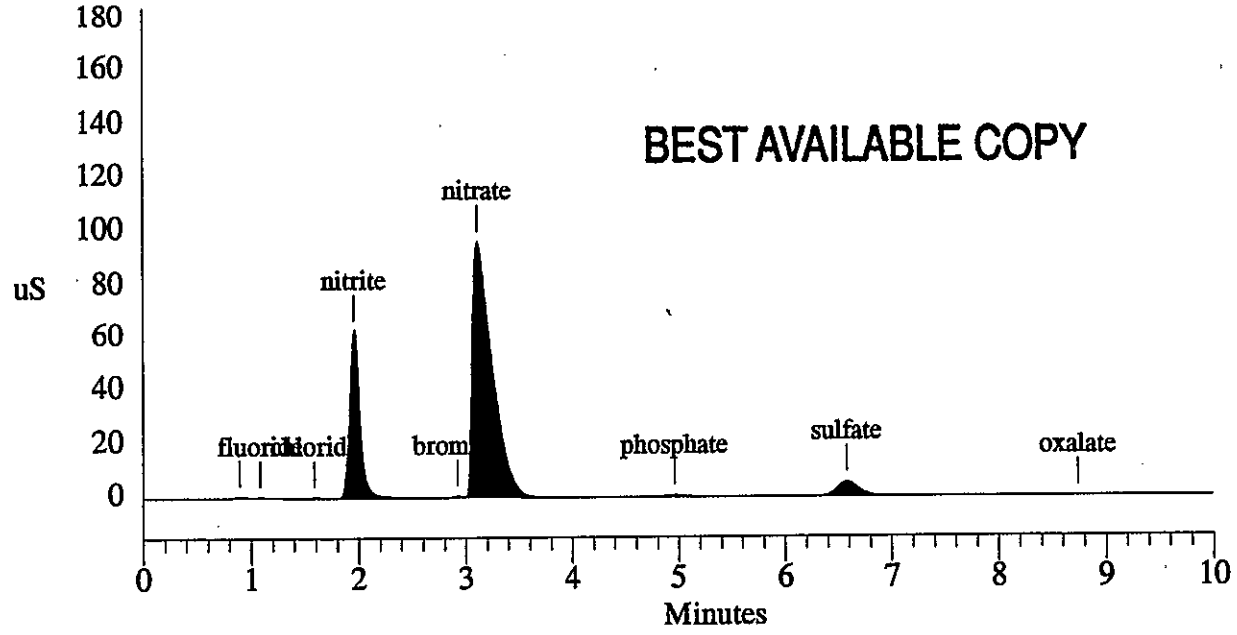
Sample Name: S95T001542 SAM Date: 09/05/1995 03:02:40
Data File : C:\DX\DATA\95090501.D05
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 5 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89			0.000	533	3009	2	
2	1.08	fluoride	OK	238.399	251	1362	2	1.89
3	1.59	chloride	OK	667.877	472	3218	1	-3.64
4	1.96	nitrite	>THAN	112418.856	62969	419030	1	-2.49
5	2.92	bromide	<THAN	1456.067	493	2357	1	-1.68
6	3.11	nitrate	>THAN	165076.074	96028	1238870	1	-7.16
7	4.96	phosphate	OK	7229.038	664	8366	1	-1.59
8	6.58	sulfate	OK	22329.467	5546	77391	1	-1.64
9	8.74	oxalate	<THAN	571.287	33	455	1	-0.68
			Totals	309987.064	166990	1754056		

File: 95090501.D05 Sample: S95T001542 SAM



BEST AVAILABLE COPY

WHC-SD-WM-DP-139, REV. 1

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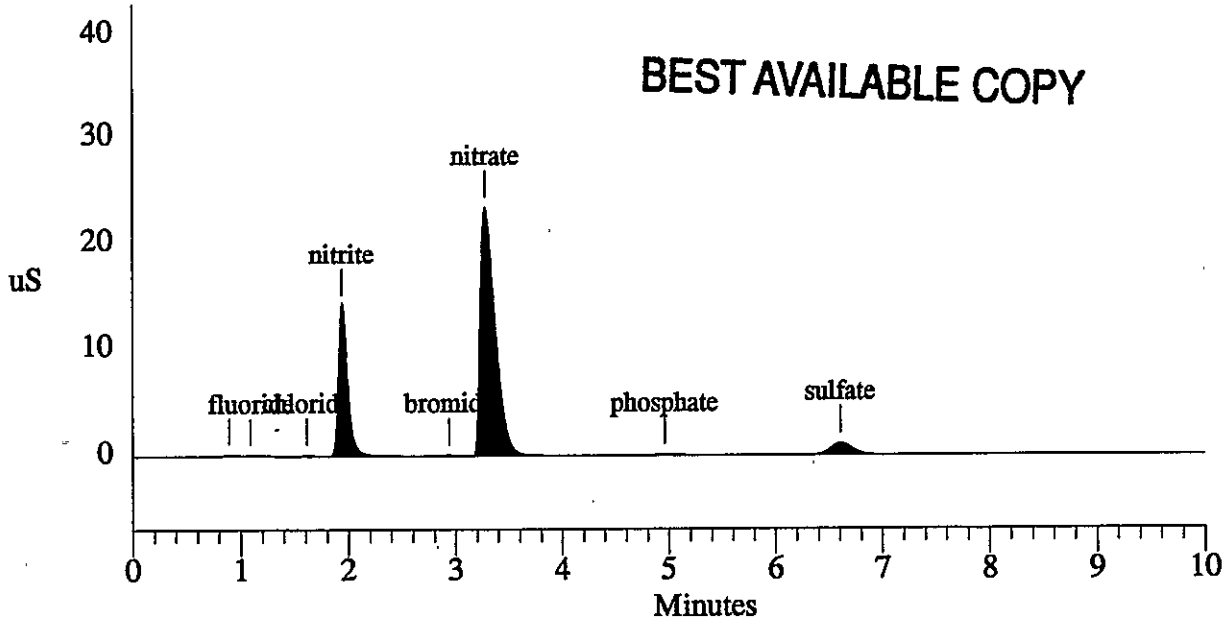
==========================================================================
| Sample Name: S95T001542 SAM                Date: 09/05/1995 04:05:57    |
| Data File  : C:\DX\DATA\95090501.D09                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| ACI Address: 1  System: 1  Inject#: 9                  Detector:CDM-1   |
| Analyst    :                Column: AG4A/AS4A anion column/SRS          |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	10201	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	118	665	1	
2	1.09	fluoride	288.641	52	301	1	2.83
3	1.61	chloride	352.548	125	672	1	-2.42
4	1.94	nitrite ok	130221.541	14145	84860	1	-3.48
5	2.94	bromide	3350.120	120	794	1	-1.01
6	3.28	nitrate ok	371537.137	23484	226993	1	-2.09
7	4.96	phosphate	8234.288	134	1623	1	-1.59
8	6.61	sulfate	22928.017	1124	15805	1	-1.20
		Totals	536912.291	39302	331713		

File: 95090501.D09 Sample: S95T001542 SAM



WHC-SD-WM-DP-139, REV. 1

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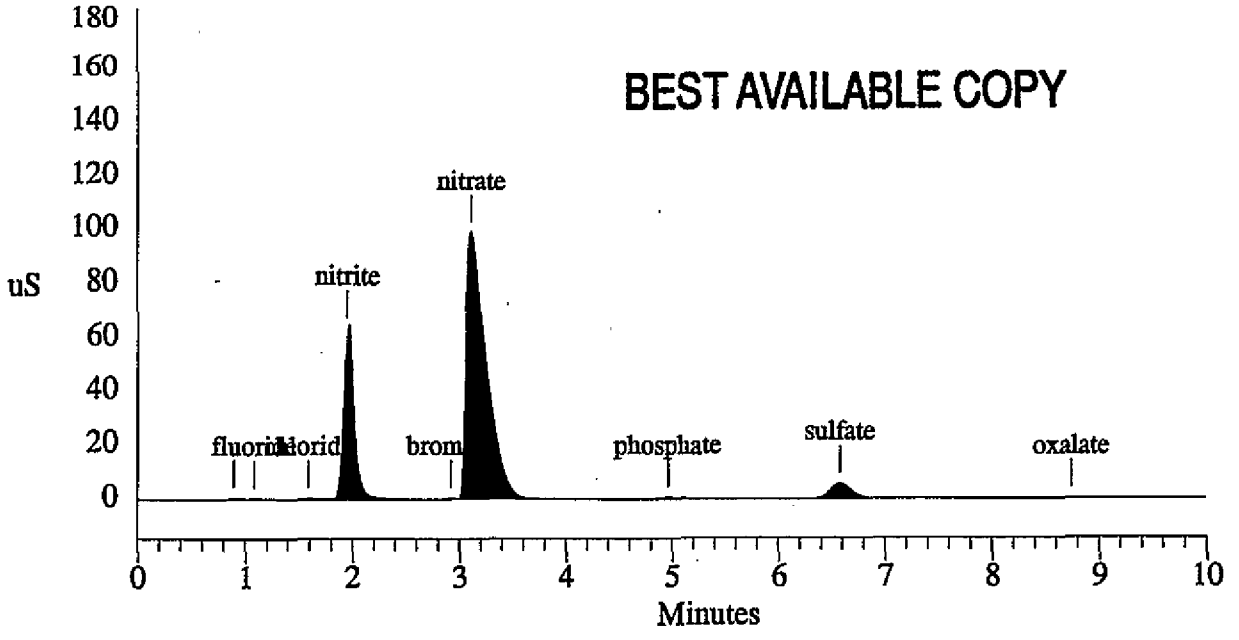
==========================================================================
| Sample Name: S95T001542   DUP                Date: 09/05/1995 03:21:41  |
| Data File  : C:\DX\DATA\95090501.D06                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 6                  Detector:CDM-1  |
| Analyst    :                Column: AG4A/AS4A anion column/SRS         |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	2121	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	533	2952	2	
2	1.08	fluoride	237.925	252	1359	2	1.89
3	1.59	chloride	704.117	499	3374	1	-3.64
4	1.96	nitrite	115102.763	63505	432199	1	-2.49
5	2.92	bromide	1482.381	508	2411	1	-1.68
6	3.11	nitrate	159730.027	98830	1280402	1	-7.16
7	4.96	phosphate	7534.736	686	8743	1	-1.59
8	6.58	sulfate	23187.525	5753	80490	1	-1.64
9	8.74	oxalate	627.197	38	586	1	-0.68
		Totals	308606.672	170605	1812517		

File: 95090501.D06 Sample: S95T001542 DUP



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WHC-SD-WM-DP-139, REV. 1

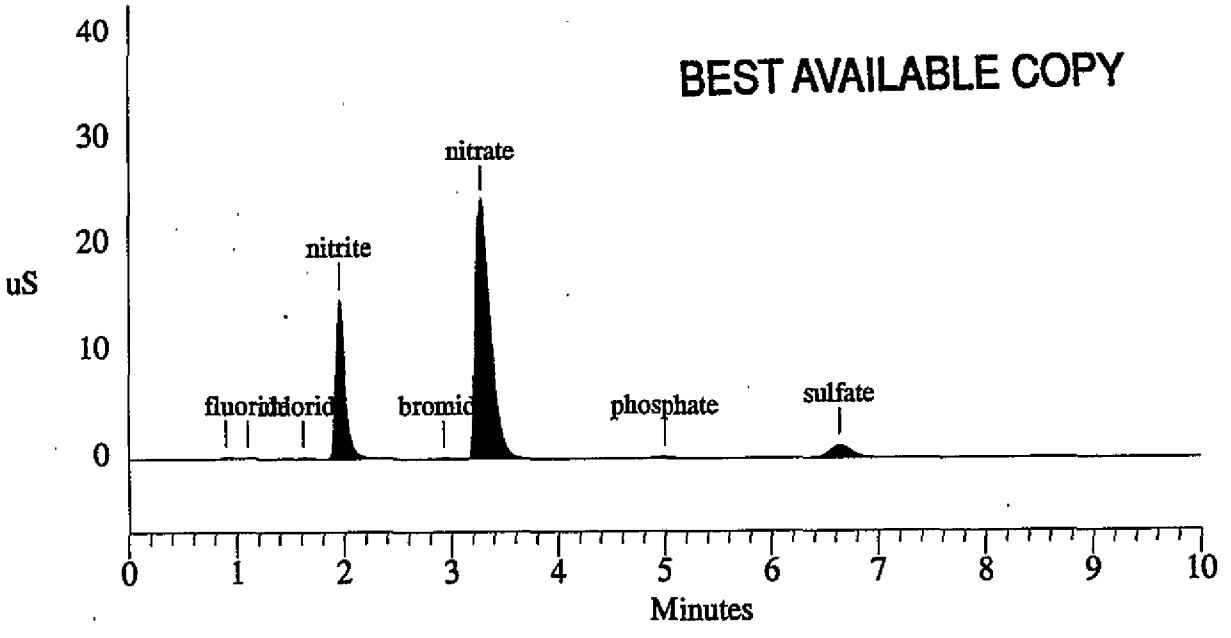
Sample Name: S95T001542 DUP Date: 09/05/1995 05:39:39
Data File : C:\DX\DATA\95090501.D10
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 10 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	10201	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	142	879	2	
2	1.10	fluoride	680.368	68	785	2	3.77
3	1.62	chloride	345.657	133	666	1	-1.82
4	1.96	nitrite	133252.569	14962	86928	1	-2.49
5	2.93	bromide	3388.500	123	811	1	-1.35
6	3.27	nitrate	379686.819	24200	232784	1	-2.39
7	5.00	phosphate	8409.499	137	1667	1	-0.79
8	6.64	sulfate	23684.478	1169	16342	1	-0.75
		Totals	549447.892	40935	340861		

File: 95090501.D10 Sample: S95T001542 DUP



WHC-SD-WM-DP-139, REV. 1

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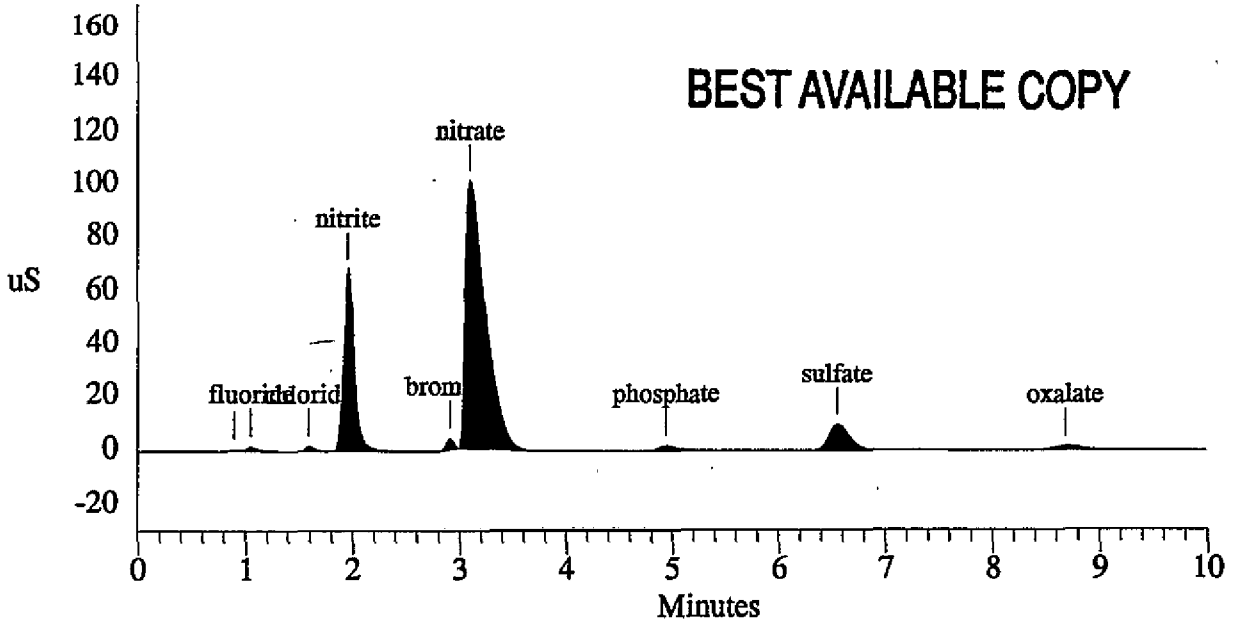
==========================================================================
| Sample Name: S95T001542 SPIKE                Date: 09/05/1995 03:43:39  |
| Data File  : C:\DX\DATA\95090501.D08                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| ACI Address: 1  System: 1  Inject#: 8                  Detector:CDM-1   |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS        |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89			0.000	443	1978	2	
2	1.05	fluoride	91.14 %	1324.601	1353	7940	2	-0.94
3	1.59	chloride	105.1 %	2346.482	1678	10565	1	-3.64
4	1.96	nitrite		121466.885	67775	464497	1	-2.49
5	2.91	bromide		10017.869	4065	20220	1	-2.02
6	3.10	nitrate		156846.401	100712	1300797	1	-7.46
7	4.94	phosphate	106.6 %	19011.375	1857	23229	1	-1.98
8	6.55	sulfate	114.2 %	36875.822	9376	131196	1	-2.09
9	8.68	oxalate	96.2 %	11864.084	1471	27515	1	-1.36
			Totals	359753.519	188731	1987938		

File: 95090501.D08 Sample: S95T001542 SPIKE



WHC-SD-WM-DP-139, REV.1

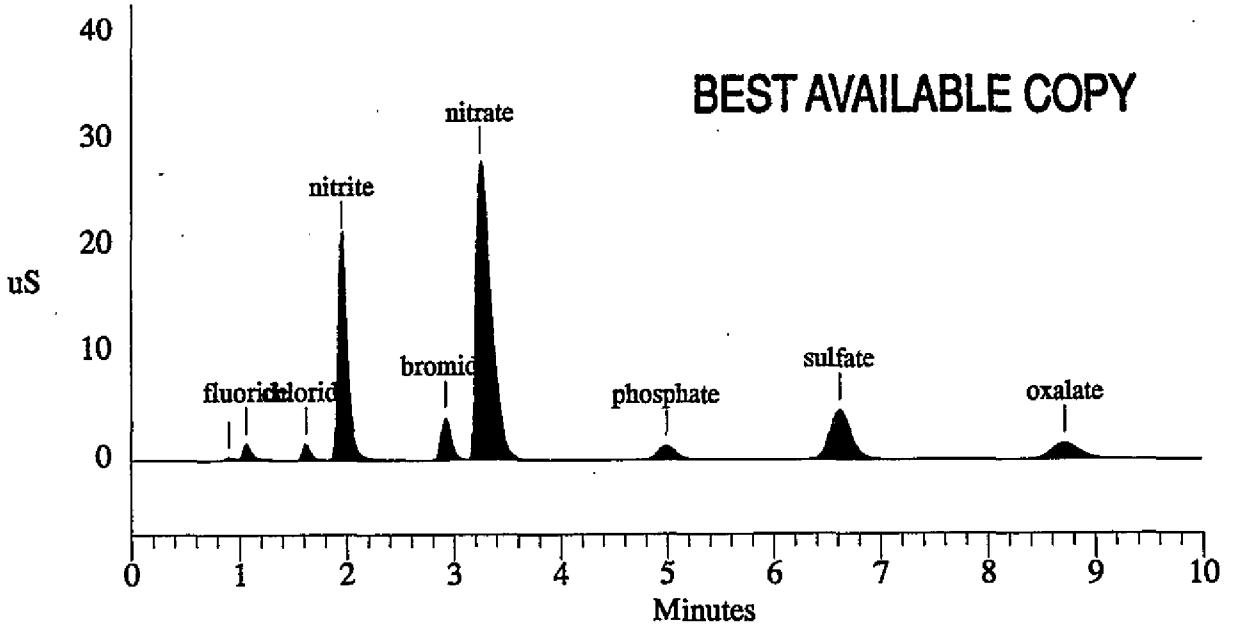
```
==========================================================================
| Sample Name: S95T001542 SPIKE                Date: 09/05/1995 05:53:10  |
| Data File  : C:\DX\DATA\95090501.D11                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| ACI Address: 1  System: 1  Inject#: 11                Detector:CDM-1    |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS        |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	10201	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90			0.000	154	778	2	
2	1.06	fluoride		7025.047	1460	8780	2	0.00
3	1.62	chloride		8692.527	1525	8179	1	-1.82
4	1.95	nitrite	112 %	188933.573	20673	125693	1	-2.99
5	2.92	bromide	101 %	61994.089	3933	26319	1	-1.68
6	3.25	nitrate	102.5 %	435125.800	27781	273498	1	-2.99
7	4.99	phosphate		65214.372	1302	16270	1	-0.99
8	6.62	sulfate		89347.660	4590	63942	1	-1.05
9	8.72	oxalate		57525.405	1509	27750	1	-0.91
			Totals	913858.473	62927	551209		

File: 95090501.D11 Sample: S95T001542 SPIKE



WHC-SD-WM-DP-139, REV. 1

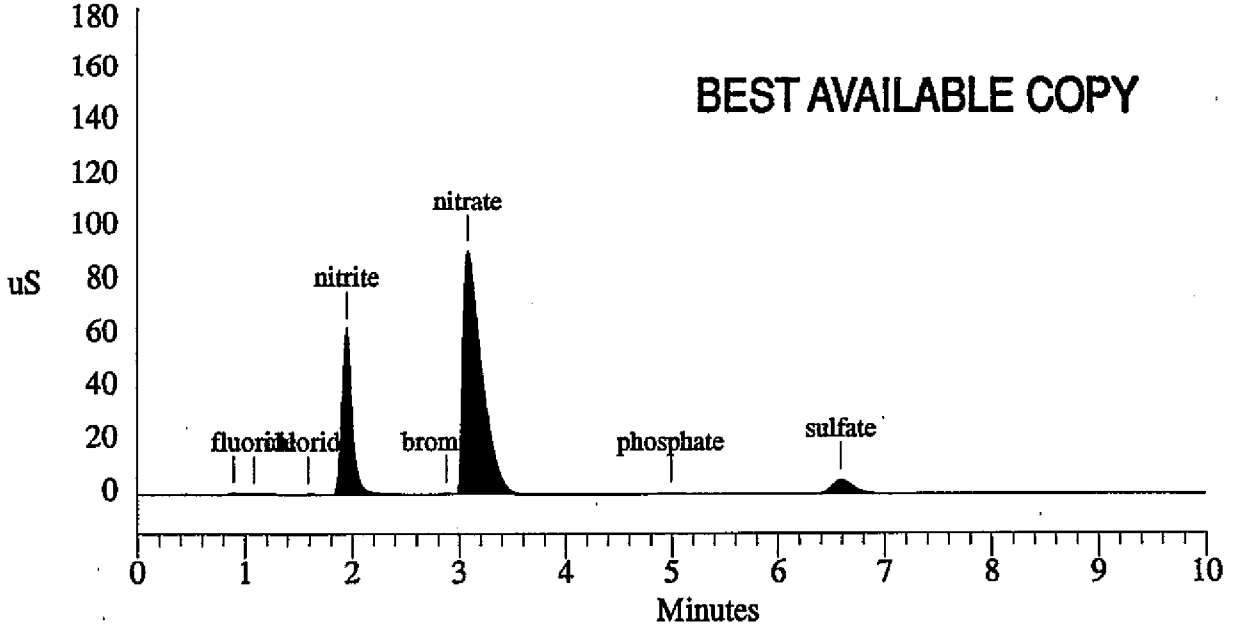
```
==============================================================================
| Sample Name: S95T001550 SAM                    Date: 09/05/1995 06:54:35    |
| Data File  : C:\DX\DATA\95090501.D15                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 15                  Detector:CDM-1      |
| Analyst    :                  Column: AG4A/AS4A anion column/SRS           |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	2121	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89			0.000	518	3053	2	
2	1.08	fluoride	OK	260.680	268	1495	2	1.89
3	1.59	chloride	OK	580.110	425	2840	1	-3.64
4	1.95	nitrite	>THAN	111243.373	62612	413340	1	-2.99
5	2.88	bromide	OK	1743.803	579	2950	1	-3.03
6	3.08	nitrate	>THAN	176187.007	91100	1123992	1	-8.06
7	4.99	phosphate	OK	4728.035	423	5293	1	-0.99
8	6.59	sulfate	OK	21223.150	5241	73408	1	-1.49
			Totals	315966.158	161165	1626371		

File: 95090501.D15 Sample: S95T001550 SAM



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WHC-SD-WM-DP-139, REV. 1

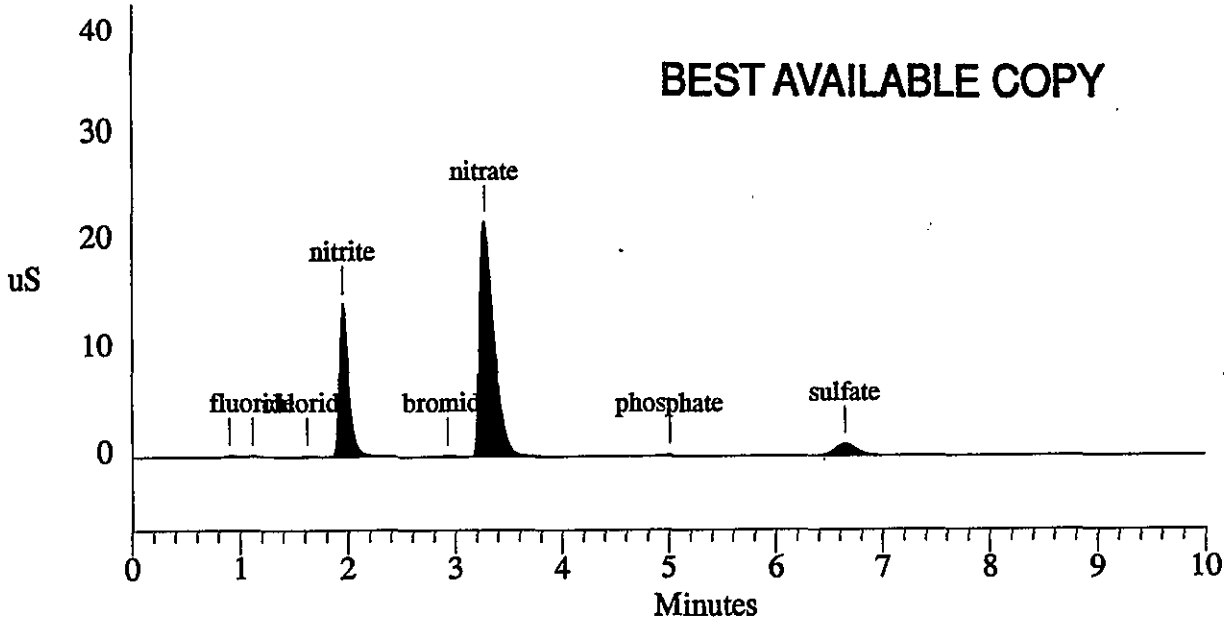
```
==========================================================================
 Sample Name: S95T001550 SAM                    Date: 09/05/1995 06:11:50
 Data File  : C:\DX\DATA\95090501.D12
 Method     : C:\DX\METHOD\KIT.MET
 ACI Address: 1  System: 1  Inject#: 12                    Detector:CDM-1
 Analyst    :                 Column: AG4A/AS4A anion column/SRS
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	10201	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90			0.000	108	610	1	
2	1.11	fluoride		303.565	59	320	1	4.72
3	1.62	chloride		308.377	120	633	1	-1.82
4	1.95	nitrite	ok	130941.967	14242	85351	1	-2.99
5	2.93	bromide		3519.081	133	866	1	-1.35
6	3.27	nitrate	ok	337180.620	21922	203078	1	-2.39
7	5.01	phosphate		5644.866	84	972	1	-0.60
8	6.65	sulfate		22044.558	1082	15179	1	-0.60
			Totals	499943.033	37750	307009		

File: 95090501.D12 Sample: S95T001550 SAM



WHC-SD-WM-DP-139, REV. 1

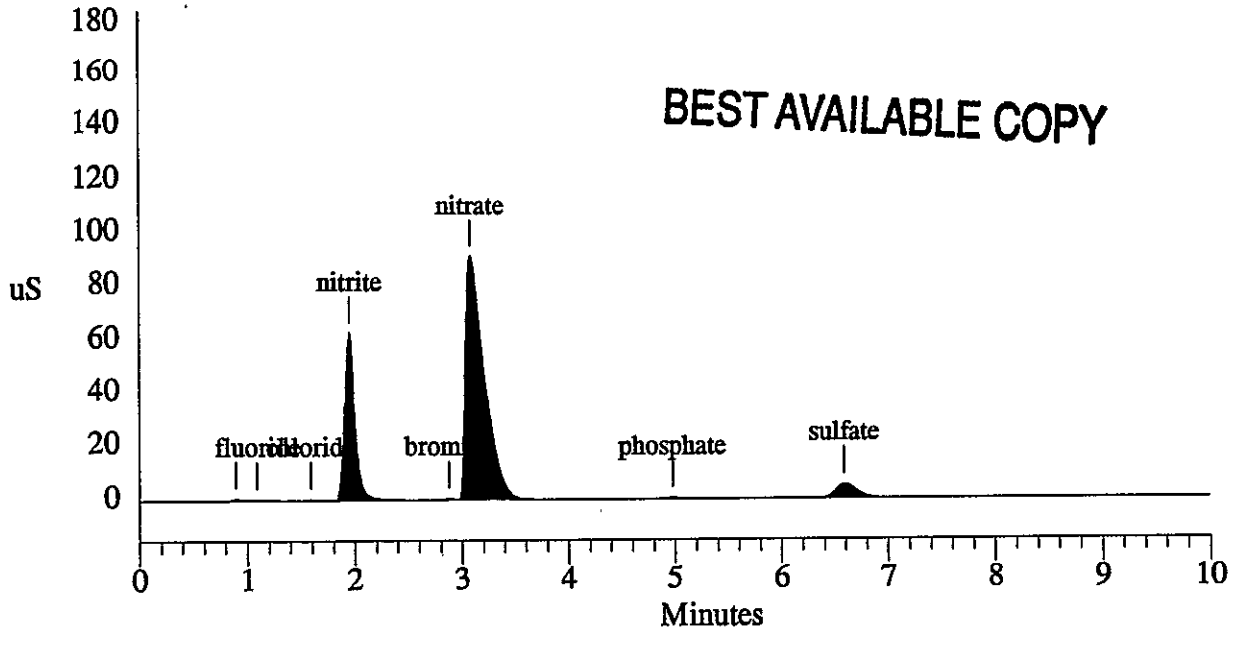
```
==========================================================================
| Sample Name: S95T001550 DUP                  Date: 09/05/1995 07:09:06  |
| Data File  : C:\DX\DATA\95090501.D16                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| ACI Address: 1  System: 1  Inject#: 16                Detector:CDM-1    |
| Analyst    :                Column: AG4A/AS4A anion column/SRS         |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	479	2639	2	
2	1.09	fluoride	245.399	262	1403	2	2.83
3	1.59	chloride	602.391	444	2936	1	-3.64
4	1.95	nitrite	111476.641	62416	414465	1	-2.99
5	2.88	bromide	1771.889	575	3008	1	-3.03
6	3.08	nitrate	176570.108	90942	1118681	1	-8.06
7	4.98	phosphate	4882.988	430	5482	1	-1.19
8	6.59	sulfate	21191.424	5241	73294	1	-1.49
		Totals	316740.840	160789	1621909		

File: 95090501.D16 Sample: S95T001550 DUP



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WHC-SD-WM-DP-139, REV. 1

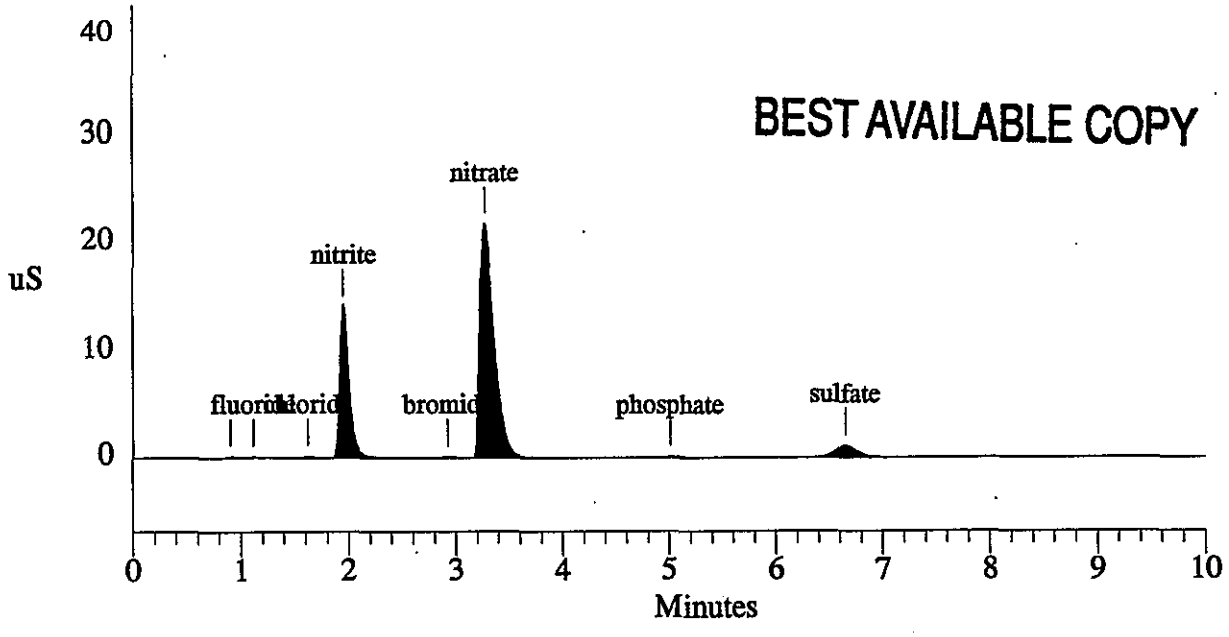
```
==========================================================================
| Sample Name: S95T001550 DUP                    Date: 09/05/1995 06:23:21 |
| Data File  : C:\DX\DATA\95090501.D13                                     |
| Method     : C:\DX\METHOD\KIT.MET                                        |
| ACI Address: 1  System: 1  Inject#: 13                  Detector:CDM-1   |
| Analyst    :                  Column: AG4A/AS4A anion column/SRS        |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	10201	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	104	582	1	
2	1.11	fluoride	332.840	63	356	1	4.72
3	1.62	chloride	410.940	138	723	1	-1.82
4	1.95	nitrite	131650.617	14046	85834	1	-2.99
5	2.92	bromide	3504.105	131	860	1	-1.68
6	3.27	nitrate	335863.195	21842	202177	1	-2.39
7	5.01	phosphate	5570.823	83	953	1	-0.60
8	6.65	sulfate	22007.043	1093	15152	1	-0.60
		Totals	499339.562	37500	306637		

File: 95090501.D13 Sample: S95T001550 DUP



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WHC-SD-WM-DP-139, REV 1

Data Reprocessed On 09/05/1995 07:50:05

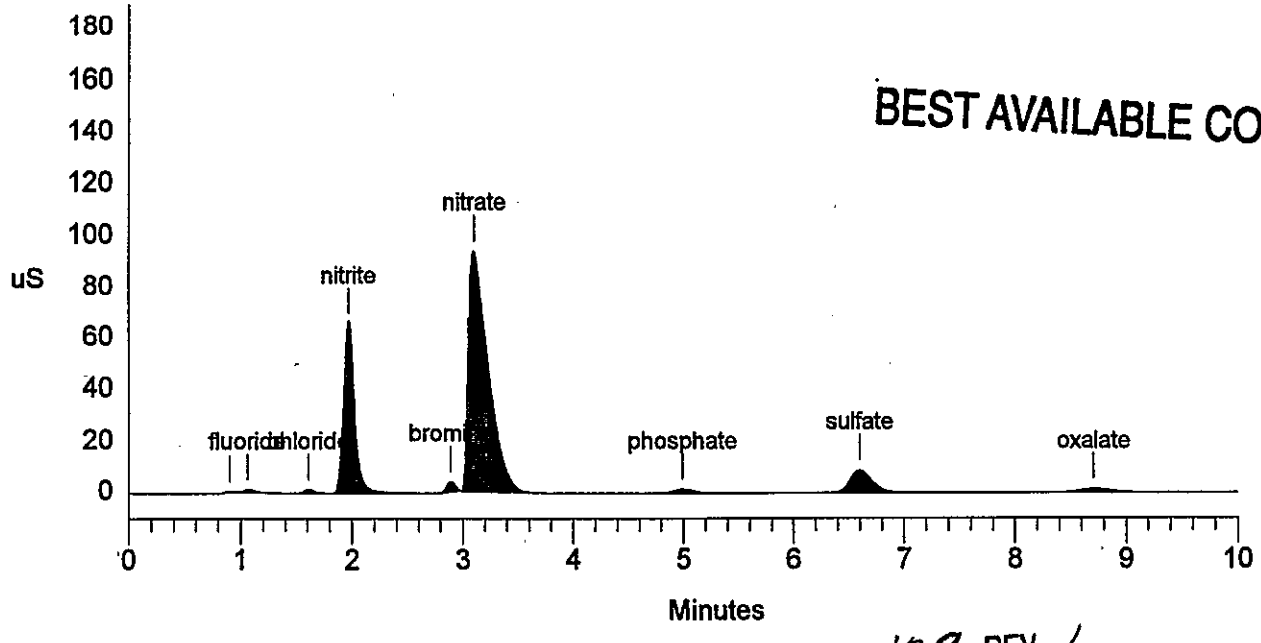
Sample Name: S95T001550 SPIKE Date: 09/05/1995 07:22:32
Data File : C:\DX\DATA\95090501.D17
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 17 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	2121	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	405	1820	1	
2	1.06	fluoride	1033.991	1194	6159	1	0.00
3	1.61	chloride	2243.792	1639	10109	1	-2.42
4	1.97	nitrite	120642.684	66122	460224	1	-1.99
5	2.89	bromide	11086.209	4207	22483	1	-2.69
6	3.10	nitrate	172813.163	94035	1165303	1	-7.46
7	4.99	phosphate	16094.643	1566	19488	1	-0.99
8	6.60	sulfate	35050.208	8975	124289	1	-1.35
9	8.71	oxalate	11636.975	1466	26961	1	-1.02
		Totals	370601.665	179610	1836836		

File: 95090501.D17 Sample: S95T001550 SPIKE



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WHC-SD-WM-DP-139, REV. 1

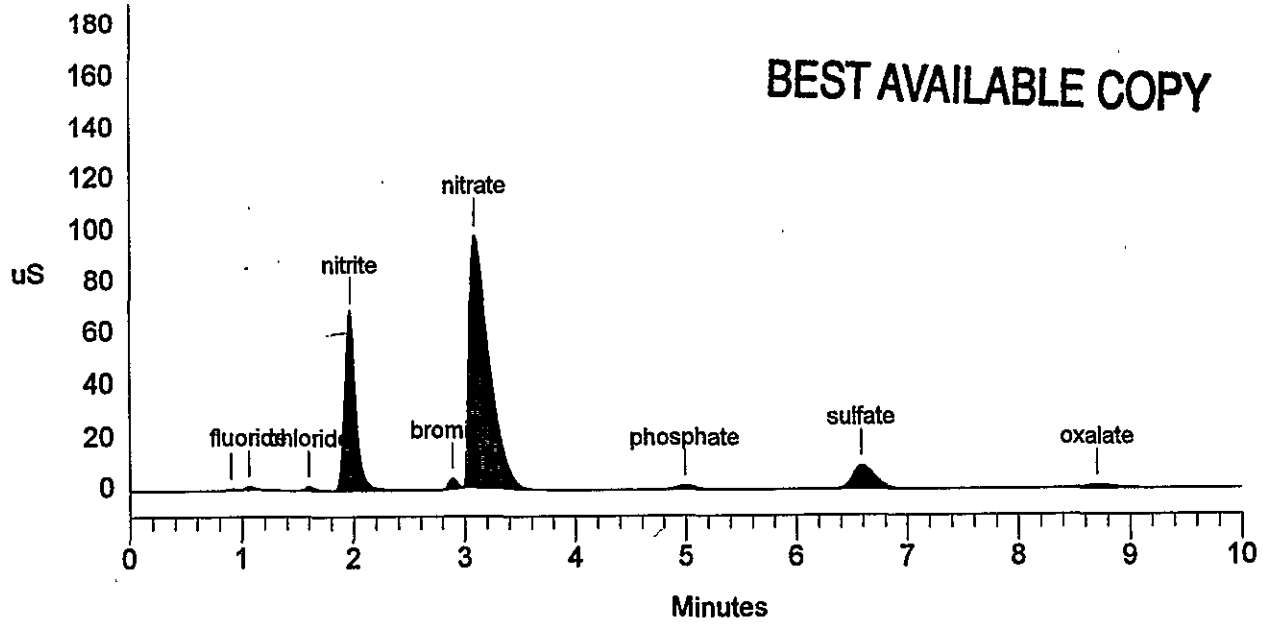
```
==========================================================================
| Sample Name: S95T001550 SPIKE                Date: 09/05/1995 07:46:32 |
| Data File  : C:\DX\DATA\95090501.D18                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 18                Detector:CDM-1   |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS       |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	404	1758	1	
2	1.06	fluoride	1053.618	1202	6279	1	0.00
3	1.60	chloride	2278.360	1632	10262	1	-3.03
4	1.97	nitrite	123588.246	68473	475627	1	-1.99
5	2.89	bromide	10984.021	4272	22266	1	-2.69
6	3.09	nitrate	167612.444	97785	1216955	1	-7.76
7	4.99	phosphate	16424.199	1590	19908	1	-0.99
8	6.59	sulfate	36210.743	9258	128674	1	-1.49
9	8.71	oxalate	11736.889	1474	27205	1	-1.02
		Totals	369888.521	186092	1908935		

File: 95090501.D18 Sample: S95T001550 SPIKE



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WHC-SD-WM-DP-139, REV. 1

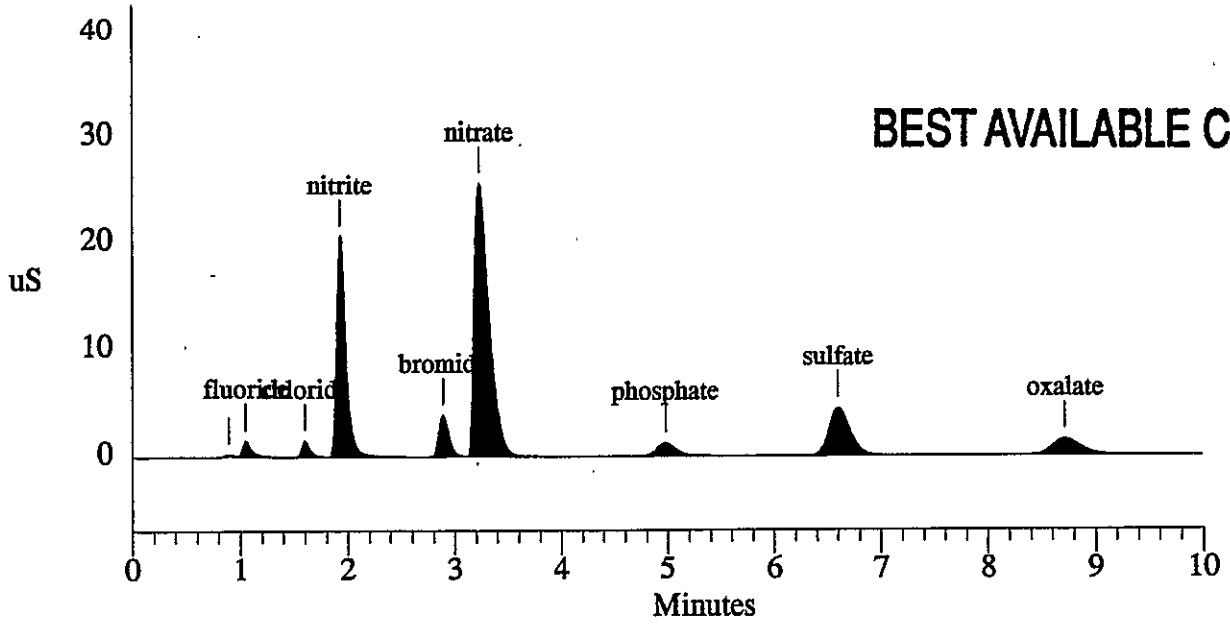
```
==========================================================================
| Sample Name: S95T001550 SPIKE                Date: 09/05/1995 06:34:05  |
| Data File  : C:\DX\DATA\95090501.D14                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| ACI Address: 1  System: 1  Inject#: 14                  Detector:CDM-1  |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS         |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	10201	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	146	711	2	
2	1.05	fluoride	6754.335	1446	8432	2	-0.94
3	1.60	chloride	8404.297	1472	7915	1	-3.03
4	1.93	nitrite	185049.931	20651	122940	1	-3.98
5	2.89	bromide	61449.009	3846	26077	1	-2.69
6	3.23	nitrate	398719.736	25649	246494	1	-3.58
7	4.98	phosphate	61684.718	1228	15344	1	-1.19
8	6.60	sulfate	86698.270	4452	61981	1	-1.35
9	8.72	oxalate	56827.643	1483	27397	1	-0.91
		Totals	865587.938	60373	517290		

File: 95090501.D14 Sample: S95T001550 SPIKE



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WHC-SD-WM-DP-139, REV. 1

LABCORE Data Entry Template for Worklist# 2169

Analyst: DCD **Instrument:** IC01 ~~AL10657~~ IC01 JMF 9/5/95 **Book #** 106N9-A STD & SPK

Method: LA-533-105 Rev/Mod D-0

Worklist Comment: B-101 IC. JMF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST		MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				@IC-01	F-02	SOLID		<.062	N/A	ug/g
		1	BLNK-PREP				@IC-01	CL-02	SOLID		<.083	N/A	ug/g
		1	BLNK-PREP				@IC-01	NO2-02	SOLID		<.547	N/A	ug/g
		1	BLNK-PREP				@IC-01	BR-02	SOLID		<.632	N/A	ug/g
		1	BLNK-PREP				@IC-01	NO3-02	SOLID		<.699	N/A	ug/g
		1	BLNK-PREP				@IC-01	PO4-02	SOLID		<.596	N/A	ug/g
		1	BLNK-PREP				@IC-01	SO4-02	SOLID		<.678	N/A	ug/g
		1	BLNK-PREP				@IC-01	OXALATE2	SOLID		<.496	N/A	ug/g
		2	STD				@IC-01	F-02	SOLID		64.3	N/A	ug/g
		2	STD				@IC-01	CL-02	SOLID		80.5	N/A	ug/g
		2	STD				@IC-01	NO2-02	SOLID		572	N/A	ug/g
		2	STD				@IC-01	BR-02	SOLID		598	N/A	ug/g
		2	STD				@IC-01	NO3-02	SOLID		631	N/A	ug/g
		2	STD				@IC-01	PO4-02	SOLID		573	N/A	ug/g
		2	STD				@IC-01	SO4-02	SOLID		658	N/A	ug/g
		2	STD				@IC-01	OXALATE2	SOLID		566	N/A	ug/g
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	F-02	SOLID	N/A	1.41e2	1.25e2	ug/g
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	CL-02	SOLID	N/A	3.23e2	1.68e2	ug/g

Data Entry Comments:

SAMPLE	DF	SAMPLE SIZE
BLNK-PREP	21	.500 - 10
S95T001544 SAM & DUP	101	.100 - 10
S95T001544 SAM & DUP	21	.500 - 10

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

S95T001544 Sample 10.4030 g/L Dup 10.3440 g/L. 99

S95T001546 Sample 5.8270 g/L Dup 5.8070 g/L

LABCORE Data Entry Template for Worklist# 2169

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST		MATRIX	ACTUAL	FOUND	DL	UNIT
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	NO2-02	SOLID	N/A	6.81e4	5.31e3	ug/g
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	BR-02	SOLID	N/A	1.50e3	1.28e3	ug/g
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	NO3-02	SOLID	N/A	1.92e5	6.79e3	ug/g
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	PO4-02	SOLID	N/A	3.59e3	1.26e3	ug/g
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	SO4-02	SOLID	N/A	1.69e4	1.37e3	ug/g
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	OXALATE2	SOLID	N/A	<1.00e3	1.00e3	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	F-02	SOLID	1.41e2	1.44e2	N/A	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	CL-02	SOLID	3.23e2	3.76e2	N/A	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	NO2-02	SOLID	6.81e4	6.98e4	N/A	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	BR-02	SOLID	JMF 9/5/95 1.50e3 ~~1.50e3~~	1.51e3 ~~1.51e3~~	JMF 9/5/95 N/A	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	NO3-02	SOLID	1.92e5	1.95e5	N/A	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	PO4-02	SOLID	3.59e3	3.93e3	N/A	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	SO4-02	SOLID	1.69e4	1.50e4	N/A	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	OXALATE2	SOLID	<1.00e3	<1.00e3	N/A	ug/g
95000091	B-101	5	SPK	S95T001544	0	W	@IC-01	CL-02	SOLID		107.1	N/A	ug/g
95000091	B-101	5	SPK	S95T001544	0	W	@IC-01	F-02	SOLID		96.4	N/A	ug/g
95000091	B-101	5	SPK	S95T001544	0	W	@IC-01	NO2-02	SOLID		112.1	N/A	ug/g
95000091	B-101	5	SPK	S95T001544	0	W	@IC-01	BR-02	SOLID		93.9	N/A	ug/g
95000091	B-101	5	SPK	S95T001544	0	W	@IC-01	NO3-02	SOLID		102.1	N/A	ug/g
95000091	B-101	5	SPK	S95T001544	0	W	@IC-01	PO4-02	SOLID		107.3	N/A	ug/g
95000091	B-101	5	SPK	S95T001544	0	W	@IC-01	SO4-02	SOLID		90.3	N/A	ug/g

SAMPLE		DF	SAMPLE SIZE
S95T001544	SPIKE	101	.100 - 9.9 + .100 spike
S95T001544	SPIKE	21	.500 - 9.9 + .100 spike

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2169

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	OXALATE2	SOLID		103.2	N/A	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	F-02	SOLID	N/A	3.64e2	2.23e2	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	CL-02	SOLID	N/A	<2.99e2	2.99e2	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	NO2-02	SOLID	N/A	7.62e4	1.97e3	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	BR-02	SOLID	N/A	<2.28e3 ~~1.10e3~~	2.28e3	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	NO3-02	SOLID	N/A	1.38e5	2.52e3	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	PO4-02	SOLID	N/A	6.72e3	2.15e3	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	SO4-02	SOLID	N/A	1.07e4	2.44e3	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	OXALATE2	SOLID	N/A	<1.79e3	1.79e3	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	F-02	SOLID	3.64e2	3.66e2	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	CL-02	SOLID	<2.99e2	<2.99e2	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	NO2-02	SOLID	7.62e4	7.50e4	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	BR-02	SOLID	<2.28e3	<2.28e3	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	NO3-02	SOLID	1.38e5	1.40e5	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	PO4-02	SOLID	6.72e3	6.98e3	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	SO4-02	SOLID	1.07e4	1.05e4	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	OXALATE2	SOLID	<1.79e3	<1.79e3	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	CL-02	SOLID		103.3	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	F-02	SOLID		102.7	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	NO2-02	SOLID		93.6	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	BR-02	SOLID		100.8	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	NO3-02	SOLID		99.6	N/A	ug/g

Data Entry Comments:

SAMPLE		DF	SAMPLE size
S95T001546	SAM & DUP	21	.500 -10
S95T001546	SPIKE	21	.500 -9.9 + .100 spike

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2169

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	PO4-02	SOLID		103.7	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	SO4-02	SOLID		103.0	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	OXALATE2	SOLID		99.0	N/A	ug/g

Final page for worklist # 2169

David C Dunbar 8-31-95
Analyst Signature Date

Analyst Signature Date

Entered + Verified by Jenn M. Fuge 9/5/95

Data Entry Comments: Standard recovery for NO_2 was high. NO_2 has to be re-run. Re-run is on WKL 2249.
J. M. Fuge

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001544 & S95T001546		
TEST CODE:	@ic-01	ANALYST:	David Dunham
INSTRUMENT:	IC01	ANALYSIS DATE:	08/31/95
WORK LIST #:	2169	SAMPLE POINT:	B-101
BATCH ID:	na	SAMPLE PREP:	water digest

Result Units µg/g	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
106N9A	109.0%	101.9%	110.2%	102.8%	104.9%	104.3%	104.0%	97.4%
S95T001544	1.41E+02	3.23E+02	6.81E+04	1.92E+05	3.59E+03	1.69E+04	1.50E+03	<1001.25
S95T001544dup	1.44E+02	3.76E+02	6.98E+04	1.95E+05	3.93E+03	1.50E+04	1.51E+03	<1006.96
Duplicate 1 RPD	1.9%	15.1%	2.4%	1.4%	8.9%	11.9%	1.1%	N/A
S95T001546	3.64E+02	2.03E+02	7.62E+04	1.38E+05	6.72E+03	1.07E+04	1.10E+03	<1787.54
S95T001546dup	3.66E+02	2.08E+02	7.50E+04	1.40E+05	6.98E+03	1.05E+04	1.12E+03	<1793.70
Duplicate 2 RPD	0.4%	2.1%	1.6%	0.8%	3.8%	1.9%	1.3%	N/A
S95T001544spk	96.4%	107.1%	112.1%	102.1%	107.3%	90.3%	93.9%	103.2%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Form Completed By:	David Dunham	Date:	9/5/95
Chemist Approval:	Jan Hedge	Date:	9/5/95

LAB LEADER INFO	
Method:	LA-533-105 d-0
Matrix:	solid
Test Code:	@ic-01
Work List #:	2169
Batch #:	na
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	106N9A
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	09/05/95
Chemist:	Jann Frye
Analyst:	David Dunham
Analysis Date:	08/31/95
Time Complete:	04:07 AM
Instrument Code:	IC01
Rerun:	0
Sample Prep:	water digest
Sample Point:	B-101
Sample Type	
STANDARD	106N9A
SAMPLE 1	S95T001544
DUPLICATE 1	S95T001544dup
SAMPLE 2	S95T001546
DUPLICATE 2	S95T001546dup
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001544spk
SPIKE DUPLICATE	

PRINT

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.062	<.083	<.547	<.699	<.596	<.678	<.632	<.496
Standard Data (µg/mL)	64.3	90.5	572	631	573	659	596	568
Sample 1 Data (µg/mL)	1.47E+00	3.36E+00	7.08E+02	2.00E+03	3.74E+01	1.76E+02	1.58E+01	<.496
Sample 1 Dilution Factor	21	21	101	101	21	21	21	21
Sample 1 Prep DF	10.403	10.403	10.403	10.403	10.403	10.403	10.403	10.403
Duplicate 1 Data (µg/mL)	1.49E+00	3.89E+00	7.22E+02	2.02E+03	4.06E+01	1.55E+02	1.57E+01	<.496
Duplicate 1 Dilution Factor	21	21	101	101	21	21	21	21
Duplicate 1 Prep DF	10.344	10.344	10.344	10.344	10.344	10.344	10.344	10.344
Sample 2 Data (µg/mL)	2.12E+00	1.19E+00	4.44E+02	8.07E+02	3.92E+01	6.26E+01	6.42E+00	<.496
Sample 2 Dilution Factor	21	21	21	21	21	21	21	21
Sample 2 Prep DF	5.927	5.927	5.927	5.927	5.927	5.927	5.927	5.927
Duplicate 2 Data (µg/mL)	2.12E+00	1.21E+00	4.36E+02	8.11E+02	4.05E+01	6.13E+01	6.49E+00	<.496
Duplicate 2 Dilution Factor	21	21	21	21	21	21	21	21
Duplicate 2 Prep DF	5.907	5.907	5.907	5.907	5.907	5.907	5.907	5.907
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 1 (µg/mL)	1.28E+01	2.03E+01	1.29E+03	2.63E+03	1.55E+02	2.90E+02	1.24E+02	1.20E+02
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.50	10.50	10.10	10.10	10.50	10.50	10.50	10.50
Std. Conc. (µg/mL)	59	79	518	614	548	631	575	581
Detection Limit	0.062	0.083	0.547	0.699	0.596	0.678	0.632	0.496
Matrix Detection Limit 1	1.25E+02	1.68E+02	5.31E+03	6.79E+03	1.20E+03	1.37E+03	1.28E+03	1.00E+03
Matrix Detection Limit 2	2.23E+02	2.99E+02	1.97E+03	2.52E+03	2.15E+03	2.44E+03	2.28E+03	1.79E+03
Matrix Detection Limit 3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	109.0%	101.9%	110.2%	102.8%	104.9%	104.3%	104.0%	97.4%
Sample 1 in µg/g	1.41E+02	3.23E+02	6.81E+04	1.92E+05	3.59E+03	1.69E+04	1.50E+03	<1001.25
Duplicate 1 in µg/g	1.44E+02	3.76E+02	6.98E+04	1.95E+05	3.93E+03	1.50E+04	1.51E+03	<1006.96
Duplicate 1 RPD	1.9%	15.1%	2.4%	1.4%	8.9%	11.8%	1.1%	N/A
Sample 2 in µg/g	3.64E+02	2.03E+02	7.62E+04	1.38E+05	6.72E+03	1.07E+04	1.10E+03	<1787.64
Duplicate 2 in µg/g	3.66E+02	2.08E+02	7.50E+04	1.40E+05	6.98E+03	1.05E+04	1.12E+03	<1793.70
Duplicate 2 RPD	0.4%	2.1%	1.6%	0.8%	3.8%	1.9%	1.3%	N/A
Spike % Recovery	98.4%	107.1%	112.1%	102.1%	107.3%	90.3%	93.9%	103.2%

NO2 was put out for review J. Mbuye

Data Entry by: Jann Frye Date: 09/05/95
Approved by: Jann Frye Date: 9/5/95

Form DIONEX.WB1 Rev. 1.3

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WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001544 & S95T001546		
TEST CODE:	@ic-01	ANALYST:	David Dunham
INSTRUMENT:	IC01	ANALYSIS DATE:	08/31/95
WORK LIST #:	2169	SAMPLE POINT:	B-101
BATCH ID:	na	SAMPLE PREP:	water digest

Result Units µg/g	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
106N9A	109.0%	101.9%	110.2%	102.8%	104.9%	104.3%	104.0%	97.4%
S95T001544	1.41E+02	3.23E+02	6.81E+04	1.92E+05	3.59E+03	1.69E+04	1.50E+03	<1001.25
S95T001544dup	1.44E+02	3.76E+02	6.98E+04	1.95E+05	3.93E+03	1.50E+04	1.51E+03	<1006.96
Duplicate 1 RPD	1.9%	15.1%	2.4%	1.4%	8.9%	11.9%	1.1%	N/A
S95T001546	3.64E+02	2.03E+02	7.62E+04	1.38E+05	6.72E+03	1.07E+04	1.10E+03	<1787.54
S95T001546dup	3.66E+02	2.08E+02	7.50E+04	1.40E+05	6.98E+03	1.05E+04	1.12E+03	<1793.70
Duplicate 2 RPD	0.4%	2.1%	1.6%	0.8%	3.8%	1.9%	1.3%	N/A
S95T001546spk	102.7%	103.3%	93.6%	99.6%	103.7%	103.0%	100.8%	99.0%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Form Completed By:	Joann M. Faye	Date:	9/5/95
Chemist Approval:	Joann M. Faye	Date:	9/5/95

LAB LEADER INFO	
Method:	LA-533-105 d-0
Matrix:	solid
Test Code:	@ic-01
Work List #:	2169
Batch #:	na
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	106N9A
Spike Sample #:	2
Prepared By:	Jann Frye
Prepared Date:	09/05/95
Chemist:	Jann Frye
Analyst:	David Dunham
Analysis Date:	08/31/95
Time Complete:	04:07 AM
Instrument Code:	IC01
Rerun:	0
Sample Prep:	water digest
Sample Point:	B-101
Sample Type	
STANDARD	106N9A
SAMPLE 1	S95T001544
DUPLICATE 1	S95T001544dup
SAMPLE 2	S95T001546
DUPLICATE 2	S95T001546dup
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001546spk
SPIKE DUPLICATE	

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.062	<.093	<.547	<.699	<.596	<.678	<.632	<.496
Standard Data (µg/mL)	64.3	80.5	572	631	573	659	598	566
Sample 1 Data (µg/mL)	1.47E+00	3.36E+00	7.09E+02	2.00E+03	3.74E+01	1.76E+02	1.66E+01	<.496
Sample 1 Dilution Factor	21	21	101	101	21	21	21	21
Sample 1 Prep DF	10.403	10.403	10.403	10.403	10.403	10.403	10.403	10.403
Duplicate 1 Data (µg/mL)	1.49E+00	3.89E+00	7.22E+02	2.02E+03	4.06E+01	1.55E+02	1.57E+01	<.496
Duplicate 1 Dilution Factor	21	21	101	101	21	21	21	21
Duplicate 1 Prep DF	10.344	10.344	10.344	10.344	10.344	10.344	10.344	10.344
Sample 2 Data (µg/mL)	2.12E+00	1.19E+00	4.44E+02	8.07E+02	3.92E+01	6.26E+01	6.42E+00	<.496
Sample 2 Dilution Factor	21	21	21	21	21	21	21	21
Sample 2 Prep DF	5.927	5.927	5.927	5.927	5.927	5.927	5.927	5.927
Duplicate 2 Data (µg/mL)	2.12E+00	1.21E+00	4.36E+02	8.11E+02	4.05E+01	6.13E+01	6.48E+00	<.496
Duplicate 2 Dilution Factor	21	21	21	21	21	21	21	21
Duplicate 2 Prep DF	5.907	5.907	5.907	5.907	5.907	5.907	5.907	5.907
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 2 (µg/mL)	1.42E+01	1.75E+01	5.42E+02	9.29E+02	1.52E+02	1.93E+02	1.22E+02	1.15E+02
Spike + Dup 2 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
Std. Conc. (µg/mL)	59	79	519	614	548	631	575	581
Detection Limit	0.062	0.093	0.547	0.699	0.596	0.678	0.632	0.496
Matrix Detection Limit 1	1.25E+02	1.68E+02	5.31E+03	6.79E+03	1.20E+03	1.37E+03	1.26E+03	1.00E+03
Matrix Detection Limit 2	2.23E+02	2.99E+02	1.97E+03	2.52E+03	2.15E+03	2.44E+03	2.28E+03	1.79E+03
Matrix Detection Limit 3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	109.0%	101.9%	110.2%	102.8%	104.9%	104.3%	104.0%	97.4%
Sample 1 in µg/g	1.41E+02	3.23E+02	6.81E+04	1.92E+05	3.59E+03	1.69E+04	1.50E+03	<1001.25
Duplicate 1 in µg/g	1.44E+02	3.76E+02	6.98E+04	1.95E+05	3.93E+03	1.50E+04	1.51E+03	<1006.98
Duplicate 1 RPD	1.9%	15.1%	2.4%	1.4%	8.9%	11.9%	1.1%	N/A
Sample 2 in µg/g	3.64E+02	2.03E+02	7.62E+04	1.38E+05	6.72E+03	1.07E+04	1.10E+03	<1787.54
Duplicate 2 in µg/g	3.66E+02	2.08E+02	7.50E+04	1.40E+05	6.98E+03	1.05E+04	1.12E+03	<1793.70
Duplicate 2 RPD	0.4%	2.1%	1.6%	0.6%	3.8%	1.9%	1.3%	N/A
Spike % Recovery	102.7%	103.3%	93.6%	99.6%	103.7%	103.0%	100.8%	99.0%

NO_2 was put out for rerun JMFrye

Data Entry by:	Jann Frye	Date:	09/05/95
Approved by:	Jann Frye	Date:	9/5/95

Form DIONEX.WB1 Rev. 1.3

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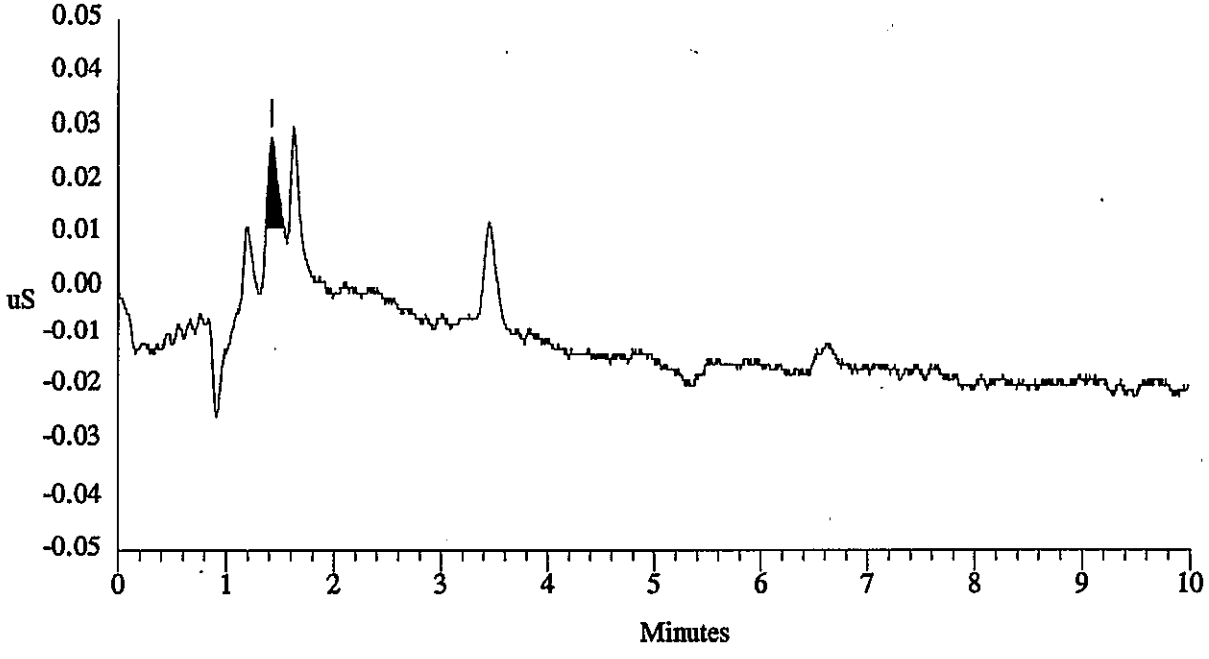
```
==========================================================================
| Sample Name: BLANK                          Date: 08/30/1995 22:08:23   |
| Data File   : C:\DX\DATA\95083051.D01                                   |
| Method      : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 1                  Detector:CDM-1   |
| Analyst     : David Dunham  Column: AG4A/AS4A anion column/SRS          |
==========================================================================
                                 8/31/95
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
		Totals	0.000	0	0		

File: 95083051.D01 Sample: BLANK



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 107 TO 120.

WHC-SD-WM-DP-139, REV. 1

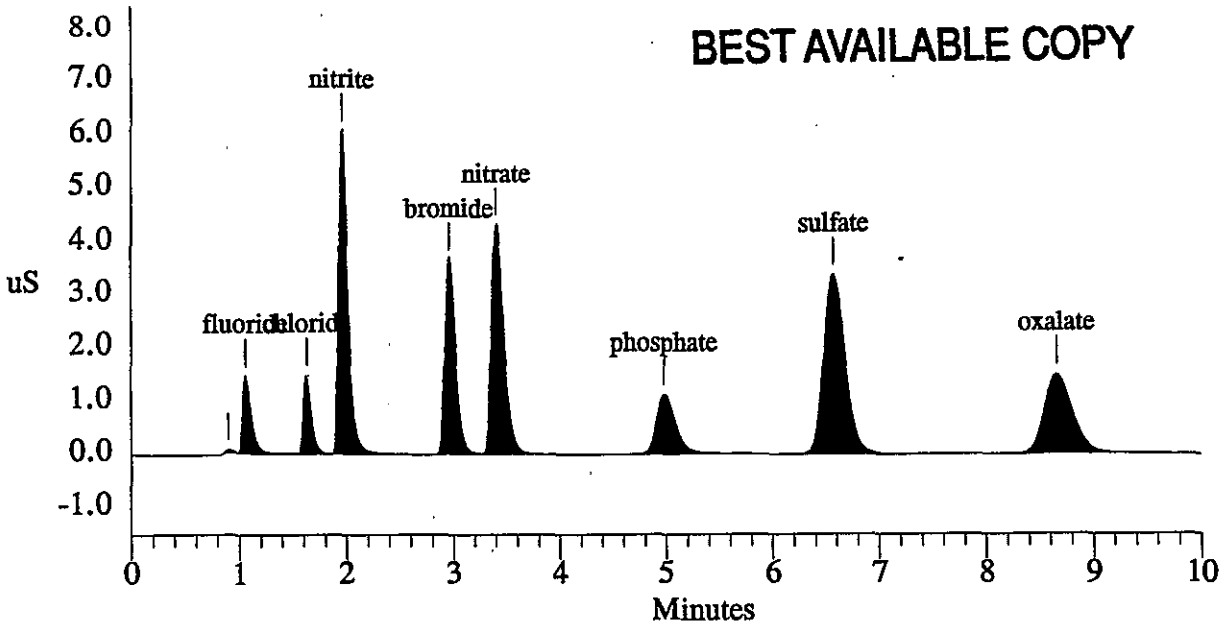
```
==========================================================================
| Sample Name: 106N9-A                          Date: 08/30/1995 22:29:51 |
| Data File   : C:\DX\DATA\95083051.D02                                   |
| Method      : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 2                  Detector:CDM-1   |
| Analyst     : David Dunham  Column: AG4A/AS4A anion column/SRS          |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	56	259	2	
2	1.06	fluoride	64.308	1447	8100	2	0.00
3	1.63	chloride	80.514	1483	7666	1	-1.21
4	1.96	nitrite	571.962	6060	36605	1	-2.49
5	2.96	bromide	597.712	3644	25598	1	-0.34
6	3.40	nitrate	630.748	4295	34857	1	1.49
7	4.98	phosphate	572.683	1137	14338	1	-1.19
8	6.57	sulfate	658.313	3378	47140	1	-1.79
9	8.66	oxalate	565.739	1496	27555	1	-1.59
		Totals	3741.979	22996	202118		

File: 95083051.D02 Sample: 106N9-A



WHC-SD-WM-DP-139, REV. 1

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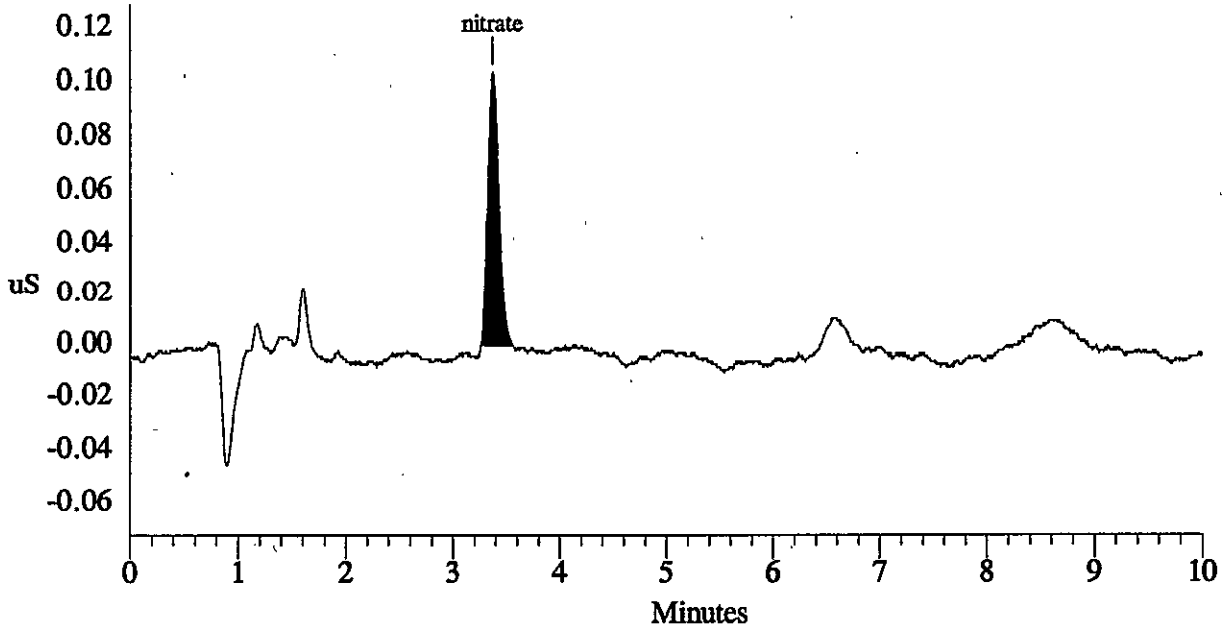
==========================================================================
ample Name: PREP-BLANK                          Date: 08/31/1995 04:07:09
ata File  : C:\DX\DATA\95083101.D26
ethod     : C:\DX\METHOD\KIT.MET
CI Address: 1  System: 1  Inject#: 26                    Detector:CDM-1
nalyst    :                Column: AG4A/AS4A anion column/SRS
==========================================================================
```

ibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ternal	1	21	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	3.37	nitrate	3.034	103	753	1	0.60
		Totals	3.034	103	753		

File: 95083101.D26 Sample: PREP-BLANK



WHC-SD-WM-DP-139, REV. 1

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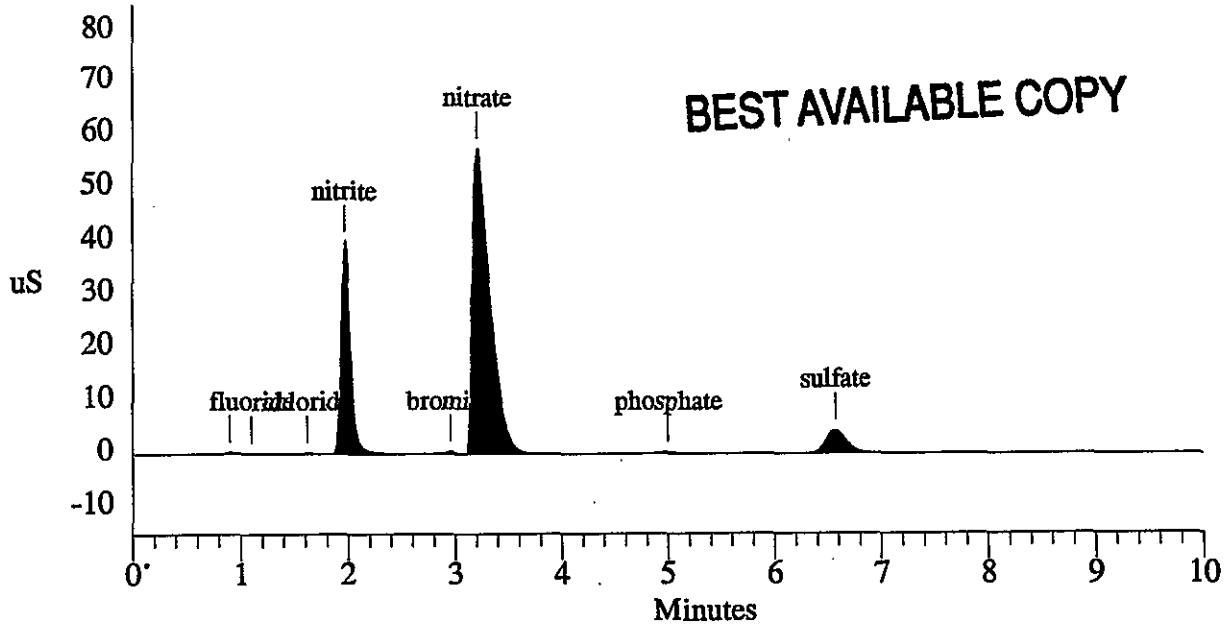
==========================================================================
| Sample Name: S95T001544 SAM                  Date: 08/30/1995 23:05:15  |
| Data File  : C:\DX\DATA\95083051.D04                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| ACI Address: 1  System: 1  Inject#: 4                  Detector:CDM-1   |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS        |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90			0.000	270	1525	2	
2	1.10	fluoride	OK	1.470	159	826	2	3.77
3	1.62	chloride	OK	3.363	297	1809	1	-1.82
4	1.97	nitrite	OK	706.695	39759	242142	1	-1.99
5	2.96	bromide	OK	15.574	438	2598	1	-0.34
6	3.21	nitrate	>THAN	1642.337	57249	657968	1	-4.18
7	5.00	phosphate	OK	37.377	333	4129	1	-0.79
8	6.57	sulfate	OK	175.823	4386	61028	1	-1.79
			Totals	2582.638	102891	972024		

File: 95083051.D04 Sample: S95T001544 SAM



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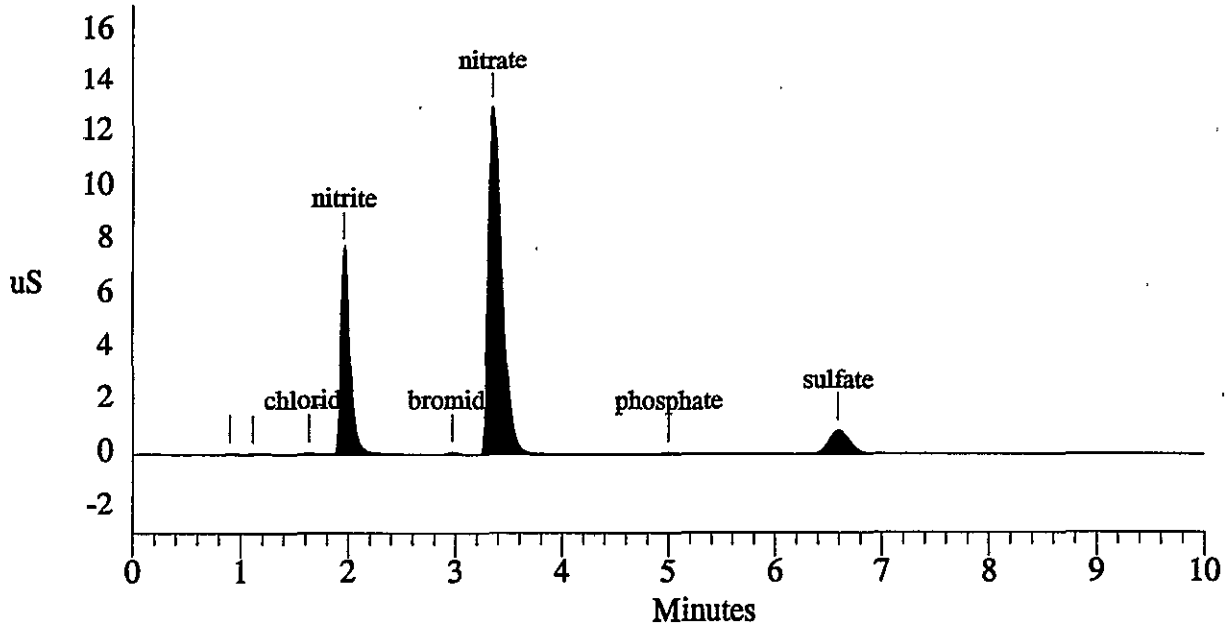
==============================================================================
| Sample Name: S95T001544 SAM                    Date: 08/30/1995 22:47:11    |
| Data File  : C:\DX\DATA\95083051.D03                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 3                   Detector:CDM-1      |
| Analyst    :                  Column: AG4A/AS4A anion column/SRS           |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90			0.000	44	262	1	
3	1.63	chloride	<THAN x3	0.251	78	382	1	-1.21
4	1.96	nitrite	OK	708.697	7686	45635	1	-2.49
5	2.97	bromide	<THAN x5	27.881	87	566	1	0.00
6	3.35	nitrate	OK	2001.820	12985	115762	1	0.00
7	5.00	phosphate	< THAN x2	45.994	63	721	1	-0.79
8	6.59	sulfate	OK	173.920	865	12008	1	-1.49
			Totals	2958.563	21808	175336		

File: 95083051.D03 Sample: S95T001544 SAM



WHC-SD-WM-DP-139, REV. 1

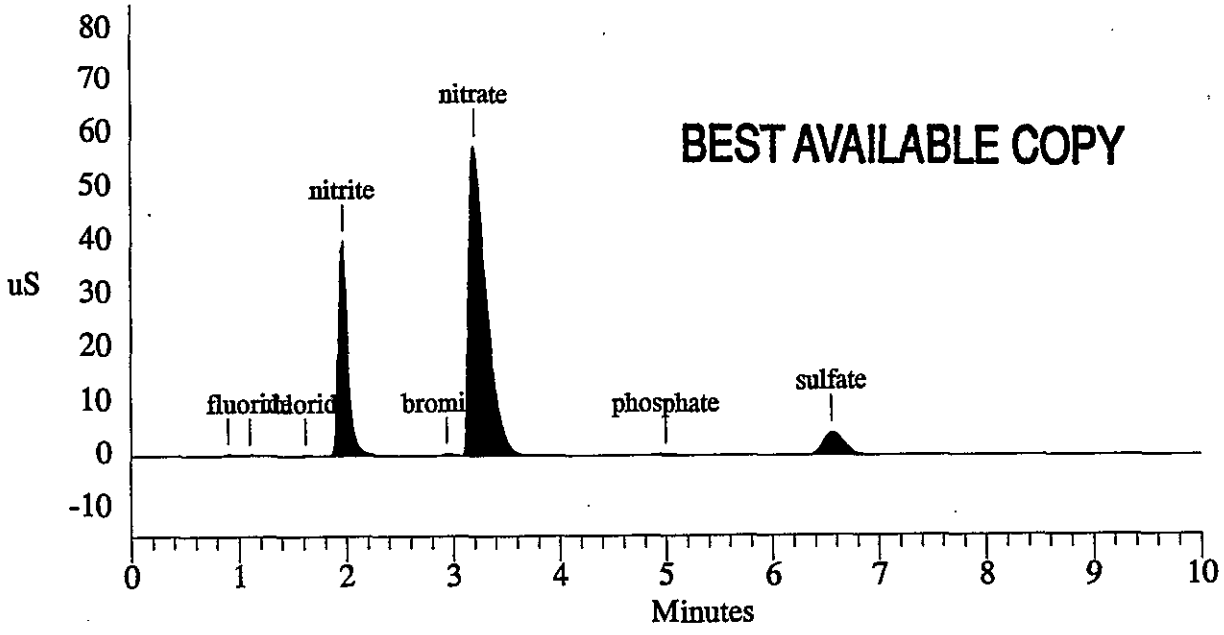
```
==========================================================================
| Sample Name: S95T001544 SAM                  Date: 08/31/1995 00:54:24  |
| Data File  : C:\DX\DATA\95083051.D12                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| ACI Address: 1  System: 1  Inject#: 12                Detector:CDM-1    |
| Analyst    :                Column: AG4A/AS4A anion column/SRS          |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90			0.000	283	1623	2	
2	1.10	fluoride	OK	1.426	154	800	2	3.77
3	1.62	chloride	OK	3.566	307	1896	1	-1.82
4	1.97	nitrite	OK	710.246	40100	243532	1	-1.99
5	2.94	bromide	OK	15.974	435	2681	1	-1.01
6	3.20	nitrate	>THAN	1647.442	57794	662391	1	-4.48
7	5.00	phosphate	OK	38.374	343	4252	1	-0.79
8	6.56	sulfate	OK	175.951	4391	61074	1	-1.94
			Totals	2592.978	103807	978249		

File: 95083051.D12 Sample: S95T001544 SAM



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WHC-SD-WM-DP-139, REV. 1

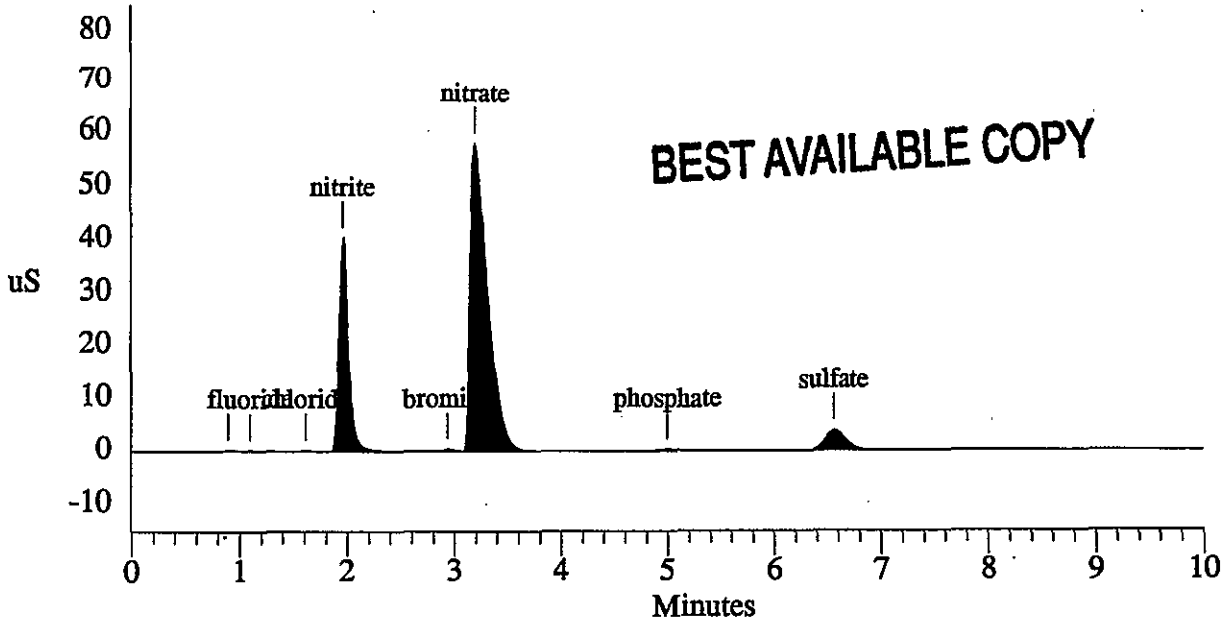
```
==========================================================================
| Sample Name: S95T001544 DUP                  Date: 08/31/1995 01:05:59 |
| Data File  : C:\DX\DATA\95083051.D13                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 13                Detector:CDM-1   |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS       |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	285	1634	2	
2	1.10	fluoride	1.497	160	843	2	3.77
3	1.62	chloride	3.890	312	2037	1	-1.82
4	1.97	nitrite	719.453	40420	247145	1	-1.99
5	2.94	bromide	15.652	434	2614	1	-1.01
6	3.20	nitrate	1648.205	57811	663059	1	-4.48
7	5.00	phosphate	40.637	367	4531	1	-0.79
8	6.56	sulfate	155.264	3836	53675	1	-1.94
		Totals	2584.599	103624	975537		

File: 95083051.D13 Sample: S95T001544 DUP



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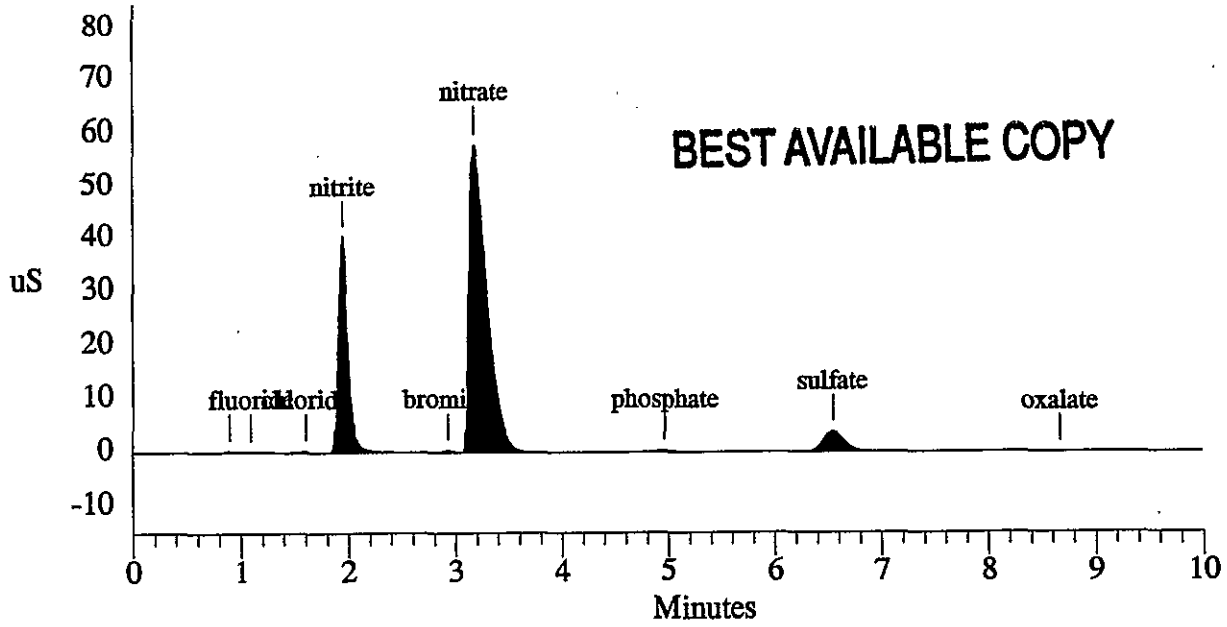
Sample Name: S95T001544 DUP Date: 08/31/1995 00:06:43
Data File : C:\DX\DATA\95083051.D08
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 8 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	276	1550	2	
2	1.09	fluoride	1.438	157	807	2	2.83
3	1.60	chloride	4.173	348	2159	1	-3.03
4	1.95	nitrite	719.080	40599	246998	1	-2.99
5	2.93	bromide	15.964	444	2679	1	-1.35
6	3.18	nitrate	1653.746	58107	667951	1	-5.07
7	4.97	phosphate	40.653	363	4533	1	-1.39
8	6.55	sulfate	155.713	3861	53835	1	-2.09
9	8.67	oxalate < THAN	4.744	18	238	1	-1.48
		Totals	2595.511	104174	980751		

File: 95083051.D08 Sample: S95T001544 DUP



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WHC-SD-WM-DP-139, REV. 1

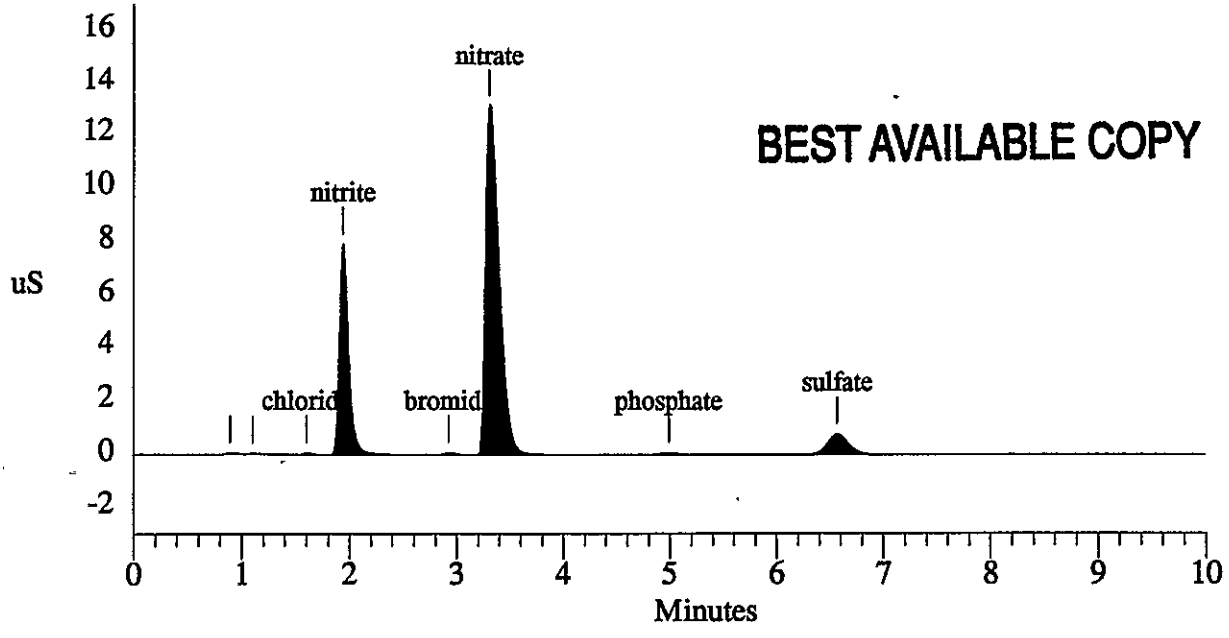
```
==========================================================================
| Sample Name: S95T001544 DUP                    Date: 08/31/1995 00:42:33 |
| Data File  : C:\DX\DATA\95083051.D11                                     |
| Method     : C:\DX\METHOD\KIT.MET                                        |
| ACI Address: 1  System: 1  Inject#: 11                  Detector:CDM-1   |
| Analyst    :                  Column: AG4A/AS4A anion column/SRS        |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	63	343	1	
3	1.60	chloride	0.640	81	417	1	-3.03
4	1.94	nitrite	721.958	7902	46514	1	-3.48
5	2.93	bromide	28.080	87	575	1	-1.35
6	3.31	nitrate	2018.353	13126	116786	1	-1.19
7	4.99	phosphate	48.900	70	795	1	-0.99
8	6.57	sulfate	154.552	765	10625	1	-1.79
		Totals	2972.484	22093	176055		

File: 95083051.D11 Sample: S95T001544 DUP



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WHC-SD-WM-DP-139, REV. 1

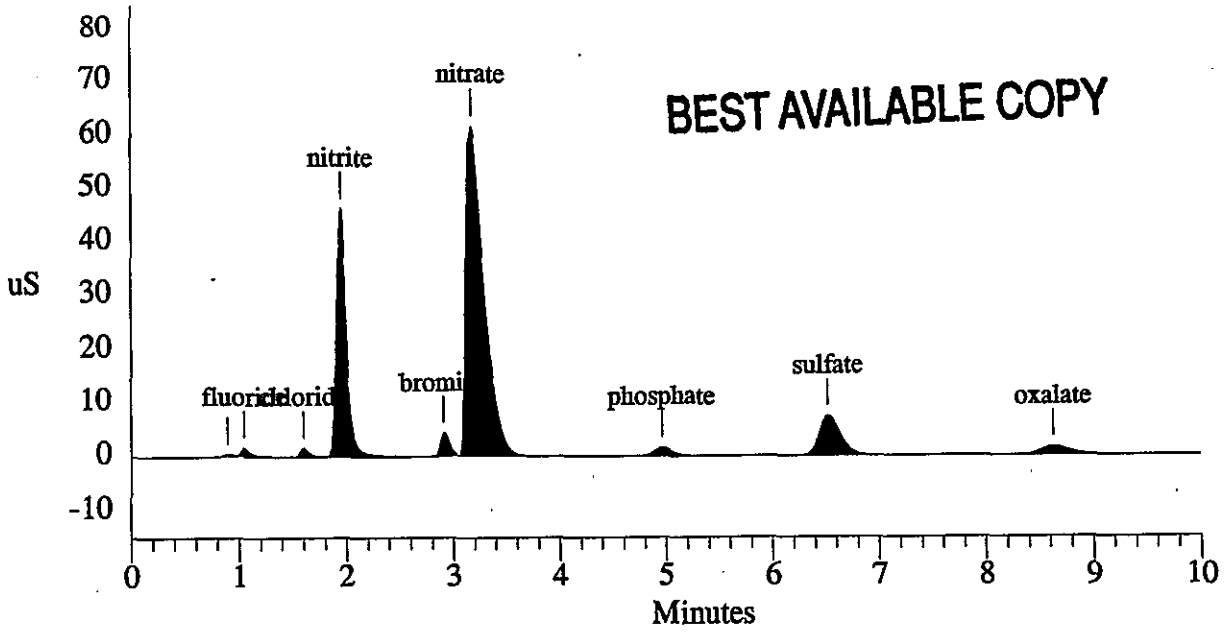
```
==========================================================================
| Sample Name: S95T001544 SPIKE                Date: 08/31/1995 00:17:34  |
| Data File  : C:\DX\DATA\95083051.D09                                    |
| Method     : C:\DX\METHOD\KIT.MET                                       |
| ACI Address: 1  System: 1  Inject#: 9                  Detector:CDM-1   |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS        |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	269	1210	2	
2	1.05	fluoride	12.849	1406	7775	2	-0.94
3	1.60	chloride	20.293	1624	9248	1	-3.03
4	1.95	nitrite	824.264	46284	289398	1	-2.99
5	2.91	bromide	123.659	4232	25465	1	-2.02
6	3.17	nitrate	1700.729	61437	713555	1	-5.37
7	4.96	phosphate	154.579	1529	18873	1	-1.59
8	6.52	sulfate	289.736	7444	102696	1	-2.54
9	8.63	oxalate	119.972	1517	28132	1	-1.93
		Totals	3246.082	125743	1196353		

File: 95083051.D09 Sample: S95T001544 SPIKE



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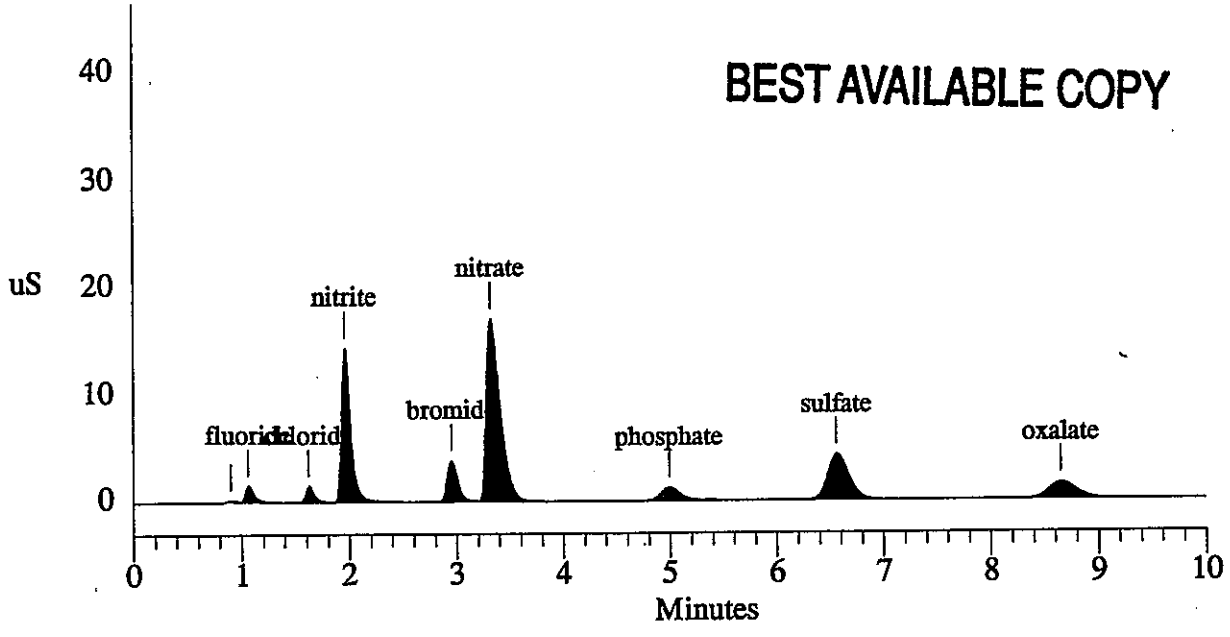
==========================================================================
| Sample Name: S95T001544 SPIKE                Date: 08/30/1995 23:54:11 |
| Data File  : C:\DX\DATA\95083051.D07                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 7                  Detector:CDM-1  |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS       |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	100	472	2	
2	1.06	fluoride	68.450	1496	8636	2	0.00
3	1.62	chloride	85.762	1494	8151	1	-1.82
4	1.96	nitrite	1290.677	14457	84953	1	-2.49
5	2.95	bromide	615.499	3864	26395	1	-0.67
6	3.32	nitrate	2628.991	17125	155530	1	-0.90
7	4.99	phosphate	614.614	1233	15446	1	-0.99
8	6.56	sulfate	833.352	4318	60112	1	-1.94
9	8.65	oxalate	576.163	1530	28089	1	-1.70
		Totals	6713.509	45616	387785		

File: 95083051.D07 Sample: S95T001544 SPIKE



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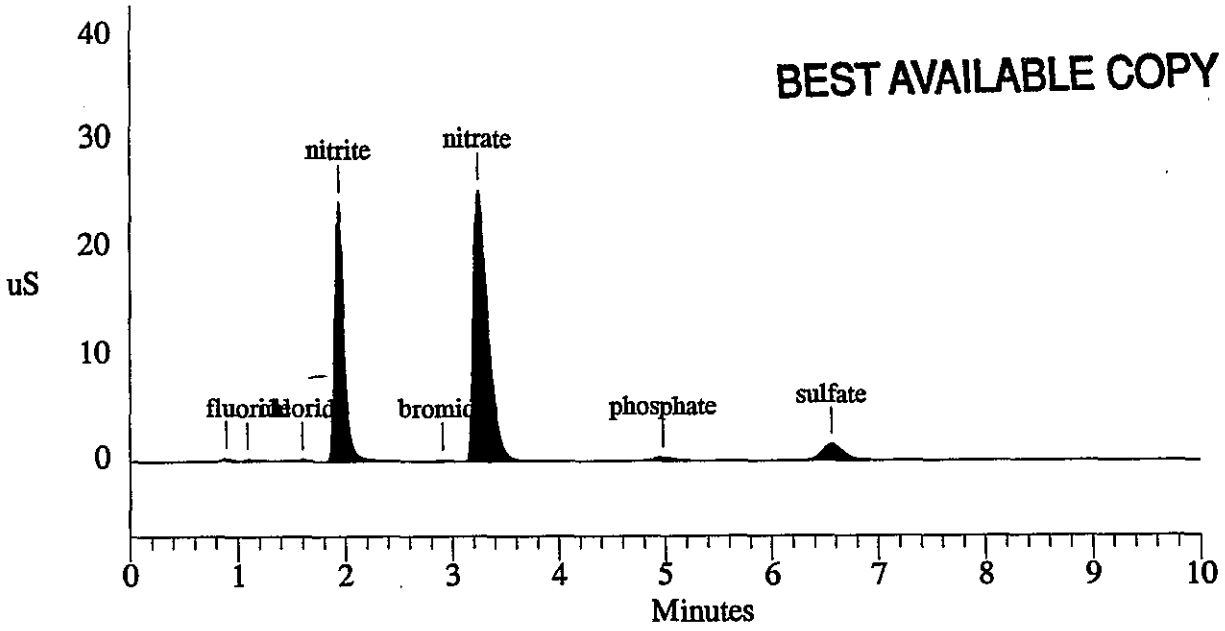
Sample Name: S95T001546 SAM Date: 08/31/1995 03:32:58
Data File : C:\DX\DATA\95083101.D23
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 23 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name		Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89			0.000	202	1143	2	
2	1.09	fluoride	OK	2.122	141	1218	2	2.83
3	1.60	chloride	OK	1.185	170	869	1	-3.03
4	1.94	nitrite	OK	444.332	24298	144982	1	-3.48
5	2.91	bromide	OK	6.417	109	695	1	-2.02
6	3.24	nitrate	OK	806.957	25357	241615	1	-3.28
7	4.98	phosphate	OK	39.178	352	4351	1	-1.19
8	6.56	sulfate	OK	62.647	1501	21141	1	-1.94
			Totals	1362.837	52129	416013		

File: 95083101.D23 Sample: S95T001546 SAM



WHC-SD-WM-DP-139, REV. 1

DAD 8-31-95

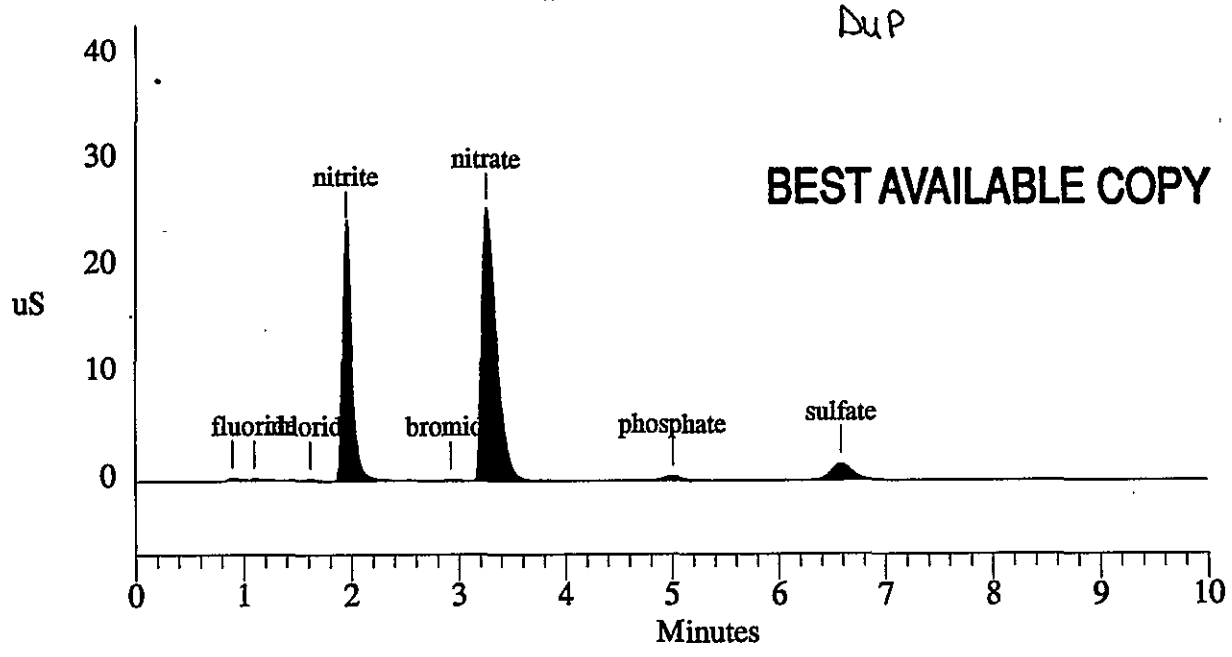
Sample Name: S95T001546 ~~SAM~~ DUP Date: 08/31/1995 03:45:27
Data File : C:\DX\DATA\95083101.D24
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 24 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	196	1165	2	
2	1.10	fluoride	2.124	141	1220	2	3.77
3	1.62	chloride	1.206	174	878	1	-1.82
4	1.95	nitrite	435.640	23639	141930	1	-2.99
5	2.93	bromide	6.478	110	707	1	-1.35
6	3.26	nitrate	810.544	25296	242875	1	-2.69
7	5.01	phosphate	40.539	359	4519	1	-0.60
8	6.59	sulfate	61.264	1493	20663	1	-1.49
		Totals	1357.796	51407	413956		

File: 95083101.D24 Sample: S95T001546 ~~SAM~~ DAD 8-31-95 DUP



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WHC-SD-WM-DP-139, REV. 1

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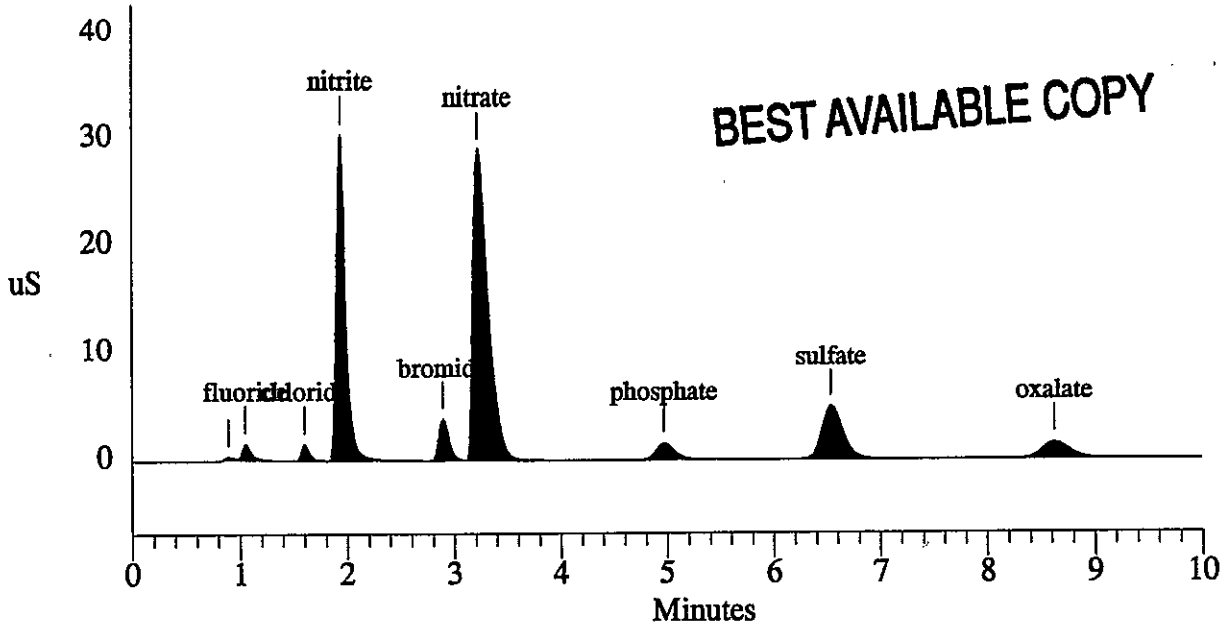
==============================================================================
| Sample Name: S95T001546 SPIKE                Date: 08/31/1995 03:56:21      |
| Data File  : C:\DX\DATA\95083101.D25                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 25                  Detector:CDM-1      |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS            |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	214	1019	2	
2	1.05	fluoride	14.242	1438	8642	2	-0.94
3	1.60	chloride	17.541	1513	8022	1	-3.03
4	1.94	nitrite	541.587	30506	179816	1	-3.48
5	2.89	bromide	122.307	3770	25175	1	-2.69
6	3.22	nitrate	929.250	29022	285923	1	-3.88
7	4.97	phosphate	152.452	1495	18600	1	-1.39
8	6.54	sulfate	192.615	4851	67070	1	-2.24
9	8.63	oxalate	115.098	1477	26932	1	-1.93
		Totals	2085.092	74286	621199		

File: 95083101.D25 Sample: S95T001546 SPIKE



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LABCORE Data Entry Template for Worklist# 2171

Analyst: EC **Instrument:** IC01 IC01 **Book #** 106N9-A

Method: LA-533-105 Rev/Mod D-0

Worklist Comment: B-101 IC.jmf

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST		MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				@IC-01	F-02	SOLID		<.062	N/A	ug/g
		1	BLNK-PREP				@IC-01	CL-02	SOLID		<.083	N/A	ug/g
		1	BLNK-PREP				@IC-01	NO2-02	SOLID		<.547	N/A	ug/g
		1	BLNK-PREP				@IC-01	BR-02	SOLID		<.632	N/A	ug/g
		1	BLNK-PREP				@IC-01	NO3-02	SOLID		<.699	N/A	ug/g
		1	BLNK-PREP				@IC-01	PO4-02	SOLID		<.596	N/A	ug/g
		1	BLNK-PREP				@IC-01	SO4-02	SOLID		<.678	N/A	ug/g
		1	BLNK-PREP				@IC-01	OXALATE2	SOLID		<.496	N/A	ug/g
		2	STD				@IC-01	F-02	SOLID		63.5	N/A	ug/g
		2	STD				@IC-01	CL-02	SOLID		79.4	N/A	ug/g
		2	STD				@IC-01	NO2-02	SOLID		553.7	N/A	ug/g
		2	STD				@IC-01	BR-02	SOLID		582.5	N/A	ug/g
		2	STD				@IC-01	NO3-02	SOLID		636.9	N/A	ug/g
		2	STD				@IC-01	PO4-02	SOLID		540.8	N/A	ug/g
		2	STD				@IC-01	SO4-02	SOLID		643.1	N/A	ug/g
		2	STD				@IC-01	OXALATE2	SOLID		553.1	N/A	ug/g
95000093	B-101	3	SAMPLE	S95T001549	0	W	@IC-01	F-02	SOLID	N/A	<2.15e2 ~~+.98e2~~	2.15e2	ug/g
95000093	B-101	3	SAMPLE	S95T001549	0	W	@IC-01	CL-02	SOLID	N/A	3.05e2	2.87e2	ug/g

Data Entry Comments:

LMCS 106N9-A .100mL - 10mL

SPIKE 106N9-A .100mL

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2171

DUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000093	B-101	3 SAMPLE	S95T001549	0	W	@IC-01	NO2-02	SOLID	N/A	7.76e4	1.89e3	ug/g
95000093	B-101	3 SAMPLE	S95T001549	0	W	@IC-01	BR-02	SOLID	N/A	<2.19e3	2.19e3	ug/g
95000093	B-101	3 SAMPLE	S95T001549	0	W	@IC-01	NO3-02	SOLID	N/A	1.76e5	2.42e3	ug/g
95000093	B-101	3 SAMPLE	S95T001549	0	W	@IC-01	PO4-02	SOLID	N/A	1.44e4	2.06e3	ug/g
95000093	B-101	3 SAMPLE	S95T001549	0	W	@IC-01	SO4-02	SOLID	N/A	1.20e4	2.35e3	ug/g
95000093	B-101	3 SAMPLE	S95T001549	0	W	@IC-01	OXALATE2	SOLID	N/A	<1.72e3	gmP 9/12/95 ~~1.72e3~~	ug/g
95000093	B-101	4 DUP	S95T001549	0	W	@IC-01	F-02	SOLID	<2.15e2	<2.15e2	N/A	ug/g
95000093	B-101	4 DUP	S95T001549	0	W	@IC-01	CL-02	SOLID	3.05e2	2.99e2	N/A	ug/g
95000093	B-101	4 DUP	S95T001549	0	W	@IC-01	NO2-02	SOLID	7.76e4	7.63e4	N/A	ug/g
95000093	B-101	4 DUP	S95T001549	0	W	@IC-01	BR-02	SOLID	<2.19e3	<2.19e3	N/A	ug/g
95000093	B-101	4 DUP	S95T001549	0	W	@IC-01	NO3-02	SOLID	1.76e5	1.73e5	N/A	ug/g
95000093	B-101	4 DUP	S95T001549	0	W	@IC-01	PO4-02	SOLID	1.44e4	1.08e4	N/A	ug/g
95000093	B-101	4 DUP	S95T001549	0	W	@IC-01	SO4-02	SOLID	1.20e4	1.17e4	N/A	ug/g
95000093	B-101	4 DUP	S95T001549	0	W	@IC-01	OXALATE2	SOLID	<1.72e3	<1.72e3	N/A	ug/g
95000093	B-101	5 SPK	S95T001549	0	W	@IC-01	CL-02	SOLID		102.7	N/A	ug/g
95000093	B-101	5 SPK	S95T001549	0	W	@IC-01	F-02	SOLID		116.2	N/A	ug/g
95000093	B-101	5 SPK	S95T001549	0	W	@IC-01	NO2-02	SOLID		40.5	N/A	ug/g
95000093	B-101	5 SPK	S95T001549	0	W	@IC-01	BR-02	SOLID		104.6%	N/A	ug/g
95000093	B-101	5 SPK	S95T001549	0	W	@IC-01	NO3-02	SOLID		-17.2	N/A	ug/g
95000093	B-101	5 SPK	S95T001549	0	W	@IC-01	PO4-02	SOLID		91.4	N/A	ug/g
95000093	B-101	5 SPK	S95T001549	0	W	@IC-01	SO4-02	SOLID		96.2	N/A	ug/g

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2171

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000093	B-101	5	SPK	S95T001549	0	W	@IC-01	OXALATE2	SOLID		98.5	N/A	ug/g
95000091	B-101	6	SAMPLE	S95T001553	0	W	@IC-01	F-02	SOLID	N/A	<1.77e2	1.77e2	ug/g
95000091	B-101	6	SAMPLE	S95T001553	0	W	@IC-01	CL-02	SOLID	N/A	<2.37e2	2.37e2	ug/g
95000091	B-101	6	SAMPLE	S95T001553	0	W	@IC-01	NO2-02	SOLID	N/A	2.66e4	1.56e3	ug/g
95000091	B-101	6	SAMPLE	S95T001553	0	W	@IC-01	BR-02	SOLID	N/A	<1.81e3	<1.81e3	ug/g
95000091	B-101	6	SAMPLE	S95T001553	0	W	@IC-01	NO3-02	SOLID	N/A	2.55e5	3.92e3	ug/g
95000091	B-101	6	SAMPLE	S95T001553	0	W	@IC-01	PO4-02	SOLID	N/A	1.76e3	1.70e3	ug/g
95000091	B-101	6	SAMPLE	S95T001553	0	W	@IC-01	SO4-02	SOLID	N/A	2.82e5	3.80e3	ug/g
95000091	B-101	6	SAMPLE	S95T001553	0	W	@IC-01	OXALATE2	SOLID	N/A	<1.42e3	1.42e3	ug/g
95000091	B-101	7	DUP	S95T001553	0	W	@IC-01	F-02	SOLID	<1.77e2	<1.77e2	N/A	ug/g
95000091	B-101	7	DUP	S95T001553	0	W	@IC-01	CL-02	SOLID	<2.37e2	<2.37e2	N/A	ug/g
95000091	B-101	7	DUP	S95T001553	0	W	@IC-01	NO2-02	SOLID	2.66e4	2.20e4	N/A	ug/g
95000091	B-101	7	DUP	S95T001553	0	W	@IC-01	BR-02	SOLID	<1.81e3	<1.81e3	N/A	ug/g
95000091	B-101	7	DUP	S95T001553	0	W	@IC-01	NO3-02	SOLID	2.55e5	1.92e5	N/A	ug/g
95000091	B-101	7	DUP	S95T001553	0	W	@IC-01	PO4-02	SOLID	1.76e3	<1.70e3	N/A	ug/g
95000091	B-101	7	DUP	S95T001553	0	W	@IC-01	SO4-02	SOLID	2.82e5	2.22e5	N/A	ug/g
95000091	B-101	7	DUP	S95T001553	0	W	@IC-01	OXALATE2	SOLID	<1.42e3	<1.42e3	N/A	ug/g
95000091	B-101	8	SPK	S95T001553	0	W	@IC-01	CL-02	SOLID		26.4	N/A	ug/g
95000091	B-101	8	SPK	S95T001553	0	W	@IC-01	F-02	SOLID		29.3	N/A	ug/g
95000091	B-101	8	SPK	S95T001553	0	W	@IC-01	NO2-02	SOLID		-14.8	N/A	ug/g
95000091	B-101	8	SPK	S95T001553	0	W	@IC-01	BR-02	SOLID		24.1	N/A	ug/g
95000091	B-101	8	SPK	S95T001553	0	W	@IC-01	NO3-02	SOLID		36.0	N/A	ug/g

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2171

DUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000091	B-101	8 SPK	S95T001553	0	W	@IC-01	PO4-02	SOLID		18.3	N/A	ug/g
95000091	B-101	8 SPK	S95T001553	0	W	@IC-01	SO4-02	SOLID		29.5	N/A	ug/g
95000091	B-101	8 SPK	S95T001553	0	W	@IC-01	OXALATE2	SOLID		21.7	N/A	ug/g

Final page for worklist # 2171

R.N. Cohn 8-31-95
Analyst Signature Date

Analyst Signature Date

Entered & Verified 9/12/95 J. M. Fuge

Data Entry Comments:
We will need to rerun S95T001549 for PO4, Br NO2 and NO3 and rerun S95T001553 for everything due to poor RPD + poor spike recovery.
Br was present but not quantifiable. J. M. Fuge

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001549 & S95T001553		
TEST CODE:	@IC-01	ANALYST:	Ed Colvin
INSTRUMENT:	IC01	ANALYSIS DATE:	08/31/95
WORK LIST #:	2171	SAMPLE POINT:	B101
BATCH ID:		SAMPLE PREP:	water digest

Result Units µg/g	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
106N9A	107.6%	100.5%	106.7%	103.7%	99.0%	101.9%	101.3%	95.2%
S95T001549	1.98E+02	3.05E+02	7.76E+04	1.76E+05	1.44E+04	1.20E+04	<2187.72	<1716.95
S95T001549dup	1.88E+02	2.99E+02	7.63E+04	1.73E+05	1.08E+04	1.17E+04	<2189.47	<1718.32
Duplicate 1 RPD	5.2%	1.9%	1.7%	1.8%	29.1%	2.4%	N/A	N/A
S95T001553	<177.20	<237.22	2.66E+04	2.55E+05	1.76E+03	2.82E+05	<1806.31	<1417.61
S95T001553dup	<175.10	<234.41	2.20E+04	1.92E+05	<1683.25	2.22E+05	<1784.92	<1400.83
Duplicate 2 RPD	N/A	N/A	19.2%	28.0%	N/A	23.8%	N/A	N/A
S95T001553spk	29.3%	26.4%	-14.8%	36.0%	18.3%	29.5%	24.1%	21.7%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Form Completed By:	Jane M. Fuge	Date:	9/12/95
Chemist Approval:	Jane M. Fuge	Date:	9/12/95

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WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001549 & S95T001553		
TEST CODE:	@IC-01	ANALYST:	Ed Colvin
INSTRUMENT:	IC01	ANALYSIS DATE:	08/31/95
WORK LIST #:	2171	SAMPLE POINT:	B101
BATCH ID:		SAMPLE PREP:	water digest

Result Units µg/g	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
106N9A	107.6%	100.5%	106.7%	103.7%	99.0%	101.9%	101.3%	95.2%
S95T001549	1.98E+02	3.05E+02	7.76E+04	1.76E+05	1.44E+04	1.20E+04	<2187.72	<1716.95
S95T001549dup	1.88E+02	2.99E+02	7.63E+04	1.73E+05	1.08E+04	1.17E+04	<2189.47	<1718.32
Duplicate 1 RPD	5.2%	1.9%	1.7%	1.8%	29.1%	2.4%	N/A	N/A
S95T001553	<177.20	<237.22	2.66E+04	2.55E+05	1.76E+03	2.82E+05	<1806.31	<1417.61
S95T001553dup	<175.10	<234.41	2.20E+04	1.92E+05	<1683.25	2.22E+05	<1784.92	<1400.83
Duplicate 2 RPD	N/A	N/A	19.2%	28.0%	N/A	23.8%	N/A	N/A
S95T001549spk	116.2%	102.7%	40.5%	-17.2%	91.6%	96.2%	104.6%	98.5%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Form Completed By:	[illegible]	Date:	9/12/95
Chemist Approval:	[illegible]	Date:	9/12/95

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LAB LEADER INFO	
Method:	LA-533-105 d-0
Matrix:	solid
Test Code:	@IC-01
Work List #:	2171
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	106N9A
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	09/12/95
Chemist:	Jann Frye
Analyst:	Ed Colvin
Analysis Date:	08/31/95
Time Complete:	12:26 PM
Instrument Code:	IC01
Rerun:	0
Sample Prep:	water digest
Sample Point:	B101
Sample Type	
STANDARD	106N9A
SAMPLE 1	S95T001549
DUPLICATE 1	S95T001549dup
SAMPLE 2	S95T001553
DUPLICATE 2	S95T001553dup
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001549spk
SPIKE DUPLICATE	

TECH INFO

	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.062	<.083	<.547	<.699	<.596	<.678	<.632	<.496
Standard Data (µg/mL)	63.5	79.4	553.7	636.9	540.8	643.1	582.5	553.1
Sample 1 Data (µg/mL)	1.49E+00	2.29E+00	5.83E+02	1.32E+03	1.08E+02	9.01E+01	<.632	<.496
Sample 1 Dilution Factor	26	26	26	26	26	26	26	26
Sample 1 Prep DF	7.511	7.511	7.511	7.511	7.511	7.511	7.511	7.511
Duplicate 1 Data (µg/mL)	1.41E+00	2.25E+00	5.72E+02	1.30E+03	9.07E+01	8.79E+01	<.632	<.496
Duplicate 1 Dilution Factor	26	26	26	26	26	26	26	26
Duplicate 1 Prep DF	7.505	7.505	7.505	7.505	7.505	7.505	7.505	7.505
Sample 2 Data (µg/mL)	<.062	<.083	2.42E+02	2.32E+03	1.60E+01	2.57E+03	<.632	<.496
Sample 2 Dilution Factor	26	26	26	51	26	51	26	26
Sample 2 Prep DF	9.097	9.097	9.097	9.097	9.097	9.097	9.097	9.097
Duplicate 2 Data (µg/mL)	<.062	<.083	2.02E+02	1.77E+03	<.596	2.04E+03	<.632	<.496
Duplicate 2 Dilution Factor	26	26	26	51	26	51	26	26
Duplicate 2 Prep DF	9.206	9.206	9.206	9.206	9.206	9.206	9.206	9.206
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 1 (µg/mL)	1.86E+01	2.26E+01	6.35E+02	1.29E+03	2.33E+02	2.42E+02	1.50E+02	1.43E+02
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.40	10.40	10.40	10.40	10.40	10.40	10.40	10.40
Std. Conc. (µg/mL)	59	79	519	614	546	631	575	581
Detection Limit	0.062	0.083	0.547	0.699	0.596	0.678	0.632	0.496
Matrix Detection Limit 1	2.15E+02	2.87E+02	1.89E+03	2.42E+03	2.06E+03	2.35E+03	2.19E+03	1.72E+03
Matrix Detection Limit 2	1.77E+02	2.37E+02	1.56E+03	3.92E+03	1.70E+03	3.80E+03	1.81E+03	1.42E+03
Matrix Detection Limit 3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
*Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)*
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	107.6%	100.5%	106.7%	103.7%	99.0%	101.9%	101.3%	95.2%
Sample 1 in µg/g	1.98E+02	3.05E+02	7.76E+04	1.76E+05	1.44E+04	1.20E+04	<2187.72	<1716.95
Duplicate 1 in µg/g	1.88E+02	2.99E+02	7.63E+04	1.73E+05	1.08E+04	1.17E+04	<2189.47	<1718.32
Duplicate 1 RPD	5.2%	1.9%	1.7%	1.8%	29.1%	2.4%	N/A	N/A
Sample 2 in µg/g	<177.20	<237.22	2.66E+04	2.55E+05	1.76E+03	2.82E+05	<1908.31	<1417.61
Duplicate 2 in µg/g	<175.10	<234.41	2.20E+04	1.92E+05	<1683.25	2.22E+05	<1784.92	<1400.83
Duplicate 2 RPD	N/A	N/A	19.2%	28.0%	N/A	23.8%	N/A	N/A
Spike % Recovery	116.2%	102.7%	40.5%	-17.2%	91.6%	96.2%	104.6%	98.5%

Data Entry by: Jann Frye Date: 09/12/95
Approved by: Jann Frye Date: 9/12/95

Form DIONEX.WB1 Rev. 1.3

LAB LEADER INFO	
Method:	LA-533-105 d-0
Matrix:	solid
Test Code:	@IC-01
Work List #:	2171
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	106N9A
Spike Sample #:	2
Prepared By:	Jann Frye
Prepared Date:	09/12/95
Chemist:	Jann Frye
Analyst:	Ed Colvin
Analysis Date:	08/31/95
Time Complete:	12:26 PM
Instrument Code:	IC01
Rerun:	0
Sample Prep:	water digest
Sample Point:	B101
Sample Type	
STANDARD	106N9A
SAMPLE 1	S95T001549
DUPLICATE 1	S95T001549dup
SAMPLE 2	S95T001553
DUPLICATE 2	S95T001553dup
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001553spk
SPIKE DUPLICATE	

PRINT

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.062	<.083	<.547	<.699	<.596	<.678	<.632	<.496
Standard Data (µg/mL)	63.5	79.4	553.7	636.9	540.9	643.1	592.5	553.1
Sample 1 Data (µg/mL)	1.49E+00	2.29E+00	5.83E+02	1.32E+03	1.09E+02	9.01E+01	<.632	<.496
Sample 1 Dilution Factor	26	26	26	26	26	26	26	26
Sample 1 Prep DF	7.511	7.511	7.511	7.511	7.511	7.511	7.511	7.511
Duplicate 1 Data (µg/mL)	1.41E+00	2.25E+00	5.72E+02	1.30E+03	9.07E+01	8.79E+01	<.632	<.496
Duplicate 1 Dilution Factor	26	26	26	26	26	26	26	26
Duplicate 1 Prep DF	7.505	7.505	7.505	7.505	7.505	7.505	7.505	7.505
Sample 2 Data (µg/mL)	<.062	<.083	2.42E+02	2.32E+03	1.60E+01	2.57E+03	<.632	<.496
Sample 2 Dilution Factor	26	26	26	51	26	51	26	26
Sample 2 Prep DF	9.097	9.097	9.097	9.097	9.097	9.097	9.097	9.097
Duplicate 2 Data (µg/mL)	<.062	<.083	2.02E+02	1.77E+03	<.596	2.04E+03	<.632	<.496
Duplicate 2 Dilution Factor	26	26	26	51	26	51	26	26
Duplicate 2 Prep DF	9.206	9.206	9.206	9.206	9.206	9.206	9.206	9.206
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 2 (µg/mL)	4.32E+00	5.21E+00	2.23E+02	2.43E+03	4.10E+01	2.66E+03	3.46E+01	3.15E+01
Spike + Dup 2 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.40	10.40	10.40	10.20	10.40	10.20	10.40	10.40
Std. Conc. (µg/mL)	59	79	519	614	548	631	575	581
Detection Limit	0.062	0.083	0.547	0.699	0.596	0.678	0.632	0.496
Matrix Detection Limit 1	2.15E+02	2.87E+02	1.89E+03	2.42E+03	2.06E+03	2.35E+03	2.19E+03	1.72E+03
Matrix Detection Limit 2	1.77E+02	2.37E+02	1.56E+03	3.92E+03	1.70E+03	3.80E+03	1.81E+03	1.42E+03
Matrix Detection Limit 3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	107.6%	100.5%	106.7%	103.7%	99.0%	101.9%	101.3%	96.2%
Sample 1 in µg/g	1.98E+02	3.05E+02	7.76E+04	1.76E+05	1.44E+04	1.20E+04	<2187.72	<1716.95
Duplicate 1 in µg/g	1.88E+02	2.99E+02	7.63E+04	1.73E+05	1.08E+04	1.17E+04	<2189.47	<1718.32
Duplicate 1 RPD	5.2%	1.9%	1.7%	1.8%	29.1%	2.4%	N/A	N/A
Sample 2 in µg/g	<177.20	<237.22	2.66E+04	2.55E+05	1.76E+03	2.82E+05	<1806.31	<1417.61
Duplicate 2 in µg/g	<175.10	<234.41	2.20E+04	1.92E+05	<1663.25	2.22E+05	<1784.92	<1400.83
Duplicate 2 RPD	N/A	N/A	19.2%	28.0%	N/A	23.6%	N/A	N/A
Spike % Recovery	29.3%	26.4%	-14.8%	36.0%	18.3%	29.5%	24.1%	21.7%

Data Entry by: Jann Frye Date: 09/12/95
Approved by: Jann Frye Date: 9/12/95

Form DIONEX.WB1 Rev. 1.3

Sample Name: 106N9-A STD Date: 08/31/1995 09:28:38
Data File : C:\DX\DATA\95083101.D03
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 3 Detector:CDM-1
Analyst : [illegible] Column: AG4A/AS4A anion column/SRS

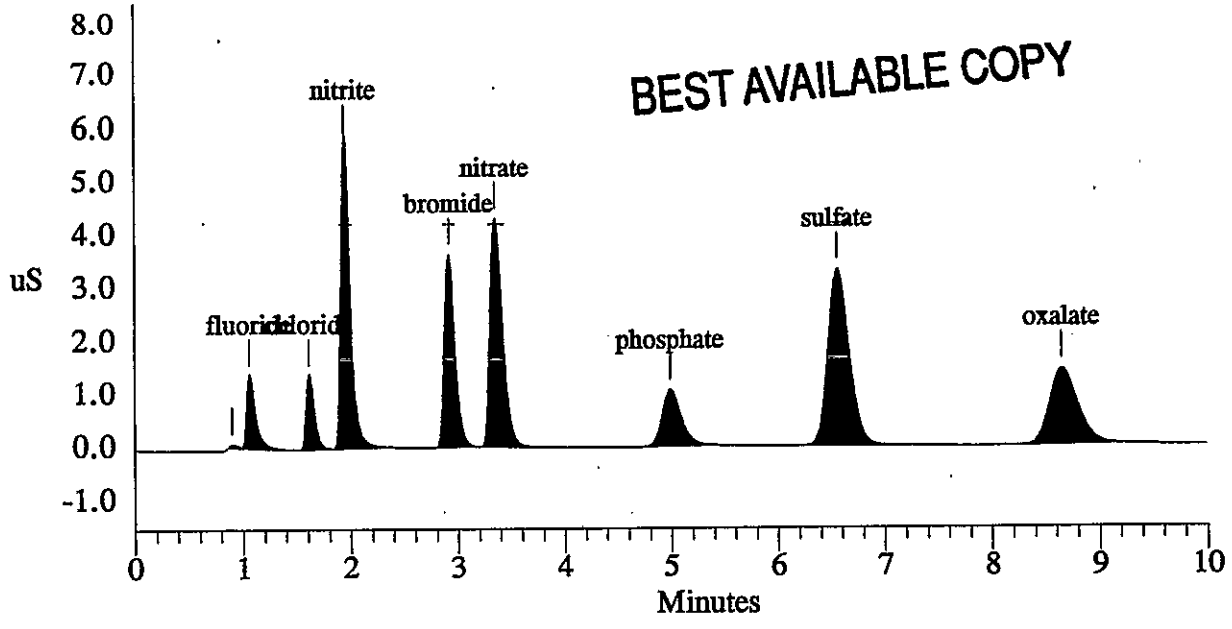
8/31/95

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	61	298	2	
2	1.06	fluoride	63.544	1376	8001	2	0.00
3	1.61	chloride	79.360	1397	7560	1	-2.42
4	1.94	nitrite	553.772	5770	35410	1	-3.48
5	2.92	bromide	582.547	3641	24920	1	-1.68
6	3.35	nitrate	636.915	4313	35204	1	0.00
7	4.99	phosphate	540.850	1071	13500	1	-0.99
8	6.56	sulfate	643.081	3333	46019	1	-1.94
9	8.65	oxalate	553.100	1460	26908	1	-1.70
		Totals	3653.169	22422	197819		

File: 95083101.D03 Sample: 106N9-A STD



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SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 129 TO 140.

WHC-SD-WM-DP-139, REV. 1

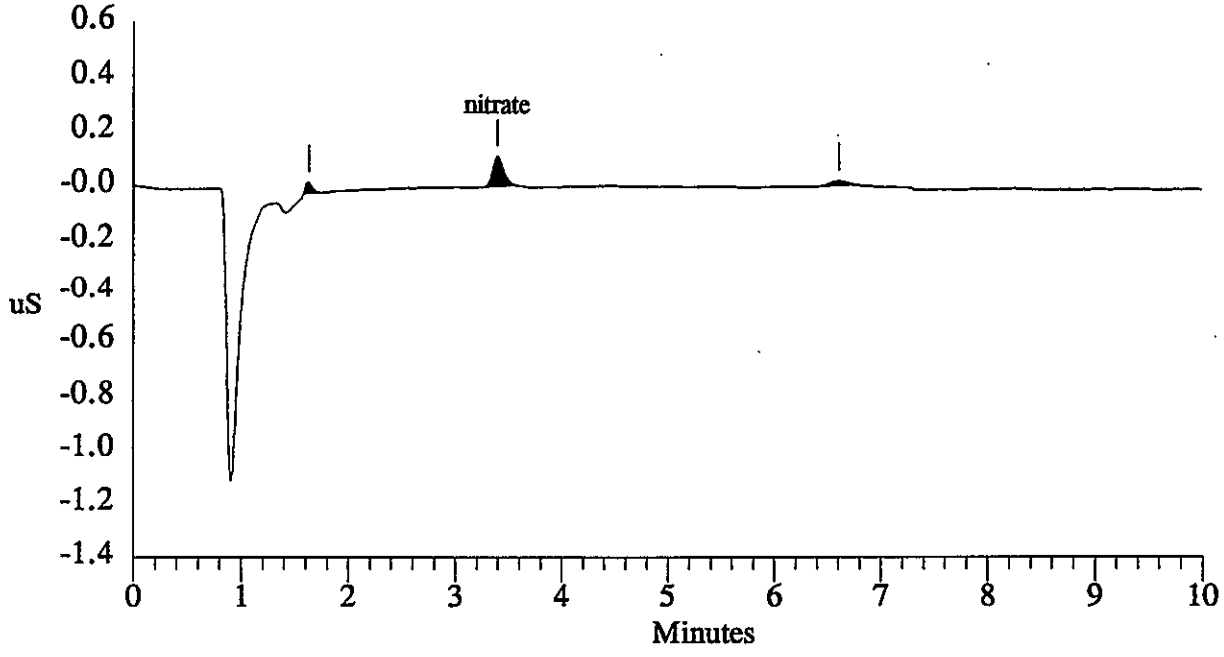
```
==============================================================================
| Sample Name: PREP BLANK                          Date: 08/31/1995 09:17:15   |
| Data File  : C:\DX\DATA\95083101.D02                                         |
| Method     : C:\DX\METHOD\KIT.MET                                            |
| ACI Address: 1  System: 1  Inject#: 2                    Detector:CDM-1      |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS             |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	3.40	nitrate	0.151	109	790	1	1.49
		Totals	0.151	109	790		

File: 95083101.D02 Sample: PREP BLANK



WHC-SD-WM-DP-139, REV. 1

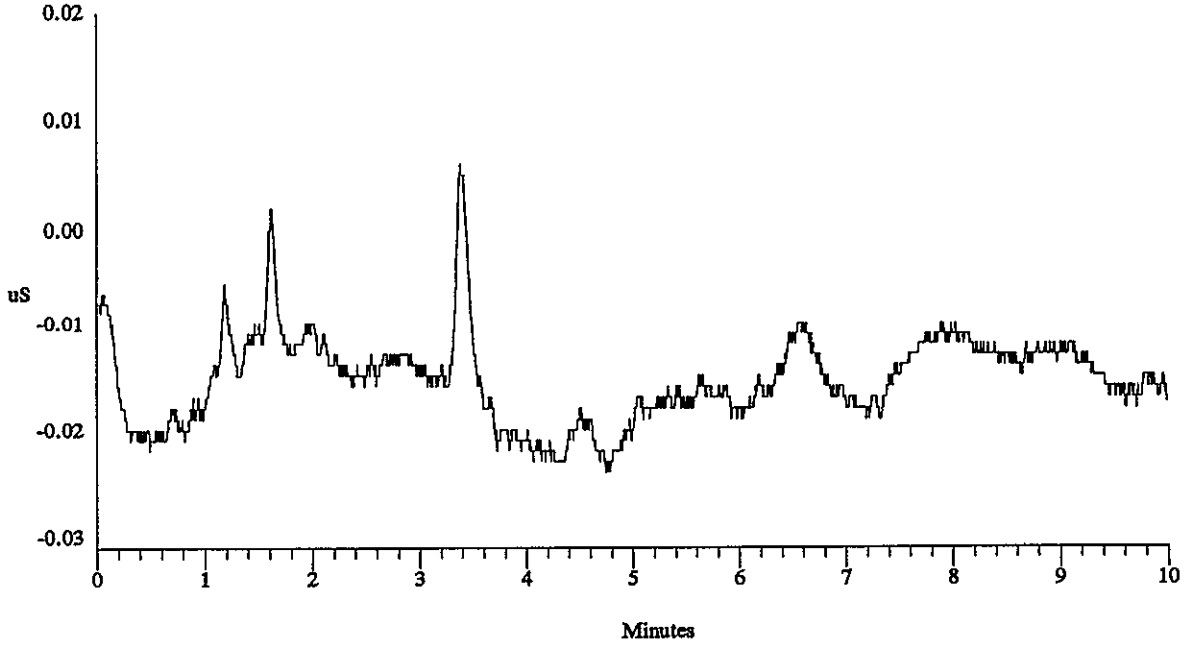
```
==================================================================================
| Sample Name: INSTR BLANK                        Date: 08/31/1995 09:04:14       |
| Data File  : C:\DX\DATA\95083101.D01                                            |
| Method     : C:\DX\METHOD\KIT.MET                                               |
| ACI Address: 1  System: 1  Inject#: 1                        Detector:CDM-1     |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS                |
==================================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
		Totals	0.000	0	0		

File: 95083101.D01 Sample: INSTR BLANK



WHC-SD-WM-DP-139, REV. 1

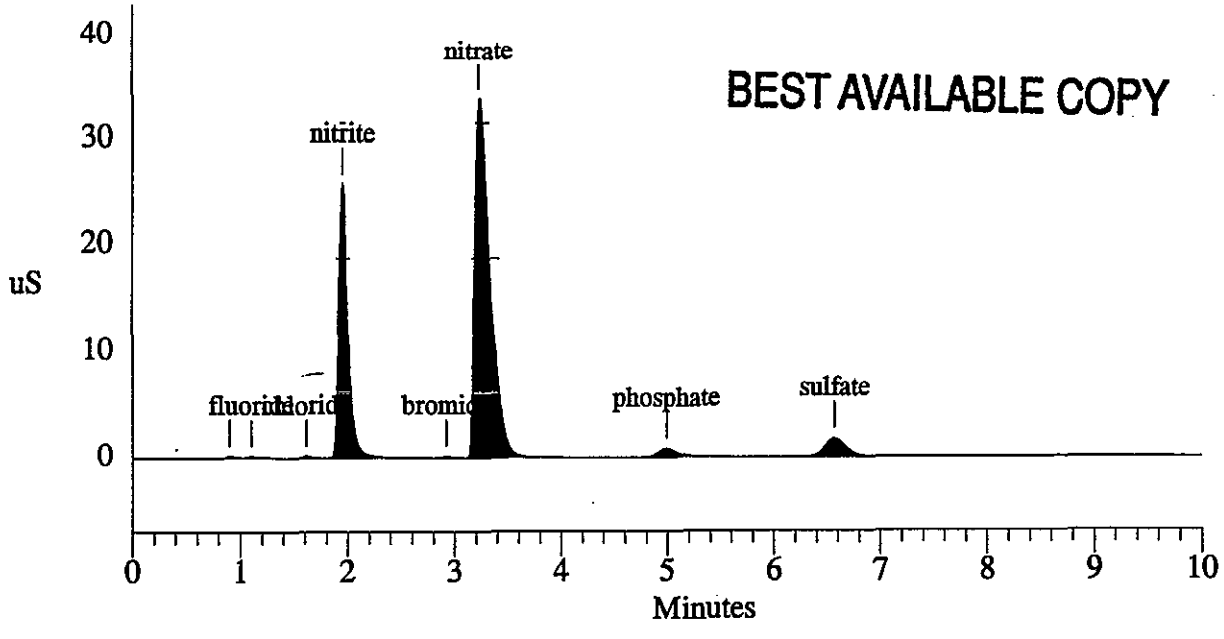
```
==============================================================================
| Sample Name: S95T001549                        Date: 08/31/1995 10:38:11    |
| Data File  : C:\DX\DATA\95083101.D05                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 5                   Detector:CDM-1      |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS            |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	26	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	157	881	2	
2	1.10	fluoride	1.486	123	665	2	3.77
3	1.61	chloride	2.293	197	1157	1	-2.42
4	1.95	nitrite	582.834	25737	154319	1	-2.99
5	2.92	bromide	9.254	139	914	1	-1.68
6	3.23	nitrate	1320.860	33646	339642	1	-3.58
7	4.99	phosphate	108.376	825	10361	1	-0.99
8	6.57	sulfate	90.116	1776	24657	1	-1.79
		Totals	2115.220	62599	532596		

File: 95083101.D05 Sample: S95T001549



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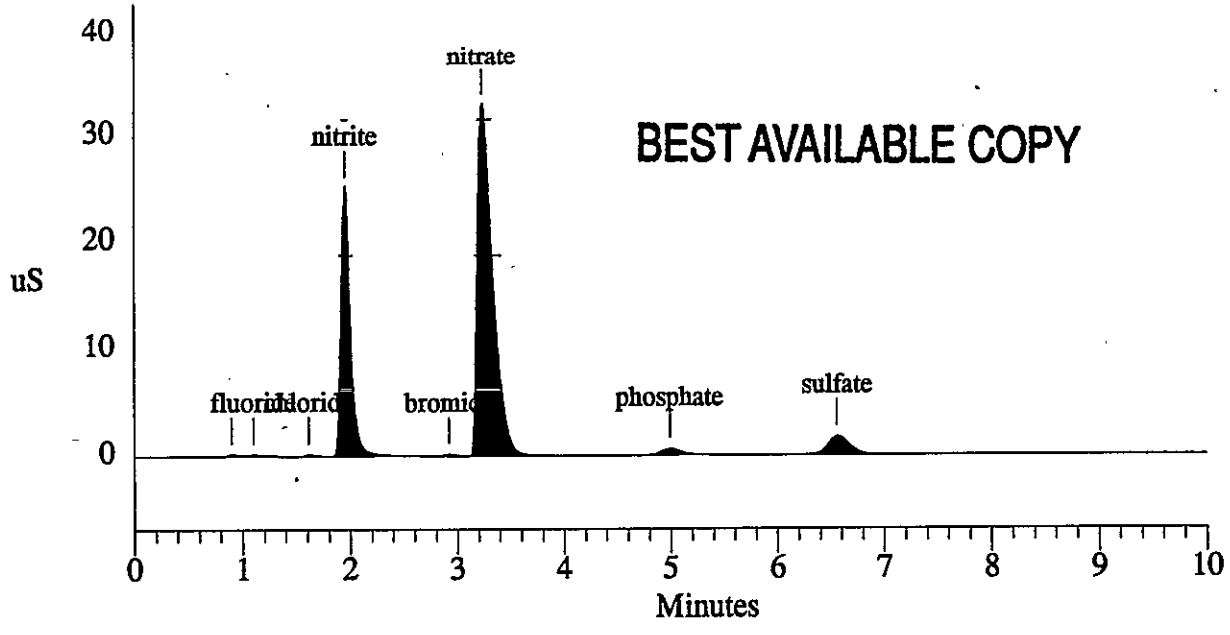
==================================================================================
| Sample Name: S95T001549  DUP                    Date: 08/31/1995 10:55:16       |
| Data File  : C:\DX\DATA\95083101.D06                                            |
| Method     : C:\DX\METHOD\KIT.MET                                               |
| ACI Address: 1  System: 1  Inject#: 6                        Detector:CDM-1     |
| Analyst    :                  Column: AG4A/AS4A anion column/SRS               |
==================================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	26	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	149	832	2	
2	1.10	fluoride	1.409	114	627	2	3.77
3	1.61	chloride	2.246	195	1140	1	-2.42
4	1.95	nitrite	572.335	25162	151312	1	-2.99
5	2.92	bromide	9.204	137	906	1	-1.68
6	3.23	nitrate	1295.656	32862	331398	1	-3.58
7	4.99	phosphate	80.721	602	7572	1	-0.99
8	6.56	sulfate	87.978	1728	24058	1	-1.94
		Totals	2049.548	60949	517844		

File: 95083101.D06 Sample: S95T001549 DUP



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WHC-SD-WM-DP-139, REV. 1

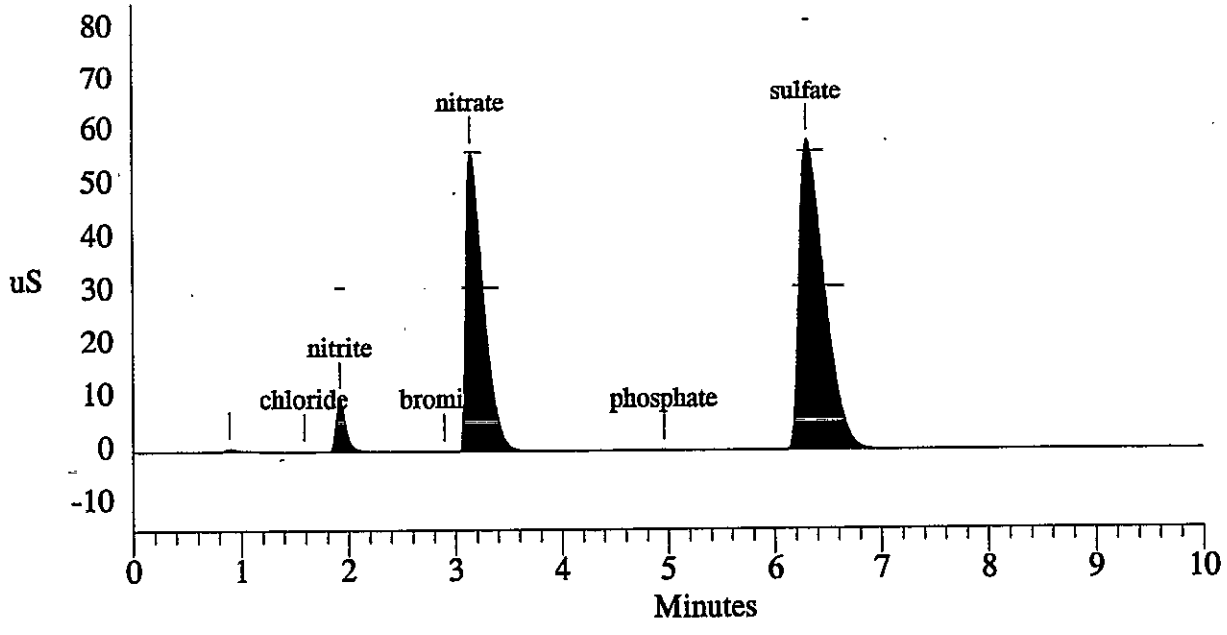
```
==================================================================================
| Sample Name: S95T001553                          Date: 08/31/1995 11:22:09      |
| Data File  : C:\DX\DATA\95083101.D08                                            |
| Method     : C:\DX\METHOD\KIT.MET                                               |
| ACI Address: 1  System: 1  Inject#: 8                    Detector:CDM-1         |
| Analyst    :                  Column: AG4A/AS4A anion column/SRS               |
==================================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	26	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	459	2738	1	
2	1.59	chloride	1.104	107	743	1	-3.64
3	1.92	nitrite	242.393	9849	61193	1	-4.48
4	2.90	bromide	6.560	77	463	1	-2.36
5	3.15	nitrate	1995.198	55899	632582	1	-5.97
6	4.96	phosphate	16.009	97	1132	1	-1.59
7	6.31	sulfate	2040.264	57996	948198	1	-5.68
		Totals	4301.529	124484	1647048		

File: 95083101.D08 Sample: S95T001553



WHC-SD-WM-DP-139, REV. 1

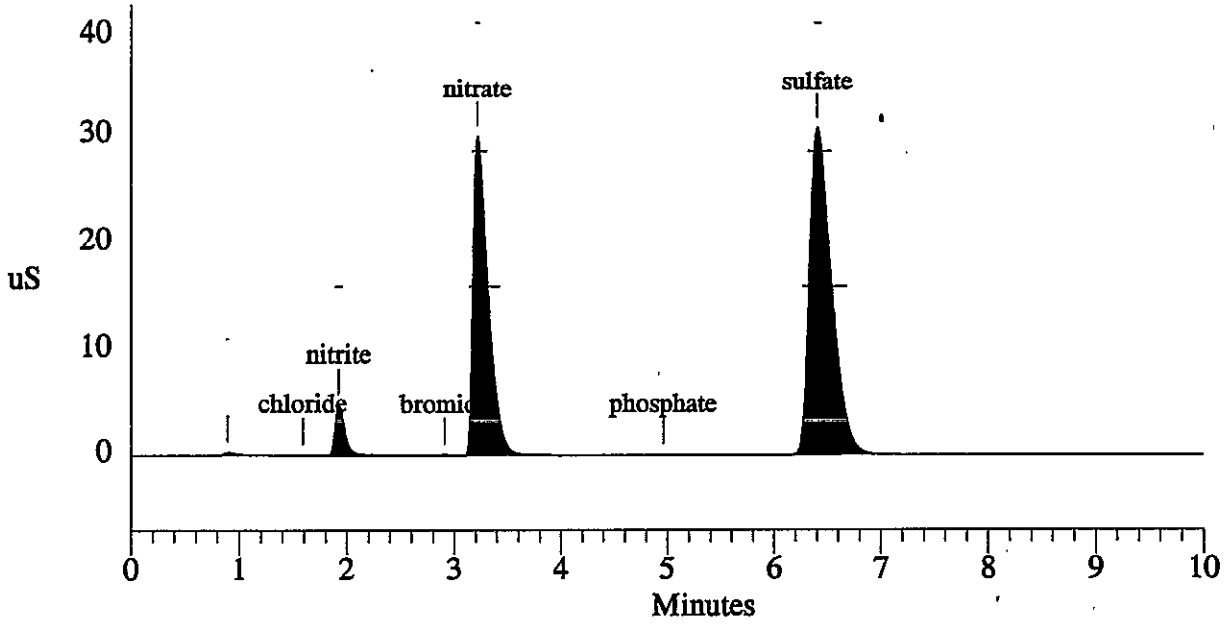
```
==============================================================================
| Sample Name: S95T001553                      Date: 08/31/1995 11:36:10      |
| Data File  : C:\DX\DATA\95083101.D09                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 9                   Detector:CDM-1      |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS             |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	51	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	235	1400	1	
2	1.59	chloride	0.386	72	428	1	-3.64
3	1.92	nitrite	238.833	4764	30116	1	-4.48
4	2.91	bromide	10.001	36	218	1	-2.02
5	3.22	nitrate	2315.742	29943	295084	1	-3.88
6	4.96	phosphate	19.324	47	525	1	-1.59
7	6.41	sulfate	2565.245	30722	443776	1	-4.19
		Totals	5149.530	65820	771547		

File: 95083101.D09 Sample: S95T001553



WHC-SD-WM-DP-139, REV. 1

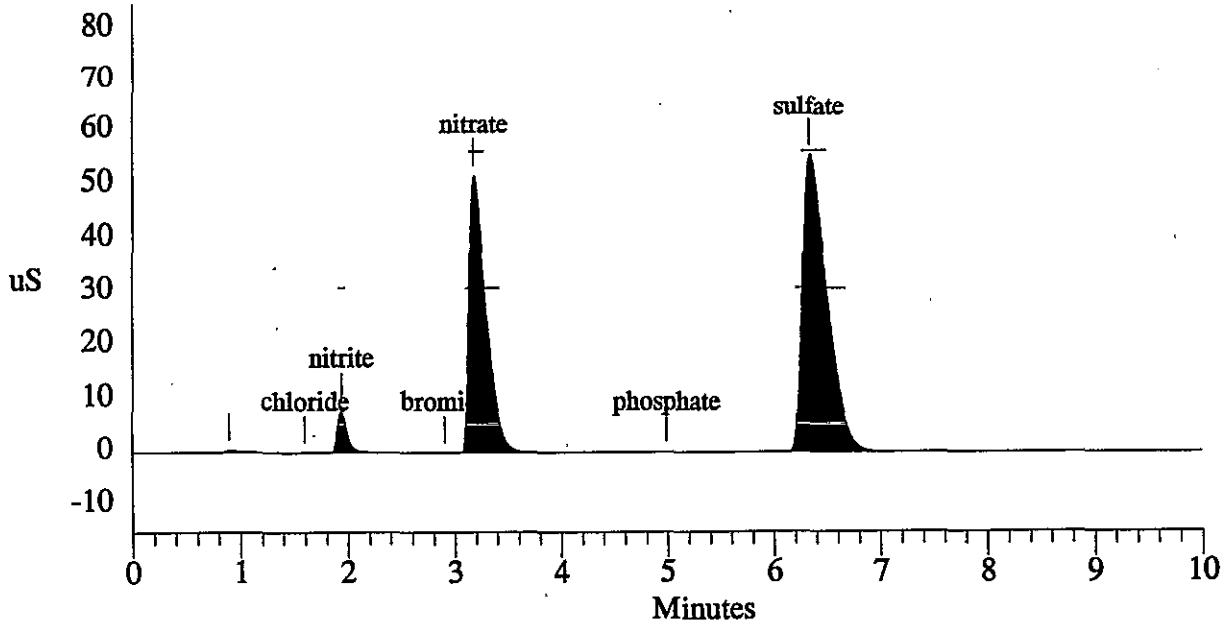
```
==================================================================================
| Sample Name: S95T001553  DUP                    Date: 08/31/1995 12:04:52       |
| Data File  : C:\DX\DATA\95083101.D11                                            |
| Method     : C:\DX\METHOD\KIT.MET                                               |
| ICI Address: 1  System: 1  Inject#: 11                    Detector:CDM-1        |
| Analyst    :                  Column: AG4A/AS4A anion column/SRS               |
==================================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	26	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	494	3974	1	
2	1.60	chloride	0.806	95	639	1	-3.03
3	1.94	nitrite	202.204	8097	50739	1	-3.48
4	2.91	bromide	6.128	62	390	1	-2.02
5	3.18	nitrate	1891.922	51544	572470	1	-5.07
6	4.99	phosphate	13.598	78	894	1	-0.99
7	6.34	sulfate	1996.373	55160	889715	1	-5.23
		Totals	4111.031	115530	1518822		

File: 95083101.D11 Sample: S95T001553 DUP



WHC-SD-WM-DP-139, REV. 1

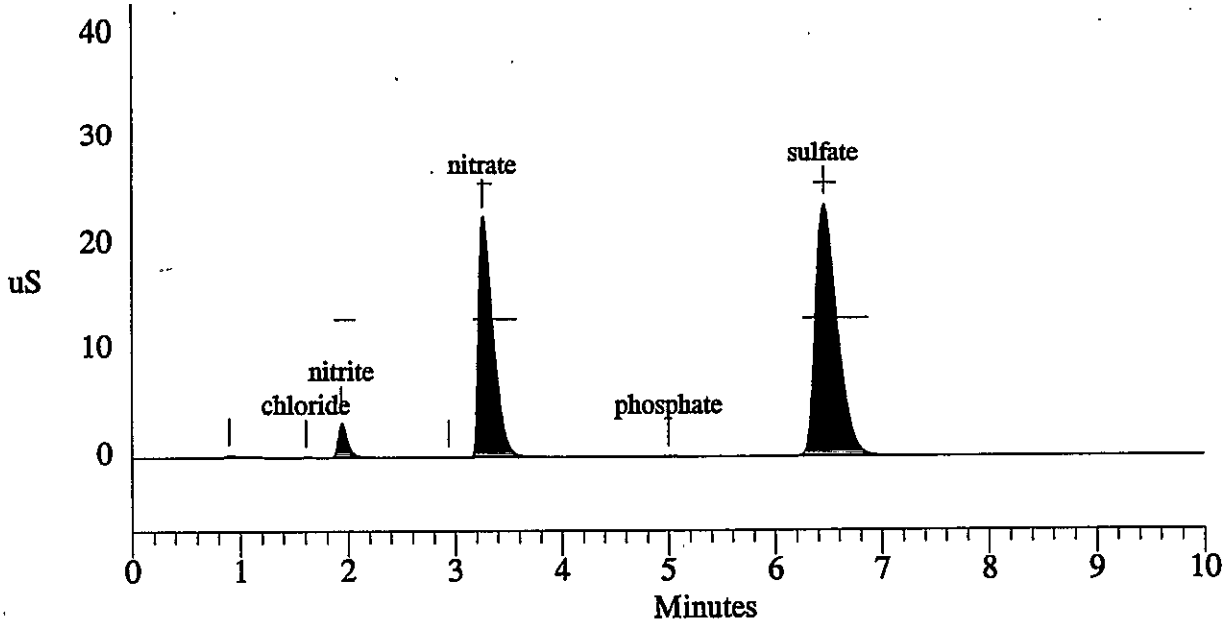
Sample Name: S95T001553 DUP Date: 08/31/1995 11:54:05
Data File : C:\DX\DATA\95083101.D10
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 10 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	51	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	171	1049	1	
2	1.61	chloride	0.326	72	417	1	-2.42
3	1.94	nitrite	158.904	3203	19819	1	-3.48
5	3.26	nitrate	1768.365	22547	214485	1	-2.69
6	5.00	phosphate	15.190	29	318	1	-0.79
7	6.46	sulfate	2043.982	23640	333906	1	-3.44
		Totals	3986.767	49661	569994		

File: 95083101.D10 Sample: S95T001553 DUP



WHC-SD-WM-DP-139, REV. 1

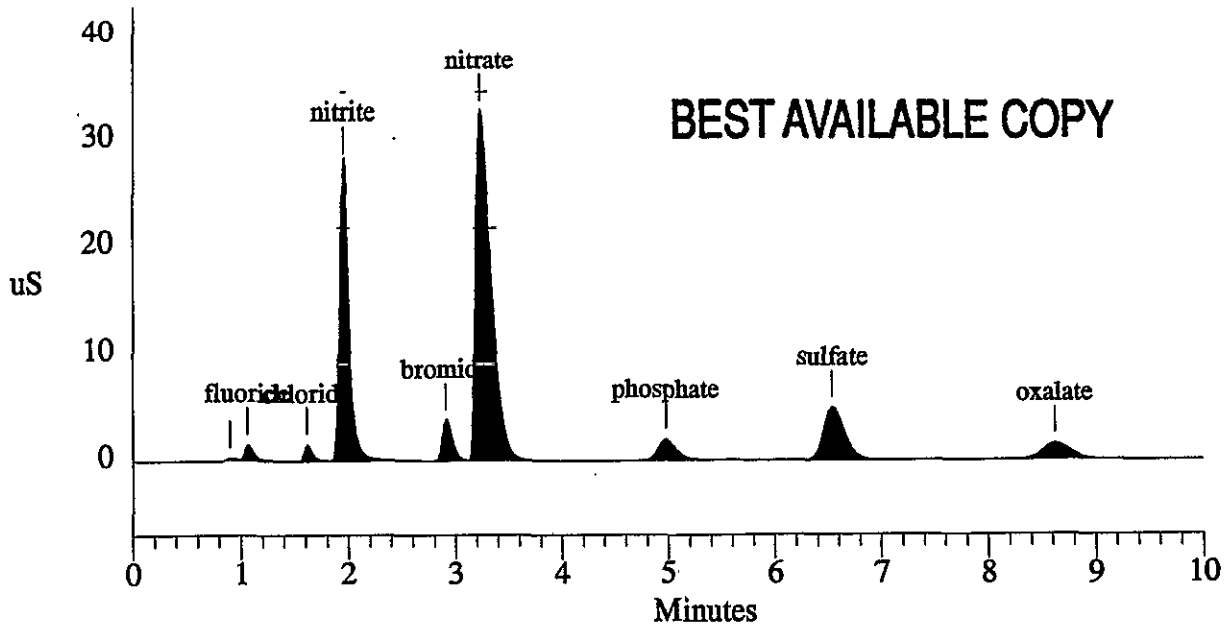
```
==================================================================================
| Sample Name: S95T001549  + SPIKE            Date: 08/31/1995 11:06:16          |
| Data File  : C:\DX\DATA\95083101.D07                                           |
| Method     : C:\DX\METHOD\KIT.MET                                              |
| ACI Address: 1  System: 1  Inject#: 7                    Detector:CDM-1        |
| Analyst    :                 Column: AG4A/AS4A anion column/SRS                |
==================================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	26	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	171	858	2	
2	1.06	fluoride	18.636	1434	9148	2	0.00
3	1.61	chloride	22.577	1497	8330	1	-2.42
4	1.95	nitrite	635.403	27810	169519	1	-2.99
5	2.91	bromide	150.348	3777	24987	1	-2.02
6	3.23	nitrate	1294.459	32632	331009	1	-3.58
7	4.98	phosphate	233.461	1893	23272	1	-1.19
8	6.54	sulfate	241.905	4917	68070	1	-2.24
9	8.62	oxalate	143.106	1478	27052	1	-2.05
		Totals	2739.894	75607	662246		

File: 95083101.D07 Sample: S95T001549 + SPIKE



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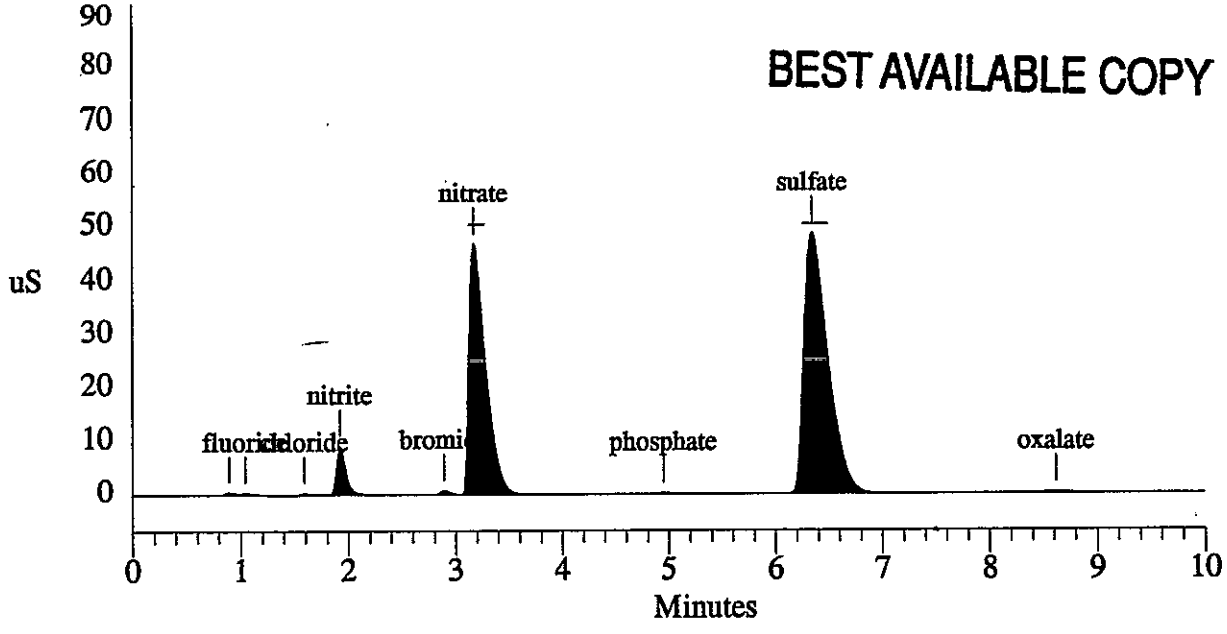
```
==========================================================================
| Sample Name: S95T001553 + SPIKE            Date: 08/31/1995 12:15:40   |
| Data File  : C:\DX\DATA\95083101.D12                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 12                Detector:CDM-1   |
| Analyst    :                Column: AG4A/AS4A anion column/SRS         |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	26	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	301	1562	2	
2	1.04	fluoride	4.318	278	2041	2	-1.89
3	1.59	chloride	5.209	371	2174	1	-3.64
4	1.92	nitrite	223.149	9185	56174	1	-4.48
5	2.89	bromide	34.611	796	5179	1	-2.69
6	3.17	nitrate	1762.869	46751	508846	1	-5.37
7	4.95	phosphate	41.074	301	3612	1	-1.79
8	6.35	sulfate	1867.150	48842	765262	1	-5.08
9	8.62	oxalate	31.542	287	5184	1	-2.05
		Totals	3969.923	107114	1350034		

File: 95083101.D12 Sample: S95T001553 + SPIKE



WHC-SD-WM-DP-139, REV. 1

Sample Name: S95T001553 + SPIKE Date: 08/31/1995 12:26:36
Data File : C:\DX\DATA\95083101.D13
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 13 Detector:CDM-1
Analyst : E.K. Cole Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	51	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	234	1156	2	
2	1.04	fluoride	33.266	1392	8303	2	-1.89
3	1.59	chloride	42.481	1409	8000	1	-3.64
4	1.93	nitrite	516.830	10772	66721	1	-3.98
5	2.89	bromide	291.971	3733	24727	1	-2.69
6	3.22	nitrate	2426.127	31478	312581	1	-3.88
7	4.95	phosphate	298.732	1199	14838	1	-1.79
8	6.41	sulfate	2658.482	32078	465265	1	-4.19
9	8.59	oxalate	284.073	1492	27393	1	-2.39
		Totals	6551.962	83786	928983		

File: 95083101.D13 Sample: S95T001553 + SPIKE

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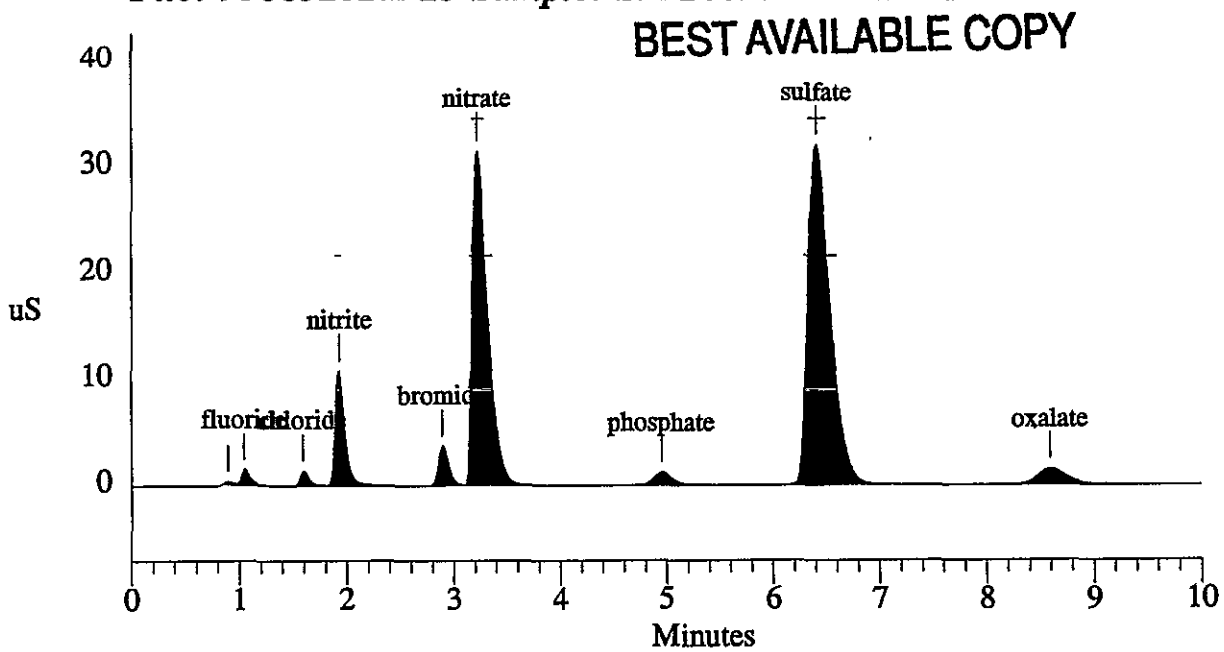


WHC-SD-WM-DP-139, REV. 1

LABCORE Completed Worklist Report for Worklist# 2172

Analyst: dpb **Instrument:** IC01 **Book#** 106W94

Method: GA-533-105 Rev/Mod D-0

Worklist Comment: B-101 IC. JMF

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK-PREP			0	@IC-01 F-02	SOLID	1	<.062		ug/g
1	BLNK-PREP			0	@IC-01 CL-02	SOLID	1	<.083		ug/g
1	BLNK-PREP			0	@IC-01 NO2-02	SOLID	1	<.547		ug/g
1	BLNK-PREP			0	@IC-01 BR-02	SOLID	1	<.632		ug/g
1	BLNK-PREP			0	@IC-01 NO3-02	SOLID	1	<.699		ug/g
1	BLNK-PREP			0	@IC-01 PO4-02	SOLID	1	<.596		ug/g
1	BLNK-PREP			0	@IC-01 SO4-02	SOLID	1	<.678		ug/g
1	BLNK-PREP			0	@IC-01 OXALATE2	SOLID	1	<.496		ug/g
2	STD			0	@IC-01 F-02	SOLID	59	64.35	109.070	% Recovery
2	STD			0	@IC-01 CL-02	SOLID	79	78.77	99.710	% Recovery
2	STD			0	@IC-01 NO2-02	SOLID	519	551.2	106.200	% Recovery
2	STD			0	@IC-01 BR-02	SOLID	575	580.4	100.940	% Recovery
2	STD			0	@IC-01 NO3-02	SOLID	614	616.2	100.360	% Recovery
2	STD			0	@IC-01 PO4-02	SOLID	546	558.4	102.270	% Recovery
2	STD			0	@IC-01 SO4-02	SOLID	631	636.6	100.890	% Recovery
2	STD			0	@IC-01 OXALATE2	SOLID	581	553.2	95.220	% Recovery
3	SAMPLE	S95T001557	W	0	@IC-01 F-02	SOLID	N/A <	2.04e2	204.000	ug/g
3	SAMPLE	S95T001557	W	0	@IC-01 CL-02	SOLID	N/A <	2.73e2	273.000	ug/g
3	SAMPLE	S95T001557	W	0	@IC-01 NO2-02	SOLID	N/A	3.35e4	1.800e+003	ug/g
3	SAMPLE	S95T001557	W	0	@IC-01 BR-02	SOLID	N/A <	2.08e3	2.080e+003	ug/g
3	SAMPLE	S95T001557	W	0	@IC-01 NO3-02	SOLID	N/A	2.82e05	7.250e+003	ug/g
3	SAMPLE	S95T001557	W	0	@IC-01 PO4-02	SOLID	N/A	2.78e03	1.960e+003	ug/g
3	SAMPLE	S95T001557	W	0	@IC-01 SO4-02	SOLID	N/A	1.95e05	7.030e+003	ug/g
3	SAMPLE	S95T001557	W	0	@IC-01 OXALATE2	SOLID	N/A <	1.63e3	1.630e+003	ug/g
4	DUP	S95T001557	W	0	@IC-01 F-02	SOLID	<2.04e2	<2.04e2		RPD
4	DUP	S95T001557	W	0	@IC-01 CL-02	SOLID	<2.73e2	<2.73e2		RPD
4	DUP	S95T001557	W	0	@IC-01 NO2-02	SOLID	3.35e4	2.58e4	26.100	RPD
4	DUP	S95T001557	W	0	@IC-01 BR-02	SOLID	<2.08e3	<2.08e3		RPD
4	DUP	S95T001557	W	0	@IC-01 NO3-02	SOLID	2.82e05	3.13e05	10.420	RPD
4	DUP	S95T001557	W	0	@IC-01 PO4-02	SOLID	2.78e03	2.25e03	21.070	RPD
4	DUP	S95T001557	W	0	@IC-01 SO4-02	SOLID	1.95e05	1.95e05	0.300	RPD
4	DUP	S95T001557	W	0	@IC-01 OXALATE2	SOLID	<1.63e3	<1.63e3		RPD
5	SPK	S95T001557	W	0	@IC-01 CL-02	SOLID	100	114.6	114.600	% Recovery
5	SPK	S95T001557	W	0	@IC-01 F-02	SOLID	100	116.5	116.500	% Recovery
5	SPK	S95T001557	W	0	@IC-01 NO2-02	SOLID	100	92.0	92.000	% Recovery
5	SPK	S95T001557	W	0	@IC-01 BR-02	SOLID	100	104.3	104.300	% Recovery
5	SPK	S95T001557	W	0	@IC-01 NO3-02	SOLID	100	96.1	96.100	% Recovery
5	SPK	S95T001557	W	0	@IC-01 PO4-02	SOLID	100	101.9	101.900	% Recovery
5	SPK	S95T001557	W	0	@IC-01 SO4-02	SOLID	100	104.3	104.300	% Recovery
5	SPK	S95T001557	W	0	@IC-01 OXALATE2	SOLID	100	97.7	97.700	% Recovery

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 2172

Analyst: DPB **Instrument:** IC01 IC01 **Book #** 106N9-A

Method: LA-533-105 Rev/Mod ~~D-8~~ D-0 JMF 9/11/95

Worklist Comment: B-101 IC. JMF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				@IC-01 F-02	SOLID	1	<.062	N/A	ug/g
		1	BLNK-PREP				@IC-01 CL-02	SOLID	1	<.083	N/A	ug/g
		1	BLNK-PREP				@IC-01 NO2-02	SOLID	1	<.547	N/A	ug/g
		1	BLNK-PREP				@IC-01 BR-02	SOLID	1	~~<.699~~ <.632 JMF 9/11/95	N/A	ug/g
		1	BLNK-PREP				@IC-01 NO3-02	SOLID	1	~~<.596~~ <.699 JMF 9/11/95	N/A	ug/g
		1	BLNK-PREP				@IC-01 PO4-02	SOLID	1	~~<.678~~ <.596 JMF 9/11/95	N/A	ug/g
		1	BLNK-PREP				@IC-01 SO4-02	SOLID	1	<.678	N/A	ug/g
		1	BLNK-PREP				@IC-01 OXALATE2	SOLID	1	<.496	N/A	ug/g
		2	STD				@IC-01 F-02	SOLID	59	64.348	N/A	ug/g
		2	STD				@IC-01 CL-02	SOLID	79	78.766	N/A	ug/g
		2	STD				@IC-01 NO2-02	SOLID	519	551.151	N/A	ug/g
		2	STD				@IC-01 BR-02	SOLID	575	580.433	N/A	ug/g
		2	STD				@IC-01 NO3-02	SOLID	614	616.217	N/A	ug/g
		2	STD				@IC-01 PO4-02	SOLID	546	558.363	N/A	ug/g
		2	STD				@IC-01 SO4-02	SOLID	631	636.638	N/A	ug/g
		2	STD				@IC-01 OXALATE2	SOLID	581	553.159	N/A	ug/g
95000093	B-101	3	SAMPLE	S95T001557	0	W	@IC-01 F-02	SOLID	N/A	~~<.643.05~~ <2.04e2 JMF 9/11/95 ~~<.062~~	2.04e2	ug/g
95000093	B-101	3	SAMPLE	S95T001557	0	W	@IC-01 CL-02	SOLID	N/A	~~<.083~~ <2.73e2 ~~<860.85~~ JMF 9/11/95	2.73e2	ug/g

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2172

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	TEST		MATRIX	ACTUAL	FOUND	DL	UNIT
95000093	B-101	3 SAMPLE	S95T001557	0	W	@IC-01	NO2-02	SOLID	N/A	3.35e4 ~~3.20+4~~ 3.12+2	gmF 9/11/95 1.8e3	ug/g
95000093	B-101	3 SAMPLE	S95T001557	0	W	@IC-01	BR-02	SOLID	N/A	<2.08e3 ~~<6554.94~~ <.637	gmF 9/11/95 2.08e3	ug/g
95000093	B-101	3 SAMPLE	S95T001557	0	W	@IC-01	NO3-02	SOLID	N/A	gmF 9/11/95 2.82+5 ~~2.75+3~~	7.25e3	ug/g
95000093	B-101	3 SAMPLE	S95T001557	0	W	@IC-01	PO4-02	SOLID	N/A	gmF 9/11/95 2.78+3 ~~2.71+1~~	1.94e3	ug/g
95000093	B-101	3 SAMPLE	S95T001557	0	W	@IC-01	SO4-02	SOLID	N/A	gmF 9/11/95 1.95+5 ~~1.90+3~~	7.03e3	ug/g
95000093	B-101	3 SAMPLE	S95T001557	0	W	@IC-01	OXALATE2	SOLID	N/A	<1.63e3 ~~<5144.38~~ ~~<.496~~	gmF 9/11/95 1.63e3	ug/g
95000093	B-101	4 DUP	S95T001557	0	W	@IC-01	F-02	SOLID	~~<643.05~~ <2.72e2	<2.04e2 ~~<6.42~~ ~~<860.24~~	<2.04e2 gmF 9/11/95 N/A	ug/g
95000093	B-101	4 DUP	S95T001557	0	W	@IC-01	CL-02	SOLID	~~<860.85~~ 3.35e4	~~<860.24~~ ~~2.80+4~~	<2.72e2 gmF 9/11/95 N/A	ug/g
95000093	B-101	4 DUP	S95T001557	0	W	@IC-01	NO2-02	SOLID	~~3.20+4~~ <2.08e3	~~3.20+4~~ <2.08e3	2.58e4 gmF 9/11/95 N/A	ug/g
95000093	B-101	4 DUP	S95T001557	0	W	@IC-01	BR-02	SOLID	~~<6554.94~~	~~<6550.23~~	gmF 9/11/95 N/A	ug/g
95000093	B-101	4 DUP	S95T001557	0	W	@IC-01	NO3-02	SOLID	2.82+5	3.13+5	N/A	ug/g
95000093	B-101	4 DUP	S95T001557	0	W	@IC-01	PO4-02	SOLID	2.78+3	2.25+3	N/A	ug/g
95000093	B-101	4 DUP	S95T001557	0	W	@IC-01	SO4-02	SOLID	1.95+5 <1.63e3	1.95+5 ~~<5144.38~~ <1.63e3	N/A gmF 9/11/95	ug/g
95000093	B-101	4 DUP	S95T001557	0	W	@IC-01	OXALATE2	SOLID	~~<.496~~	~~<5140.69~~	N/A	ug/g
95000093	B-101	5 SPK	S95T001557	0	W	@IC-01	CL-02	SOLID	gmF 9/11/95 114.6% 100	~~114.7%~~ ~~36.2~~	~~104.2~~ N/A	RS 8-1-95 ug/g
95000093	B-101	5 SPK	S95T001557	0	W	@IC-01	F-02	SOLID	gmF 9/11/95 116.5% 100	~~104.2%~~ ~~35.5~~	~~111.7~~ N/A	RT 9-1-95 ug/g
95000093	B-101	5 SPK	S95T001557	0	W	@IC-01	NO2-02	SOLID	100	~~117.3%~~ ~~31.3~~	92.0% N/A	gmF 9/11/95 ug/g
95000093	B-101	5 SPK	S95T001557	0	W	@IC-01	BR-02	SOLID	100	100.2% ~~105.1%~~ ~~31.1~~	~~96.1%~~ N/A	gmF 9/11/95 ug/g
95000093	B-101	5 SPK	S95T001557	0	W	@IC-01	NO3-02	SOLID	100	96.1% ~~65.6~~	N/A	gmF 9/11/95 ug/g
95000093	B-101	5 SPK	S95T001557	0	W	@IC-01	PO4-02	SOLID	100	101.9% ~~101.9~~	N/A	gmF 9/11/95 ug/g
95000093	B-101	5 SPK	S95T001557	0	W	@IC-01	SO4-02	SOLID	100	104.3% ~~30.9~~	N/A	gmF 9/11/95 ug/g

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2172

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000093	B-101	5	SPK	S95T001557	0	W	@IC-01	OXALATE2	SOLID	100	~~303~~ ~~97.2%~~ 97.7% JMF 9/11/95	N/A	ug/g

Final page for worklist # 2172

RJ 9-1-95

DP Bromley 8/29/95
Analyst Signature Date

Analyst Signature S
Date

9-1-95

Corrected, reentered, verified + put NO_2 & PO_4 out for review
JM Fuge
9/11/95

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Completed Worklist Report for Worklist# 2172

Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit

Final page for worklist# 2172

Analyst Signature Date

Analyst Signature Date

Jann Luye 9/11/95
Reviewer Signature Date

Need to rerun NO_2 + PO_4 due to high RPD. J.M. Luye 9/11/95

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001557	ANALYST:	DP Bromely
TEST CODE:		ANALYSIS DATE:	08/29/95
INSTRUMENT:	IC-01	SAMPLE POINT:	B-101
WORK LIST #:	2172	SAMPLE PREP:	water digest
BATCH ID:			

Result Units µg/g	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
							100.9%	
S95T001557	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	9.04E+02	<0.00
	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	8.15E+02	<0.00
Duplicate 1 RPD	N/A	N/A	N/A	N/A	N/A	N/A	10.3%	N/A
	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
							95.3%	

NARRATIVE: **Analyst Comments:**

Chemist Comments:

To calculate Br that was below the EQL.

Form Completed By:	[signature]	Date:	9/21/95
Chemist Approval:	[signature]	Date:	9/21/95

LAB LEADER INFO	
Method:	La-533-105
Matrix:	solid
Test Code:	
Work List #:	2172
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	106N9A
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	09/21/95
Chemist:	Jann Frye
Analyst:	DP Bromely
Analysis Date:	08/29/95
Time Complete:	
Instrument Code:	IC-01
Rerun:	0
Sample Prep:	water digest
Sample Point:	B-101
Sample Type	
STANDARD	
SAMPLE 1	S95T001552
DUPLICATE 1	
SAMPLE 2	
DUPLICATE 2	
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	
SPIKE DUPLICATE	

PRINT

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)							<.632	
Standard Data (µg/mL)							580	
Sample 1 Data (µg/mL)		-					8.80E+00	
Sample 1 Dilution Factor							32	
Sample 1 Prep DF	9.738	9.738	9.738	9.738	9.738	9.738	9.738	9.738
Duplicate 1 Data (µg/mL)							7.94E+00	
Duplicate 1 Dilution Factor							32	
Duplicate 1 Prep DF	9.745	9.745	9.745	9.745	9.745	9.745	9.745	9.745
Sample 2 Data (µg/mL)								
Sample 2 Dilution Factor								
Sample 2 Prep DF								
Duplicate 2 Data (µg/mL)								
Duplicate 2 Dilution Factor								
Duplicate 2 Prep DF								
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 1 (µg/mL)							1.79E+02	
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)							1.00E-01	
Total Volume (mL)							10.33	
Std. Conc. (µg/mL)							575	
Detection Limit							0.632	
Matrix Detection Limit 1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E+03	0.00E+00
Matrix Detection Limit 2	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery							100.9%	
Sample 1 in µg/g	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	9.04E+02	<0.00
Duplicate 1 in µg/g	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	8.15E+02	<0.00
Duplicate 1 RPD	N/A	N/A	N/A	N/A	N/A	N/A	10.3%	N/A
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Spike % Recovery							95.3%	

Data Entry by: Jann Frye Date: 09/21/95
Approved by: Jann Frye Date: 9/21/95

Form DIONEX.WB1 Rev. 1.3

WESTINGHOUSE HANFORD COMPANY
222-S LABORATORY
INORGANIC ANALYTICAL BATCH AND SUMMARY SHEET

ANION ANALYSIS ON DIONEX

SAMPLE #:	S95T001557		
TEST CODE:	@ic-01	ANALYST:	D. Bromley
INSTRUMENT:	IC01	ANALYSIS DATE:	08/29/95
WORK LIST #:	2172	SAMPLE POINT:	B101
BATCH ID:		SAMPLE PREP:	water digest

Result Units µg/g	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
106N9A	109.0%	99.7%	106.2%	100.3%	102.2%	101.0%	100.9%	95.2%
S95T001557	<203.74	<272.75	3.35E+04	2.82E+05	2.78E+03	1.95E+05	<2076.81	<1629.90
S95T001557dup	<203.59	<272.55	2.58E+04	3.13E+05	2.25E+03	1.95E+05	<2075.32	<1628.73
Duplicate 1 RPD	N/A	N/A	26.1%	10.3%	21.3%	0.3%	N/A	N/A
	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
S95T001557spk	116.5%	114.6%	92.0%	96.1%	101.9%	104.3%	100.2%	97.7%

NARRATIVE: **Analyst Comments:**

Chemist Comments:

Need to rerun NO_2 + PO_4 due to poor RPD.

Form Completed By:	Jerry Hyde	Date:	9/11/95
Chemist Approval:	Jerry Hyde	Date:	9/11/95

LAB LEADER INFO	
Method:	LA-533-106 d-0
Matrix:	solid
Test Code:	@ic-01
Work List #:	2172
Batch #:	
Result Units	
(µg/g or µg/mL):	µg/g
Spike Book Number:	106N9A
Spike Sample #:	1
Prepared By:	Jann Frye
Prepared Date:	09/11/95
Chemist:	Jann Frye
Analyst:	D. Bromley
Analysis Date:	08/29/95
Time Complete:	11:19 PM
Instrument Code:	IC01
Rerun:	0
Sample Prep:	water digest
Sample Point:	B101
Sample Type	
STANDARD	106N9A
SAMPLE 1	S95T001557
DUPLICATE 1	S95T001557dup
SAMPLE 2	
DUPLICATE 2	
SAMPLE 3	
DUPLICATE 3	
SAMPLE 4	
DUPLICATE 4	
SPIKE	S95T001557spk
SPIKE DUPLICATE	

PRINT

TECH INFO	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Blank Data (µg/mL)	<.062	<.083	<.547	<.699	<.596	<.678	<.632	<.496
Standard Data (µg/mL)	64.3	78.8	551	616	558	637	580	553
Sample 1 Data (µg/mL)	<.062	<.083	3.28E+02	2.75E+03	2.71E+01	1.90E+03	<.632	<.496
Sample 1 Dilution Factor	32	32	32	101	32	101	32	32
Sample 1 Prep DF	9.738	9.738	9.738	9.738	9.738	9.738	9.738	9.738
Duplicate 1 Data (µg/mL)	<.062	<.083	2.61E+02	3.05E+03	2.19E+01	1.90E+03	<.632	<.496
Duplicate 1 Dilution Factor	32	32	32	101	32	101	32	32
Duplicate 1 Prep DF	9.745	9.745	9.745	9.745	9.745	9.745	9.745	9.745
Sample 2 Data (µg/mL)								
Sample 2 Dilution Factor								
Sample 2 Prep DF								
Duplicate 2 Data (µg/mL)								
Duplicate 2 Dilution Factor								
Duplicate 2 Prep DF								
Sample 3 Data (µg/mL)								
Sample 3 Dilution Factor								
Sample 3 Prep DF								
Duplicate 3 Data (µg/mL)								
Duplicate 3 Dilution Factor								
Duplicate 3 Prep DF								
Sample 4 Data (µg/mL)								
Sample 4 Dilution Factor								
Sample 4 Prep DF								
Duplicate 4 Data (µg/mL)								
Duplicate 4 Dilution Factor								
Duplicate 4 Prep DF								
Spike + Sample 1 (µg/mL)	2.13E+01	2.81E+01	4.74E+02	3.34E+03	2.00E+02	2.58E+03	1.79E+02	1.76E+02
Spike + Dup 1 (µg/mL)								
Spike Volume (mL)	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
Total Volume (mL)	10.33	10.33	10.33	10.10	10.33	10.10	10.33	10.33
Std. Conc. (µg/mL)	59	79	519	614	546	631	576	581
Detection Limit	0.062	0.083	0.547	0.699	0.596	0.678	0.632	0.496
Matrix Detection Limit 1	2.04E+02	2.73E+02	1.80E+03	7.25E+03	1.96E+03	7.03E+03	2.09E+03	1.63E+03
Matrix Detection Limit 2	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 3	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Matrix Detection Limit 4	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR

Spike Recovery = [((Spike+Sample)-(Sample)*(Total Volume))/((Spike Vol.)*(Spike Std.)*(Sample DF))]*100%
Note: (For spike recovery when the sample conc. is less than detection limit you do NOT subtract sample conc.)
Duplicate Relative % Difference = ((Sample - Duplicate) / ((Sample + Duplicate) / 2) * 100%)
Less than Values are Calculated from the Detection Limit*Dilution Factor

v RESULTS v	Fluoride	Chloride	Nitrite	Nitrate	Phosphate	Sulfate	Bromide	Oxalate
Standard % Recovery	109.0%	99.7%	106.2%	100.3%	102.2%	101.0%	100.9%	95.2%
Sample 1 in µg/g	<203.74	<272.76	3.35E+04	2.82E+05	2.78E+03	1.95E+05	<2076.61	<1629.90
Duplicate 1 in µg/g	<203.69	<272.55	2.68E+04	3.13E+05	2.25E+03	1.95E+05	<2076.32	<1628.73
Duplicate 1 RPD	N/A	N/A	26.1%	10.3%	21.3%	0.3%	N/A	N/A
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
Spike % Recovery	116.5%	114.6%	92.0%	96.1%	101.9%	104.3%	100.2%	97.7%

Data Entry by: Jann Frye Date: 09/11/95
Approved by: Jann Frye Date: 9/11/95
Form DIONEX.WB1 Rev. 1.3

AMW 11/02/95

849940149

Data Reprocessed On 08/29/1995 23:19:03

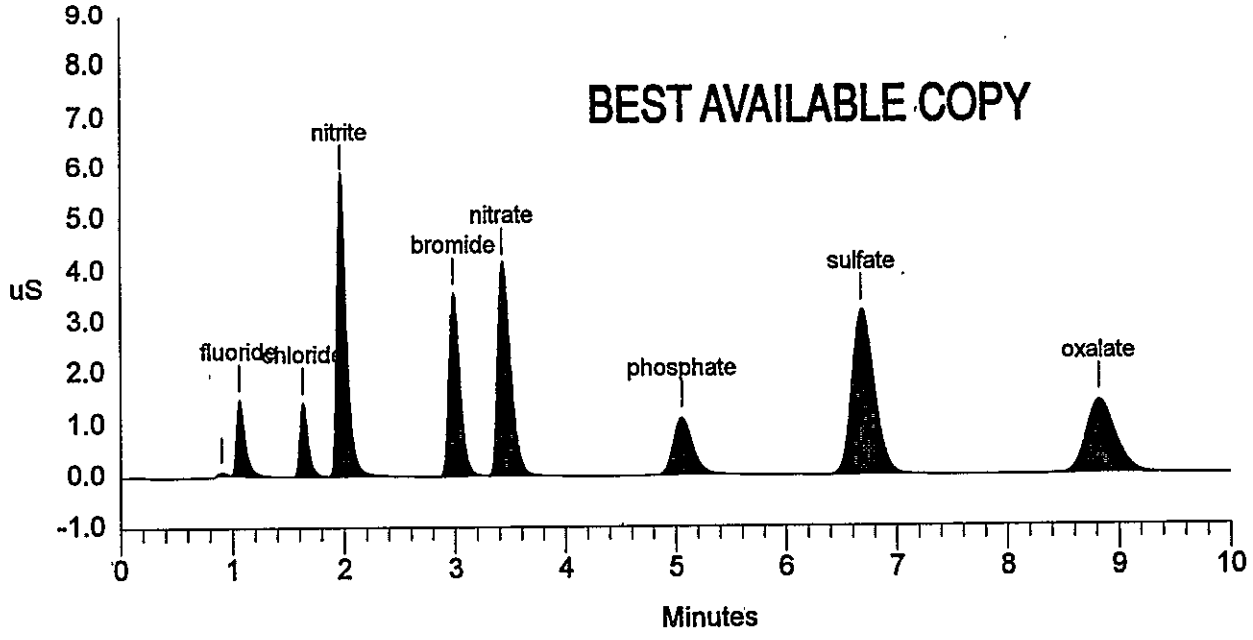
Sample Name: STD 106N9-A Date: 08/29/1995 19:45:18
Data File : C:\DX\DATA\95082921.D05
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 5 Detector:CDM-1
Analyst : D Bromley 8/29/95 Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	52	247	2	
2	1.06	fluoride	64.348	1457	8105	2	0.00
3	1.63	chloride	78.766	1417	7505	1	-1.21
4	1.97	nitrite	551.151	5788	35238	1	-1.99
5	2.99	bromide	580.433	3567	24826	1	0.67
6	3.43	nitrate	616.217	4131	34038	1	2.39
7	5.06	phosphate	558.363	1127	13961	1	0.40
8	6.69	sulfate	636.638	3224	45544	1	0.00
9	8.83	oxalate	553.159	1437	26911	1	0.34
		Totals	3639.074	22200	196375		

File: 95082921.D05 Sample: STD 106N9-A



WHC-SD-WM-DP-139, REV. 1

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 150 TO 158.

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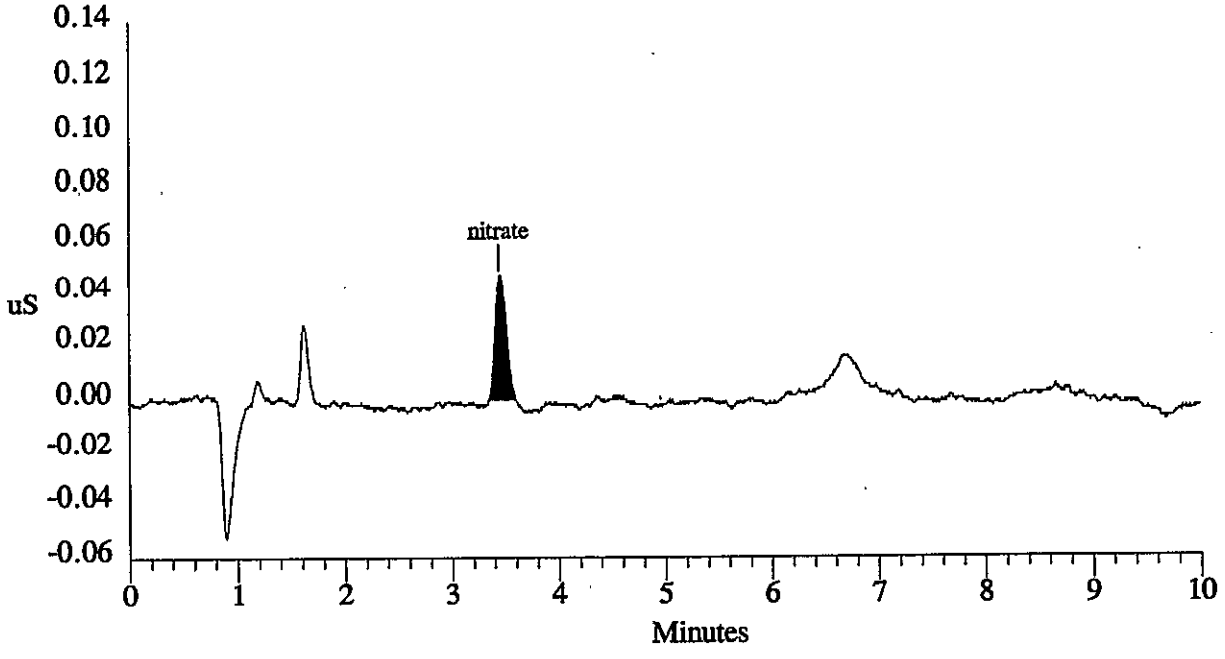
==========================================================================
| Sample Name: S95T001557 BLK H2O DIGEST      Date: 08/29/1995 23:08:44   |
| Data File  : C:\DX\DATA\95082921.D14                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 14                Detector:CDM-1   |
| Analyst    :                Column: AG4A/AS4A anion column/SRS         |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	32	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	3.44	nitrate	2.157	45	330	1	2.69
		Totals	2.157	45	330		

File: 95082921.D14 Sample: S95T001557 BLK H2O DIGEST



WHC-SD-WM-DP-139, REV. 1

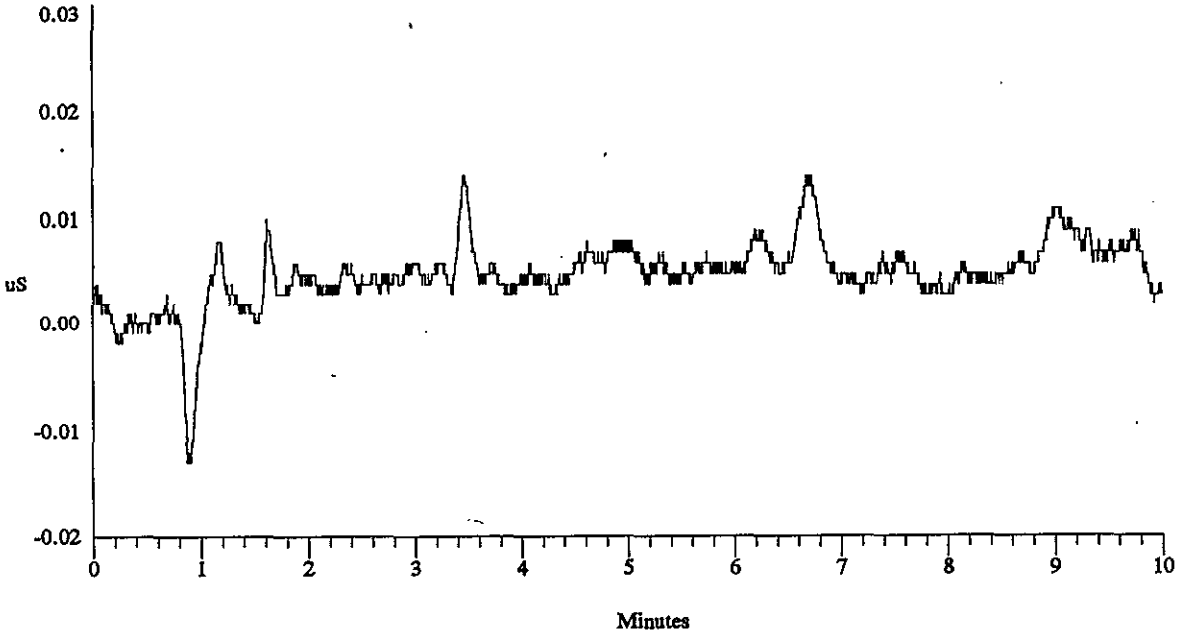
```
==================================================================================
| Sample Name: ELUANT BLANK                    Date: 08/29/1995 18:38:00          |
| Data File  : C:\DX\DATA\95082921.D01                                            |
| Method     : C:\DX\METHOD\KIT.MET                                               |
| ACI Address: 1  System: 1  Inject#: 1                      Detector:CDM-1       |
| Analyst    :                  Column: AG4A/AS4A anion column/SRS                |
==================================================================================

Calibration  Volume   Dilution Points Rate  Start   Stop Area Reject
-----------------------------------------------------------------------
External          1          1   3000  5Hz   0.00  10.00         200

************************** Peak Report: All Peaks ****************************

 Pk.     Ret Component          Concentration     Height       Area  Bl. %Delta
 Num    Time Name                     ug/ml                         Code
-----------------------------------------------------------------------------
                                 ----------------------------------
                       Totals         0.000          0           0
```

File: 95082921.D01 Sample: ELUANT BLANK



WHC-SD-WM-DP-139, REV. 1

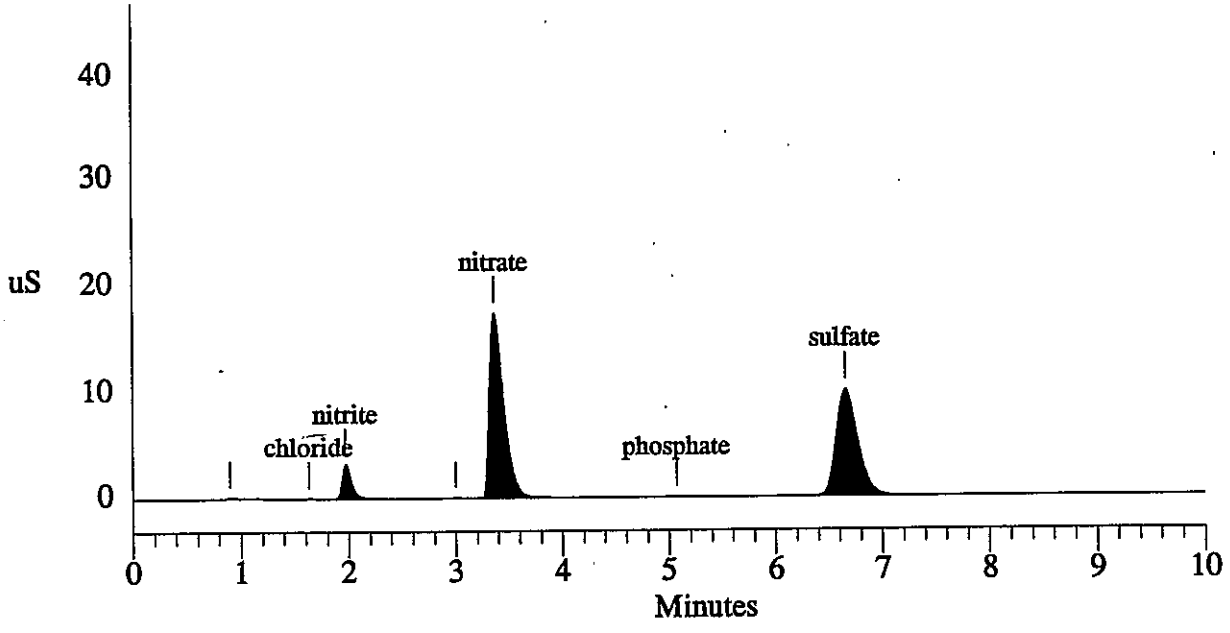
Sample Name: S95T001557 H2O DIGEST Date: 08/29/1995 21:45:19
Data File : C:\DX\DATA\95082921.D09
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 9 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	95	558	1	
2	1.63	chloride	-0.352	66	328	1	-1.21
3	1.97	nitrite	311.634	3229	19621	1	-1.99
5	3.36	nitrate	2747.476	17466	163270	1	0.30
6	5.07	phosphate	34.547	39	431	1	0.60
7	6.65	sulfate	1902.234	10159	142920	1	-0.60
		Totals	4995.539	31053	327128		

File: 95082921.D09 Sample: S95T001557 H2O DIGEST



WHC-SD-WM-DP-139, REV. 1

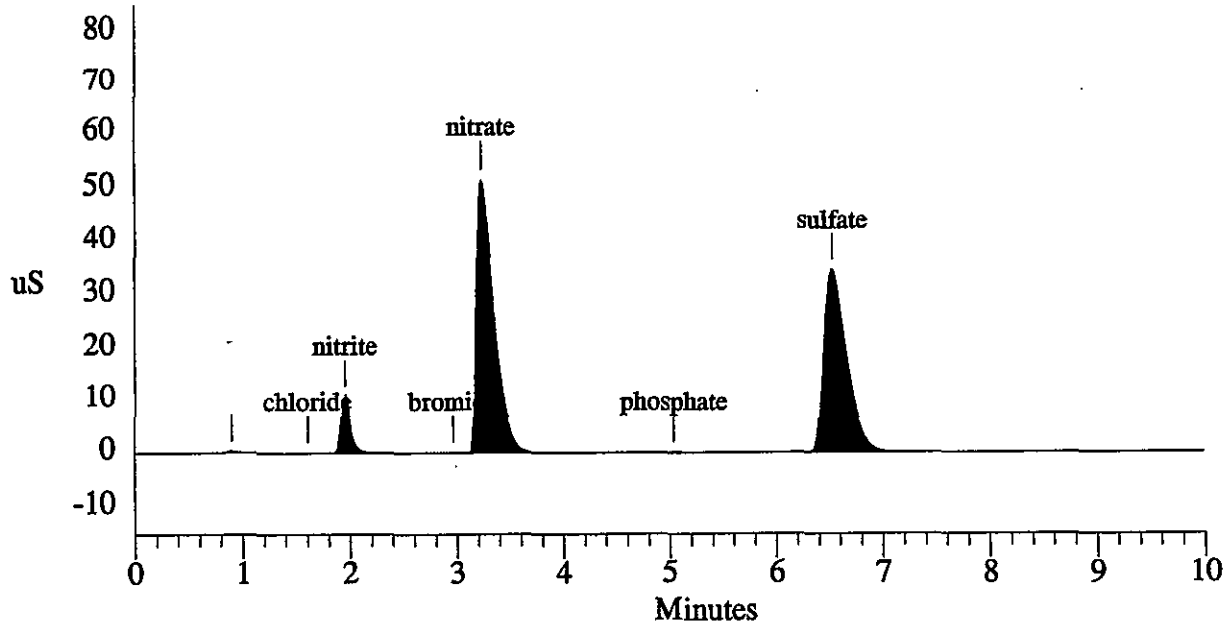
Sample Name: S95T001557 H2O DIGEST Date: 08/29/1995 22:17:13
Data File : C:\DX\DATA\95082921.D10
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 10 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column/SRS

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	32	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	326	1861	1	
2	1.60	chloride <	1.418	105	760	1	-3.03
3	1.95	nitrite	326.038	10843	67095	1	-2.99
4	2.96	bromide <	8.803	91	562	1	-0.34
5	3.23	nitrate	2360.553	51561	586667	1	-3.58
6	5.04	phosphate ok	27.108	140	1725	1	0.00
7	6.53	sulfate	1800.926	34498	516737	1	-2.39
		Totals	4524.847	97563	1175408		

File: 95082921.D10 Sample: S95T001557 H2O DIGEST



WHC-SD-WM-DP-139, REV. 1

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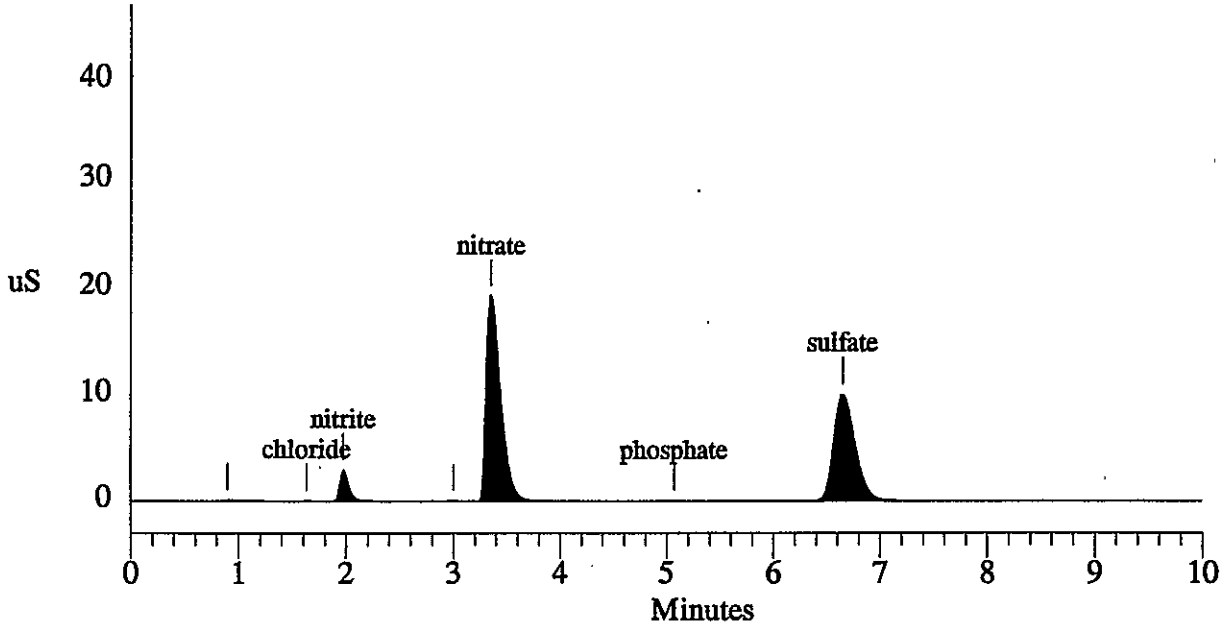
==========================================================================
| Sample Name: S95T001557 DUP H2O DIGEST      Date: 08/29/1995 22:44:17   |
| Data File  : C:\DX\DATA\95082921.D12                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 12                Detector:CDM-1   |
| Analyst    :                Column: AG4A/AS4A anion column/SRS         |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	100	584	1	
2	1.63	chloride	-0.751	59	293	1	-1.21
3	1.97	nitrite	280.973	2961	17638	1	-1.99
5	3.35	nitrate	3047.540	19367	183223	1	0.00
6	5.07	phosphate	33.406	38	402	1	0.60
7	6.65	sulfate	1898.732	10162	142637	1	-0.60
		Totals	5259.900	32687	344778		

File: 95082921.D12 Sample: S95T001557 DUP H2O DIGEST



WHC-SD-WM-DP-139, REV. 1

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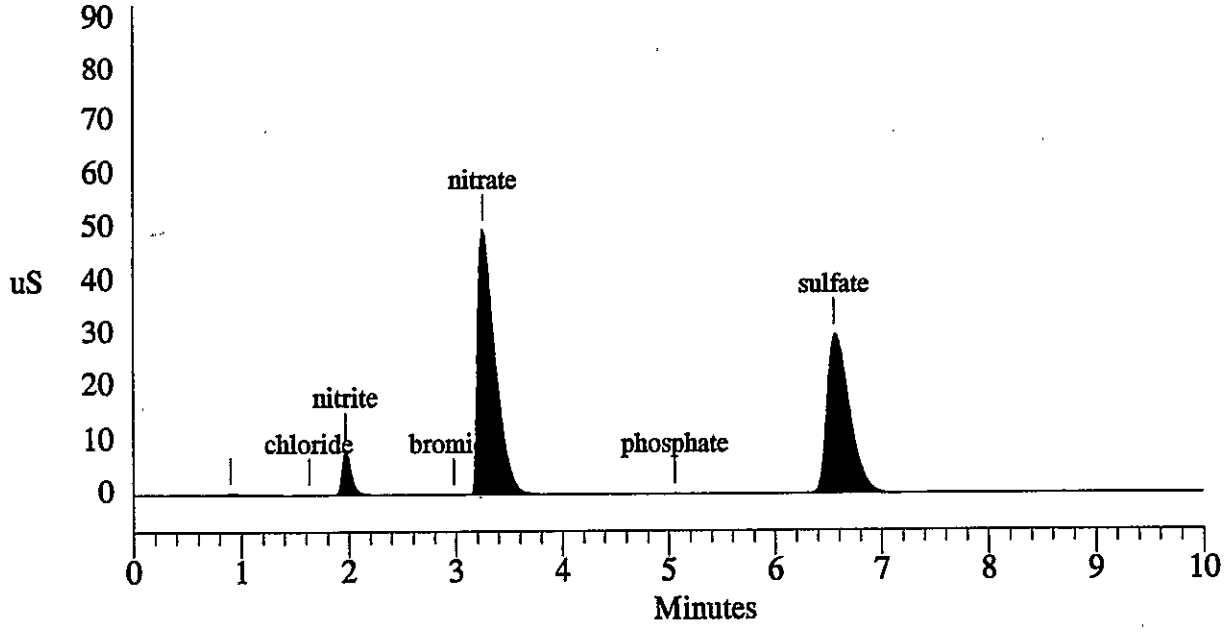
==============================================================================
| Sample Name: S95T001557 DUP H2O DIGEST      Date: 08/29/1995 22:33:22       |
| Data File  : C:\DX\DATA\95082921.D11                                        |
| Method     : C:\DX\METHOD\KIT.MET                                           |
| ACI Address: 1  System: 1  Inject#: 11                  Detector:CDM-1      |
| Analyst    :                Column: AG4A/AS4A anion column/SRS              |
==============================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	32	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	298	1823	1	
2	1.63	chloride	1.488	120	779	1	-1.21
3	1.97	nitrite	251.026	8553	51193	1	-1.99
4	2.98	bromide	7.943	71	445	1	0.34
5	3.26	nitrate	2304.177	49643	562033	1	-2.69
6	5.06	phosphate	21.903	113	1308	1	0.40
7	6.56	sulfate	1596.465	29884	439052	1	-1.94
		Totals	4183.002	88681	1056634		

File: 95082921.D11 Sample: S95T001557 DUP H2O DIGEST



WHC-SD-WM-DP-139, REV. 1

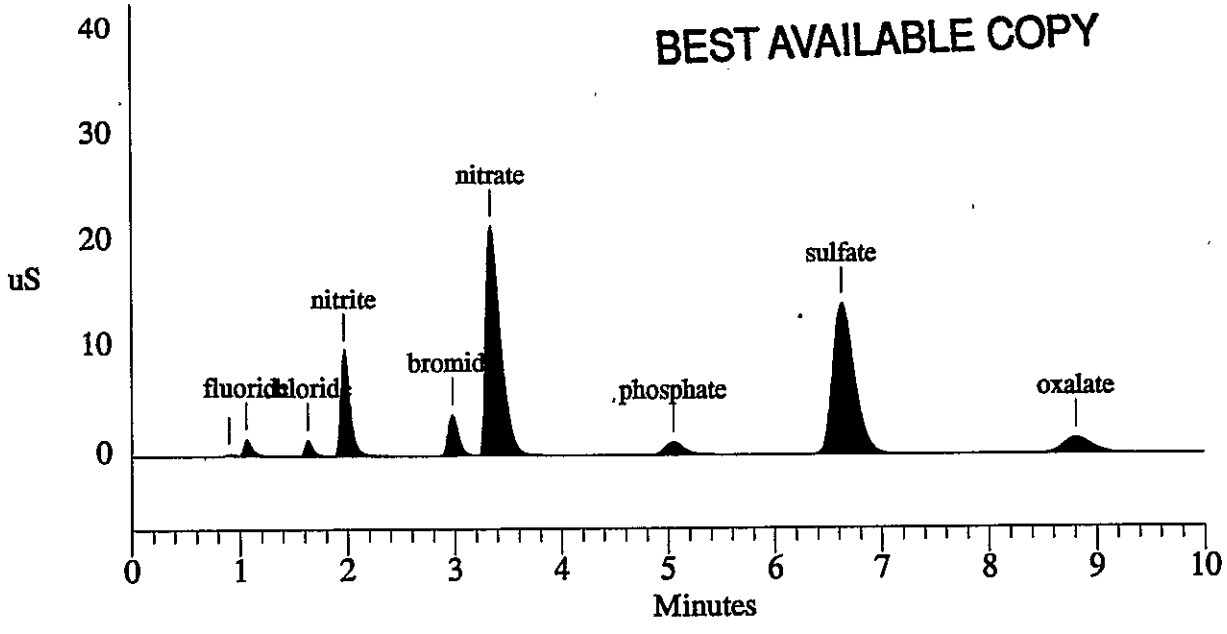
```
==========================================================================
| Sample Name: S95T001557 SPK H2O DIGEST      Date: 08/29/1995 22:55:37   |
| Data File  : C:\DX\DATA\95082921.D13                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 13                Detector:CDM-1   |
| Analyst    :                Column: AG4A/AS4A anion column/SRS         |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	144	736	2	
2	1.06	fluoride	67.650	1511	8532	2	0.00
3	1.63	chloride	82.344	1480	7835	1	-1.21
4	1.97	nitrite	894.503	9750	58028	1	-1.99
5	2.98	bromide	604.243	3788	25891	1	0.34
6	3.34	nitrate	3337.734	21385	203031	1	-0.30
7	5.05	phosphate	598.638	1219	15024	1	0.20
8	6.63	sulfate	2560.306	14046	197447	1	-0.90
9	8.81	oxalate	564.634	1478	27498	1	0.11
		Totals	8710.052	54801	544022		

File: 95082921.D13 Sample: S95T001557 SPK H2O DIGEST



WHC-SD-WM-DP-139, REV. 1

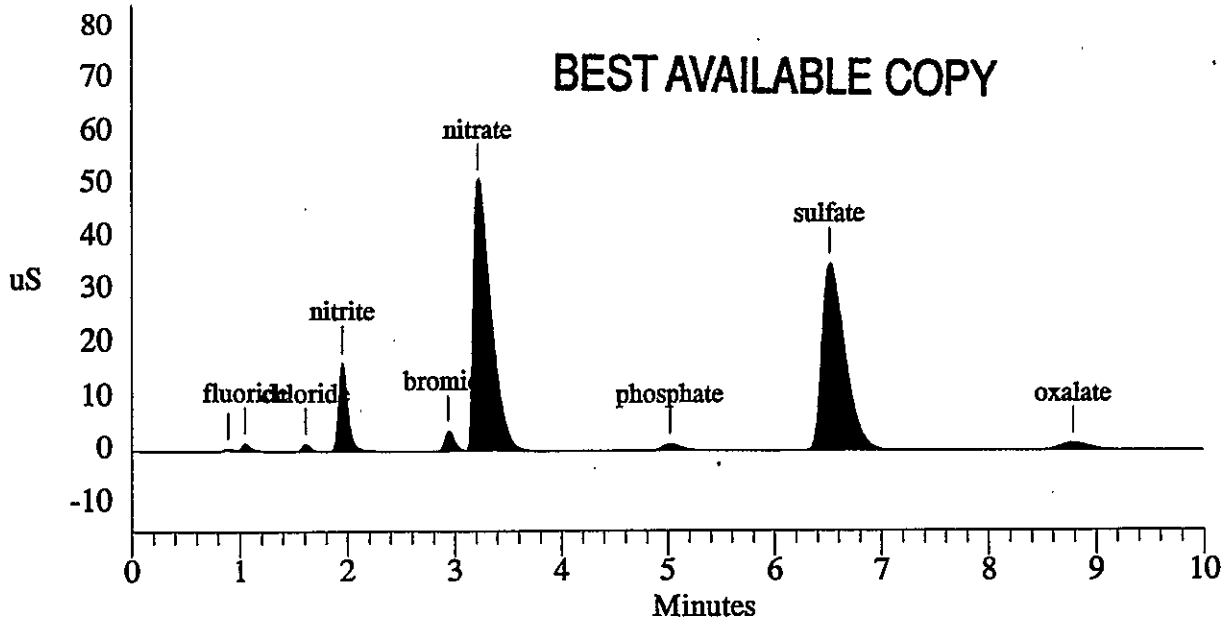
```
==========================================================================
| Sample Name: S95T001557 SPK H2O DIGEST      Date: 08/29/1995 23:20:55   |
| Data File  : C:\DX\DATA\95082921.D15                                   |
| Method     : C:\DX\METHOD\KIT.MET                                      |
| ACI Address: 1  System: 1  Inject#: 15                Detector:CDM-1   |
| Analyst    :                Column: AG4A/AS4A anion column/SRS         |
==========================================================================
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	32	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	309	1518	2	
2	1.05	fluoride	21.344	1453	8496	2	-0.94
3	1.61	chloride	28.060	1469	8410	1	-2.42
4	1.95	nitrite	474.287	16490	99257	1	-2.99
5	2.94	bromide	178.593	3813	24077	1	-1.01
6	3.22	nitrate	2344.615	51033	579534	1	-3.88
✓7	5.02	phosphate	199.531	1295	15848	1	-0.40
8	6.52	sulfate	1833.614	35316	530048	1	-2.54
9	8.79	oxalate	175.958	1439	27024	1	-0.11
		Totals	5256.001	112617	1294212		

File: 95082921.D15 Sample: S95T001557 SPK H2O DIGEST



WHC-SD-WM-DP-139, REV. 1

LABCORE Data Entry Template for Worklist# 2249

Analyst: EAL **Instrument:** IC01 _____ **Book #** 106N9C

Method: LA-533-105 Rev/Mod D-0 WHC-SD-WM-DP-139, REV. 1

Worklist Comment: Re run NO2, use 101 df for 1544, and 21 df for 1546. JMF

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP				@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
		1	BLNK-PREP				@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
		1	BLNK-PREP				@IC-01	NO2-02	SOLID	1	<.547	N/A	ug/g
		1	BLNK-PREP				@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
		1	BLNK-PREP				@IC-01	NO3-02	SOLID	N/A	N/A	N/A	ug/g
		1	BLNK-PREP				@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
		1	BLNK-PREP				@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
		1	BLNK-PREP				@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g
		2	STD				@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
		2	STD				@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
		2	STD				@IC-01	NO2-02	SOLID	532	564.103	N/A	ug/g
		2	STD				@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
		2	STD				@IC-01	NO3-02	SOLID	N/A	N/A	N/A	ug/g
		2	STD				@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
		2	STD				@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
		2	STD				@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	3	SAMPLE	S95T001544	0	W	@IC-01	NO2-02	SOLID	N/A	5.88^{+4}	5.31^{+3}	ug/g
95000091	B-101	4	DUP	S95T001544	0	W	@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g

Data Entry Comments: 106N9C .100 ml → 10 ml Prep D:2 ⇒ 1544 = 10.4080
DUP = 10.3440
Spike 106N9C .100 ml 1546 = 5.8270
DUP = 5.8070

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2249

OUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000091	B-101	4 DUP	S95T001544	0	W	@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	4 DUP	S95T001544	0	W	@IC-01	NO2-02	SOLID	5.88+4 ~~6.92+4~~	6.92+4 ~~5.88+4~~	N/A	ug/g
95000091	B-101	4 DUP	S95T001544	0	W	@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	4 DUP	S95T001544	0	W	@IC-01	NO3-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	4 DUP	S95T001544	0	W	@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	4 DUP	S95T001544	0	W	@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	4 DUP	S95T001544	0	W	@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	NO2-02	SOLID	100	130.4	N/A	ug/g
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	NO3-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
95000091	B-101	5 SPK	S95T001544	0	W	@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	6 SAMPLE	S95T001546	0	W	@IC-01	NO2-02	SOLID	N/A	3.72+4	1.97+3	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	NO2-02	SOLID	3.72+4	5.25+4	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	NO3-02	SOLID	N/A	N/A	N/A	ug/g

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 2249

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------		MATRIX	ACTUAL	FOUND	DL	UNIT
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	7 DUP	S95T001546	0	W	@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	CL-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	F-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	NO2-02	SOLID	100	120%	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	BR-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	NO3-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	PO4-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	SO4-02	SOLID	N/A	N/A	N/A	ug/g
95000093	B-101	8 SPK	S95T001546	0	W	@IC-01	OXALATE2	SOLID	N/A	N/A	N/A	ug/g

Final page for worklist # 2249

Lisa Lambert 09/08/95
Analyst Signature Date

R + Steele 09/15/95
Analyst Signature Date

Entered + Verified 9/18/95. J. M. Fuge

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.