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

Document number: SD-WM-DP-074

Section 6 **of** 8

Title: 216 Day Final Report for Tank 241-SY-103 Push Mode Core 62

Date: 08-11-95 **Revision:** A000

Originator: A D Rice
Co: WHC

Recipient:
Co:

References: EDT-612158

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IODINE-129 ANALYSES

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LABCORE Data Entry Template for Worklist# 233

Analyst: SMF **Instrument:** GEA00 #1 **Method:** LA-378-103 B3

Worklist Comment: Run one standard only. --LLF WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				@I129-01	I129-01	SOLID			N/A	uCi/g
1	BLNK-PREP				@I129-01	I129-01C	SOLID			N/A	% Rec
1	BLNK-PREP				@I129-01	I129-01E	SOLID			N/A	% Ct.
2	STD				@I129-01	I129-01	SOLID			N/A	uCi/g
2	STD				@I129-01	I129-01C	SOLID			N/A	% Rec
2	STD				@I129-01	I129-01E	SOLID			N/A	% Ct.
3	SAMPLE	S94T000005	0	WF	@I129-01	I129-01	SOLID	N/A			uCi/g
3	SAMPLE	S94T000005	0	WF	@I129-01	I129-01C	SOLID	N/A			% Rec
3	SAMPLE	S94T000005	0	WF	@I129-01	I129-01E	SOLID	N/A			% Ct.
4	DUP	S94T000005	0	WF	@I129-01	I129-01	SOLID			N/A	uCi/g
4	DUP	S94T000005	0	WF	@I129-01	I129-01C	SOLID			N/A	% Rec
4	DUP	S94T000005	0	WF	@I129-01	I129-01E	SOLID			N/A	% Ct.
5	BLNK-PREP			M 7-31-95	@I129-01	I129-01	SOLID			N/A	uCi/g
5	BLNK-PREP				@I129-01	I129-01C	SOLID			N/A	% Rec
5	BLNK-PREP				@I129-01	I129-01E	SOLID			N/A	% Ct.
6	STD				@I129-01	I129-01	SOLID			N/A	uCi/g
6	STD				@I129-01	I129-01C	SOLID			N/A	% Rec
6	STD				@I129-01	I129-01E	SOLID			N/A	% Ct.
7	SAMPLE	S94T000067	0	WF	@I129-01	I129-01	SOLID	N/A			uCi/g
7	SAMPLE	S94T000067	0	WF	@I129-01	I129-01C	SOLID	N/A			% Rec
				M 7-31-95							

Data Entry Comments:

I-TANK # 3B52

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 233

Analyst: SMF **Instrument:** GEA00 #1 **Method:** LA-378-103

Worklist Comment: Run one standard only. --LLF WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
7	SAMPLE	S94T000067	0	W	F@I129-01	I129-01E	SOLID	N/A			% Ct.
8	DUP	S94T000067	0	W	F@I129-01	I129-01	SOLID			N/A	uCi/g
8	DUP	S94T000067	0	W	F@I129-01	I129-01C	SOLID			N/A	% Rec
8	DUP	S94T000067	0	W	F@I129-01	I129-01E	SOLID			N/A	% Ct.

M 7-31-5,1

Final page for worklist # 233

Susie M. Fulton
Analyst Signature

12-13-94
Date

M G Sicilian 12/14/94

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			BLANK
Gross Weight	(wt2)		2.7572
Tare Weight	(wt1)		2.7459
Mass Precipitate	(net wt)		0.0113
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.5703E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		2.2092
Carrier Fractional Recovery	(Rec)		0.3705

Type	BLANK
Work List	233
Test Code	@I129-01
Matrix	SOLID
Sample #	S94T5
Instrument Code	WC38931
Analyst	SMF
Date	12/13/94
Time	12:00 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	8.03E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	37.0%

Data Entry by: [signature] Date: 12/15/94

Approved by: [signature] Date: 12/15/94

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.7695
STANDARD	Tare Weight	(wt1)	2.7514
Work List	Mass Precipitate	(net wt)	0.0181
233	I-129 µCi / Sample from GEA	(I-129 GEA)	3.813E-4
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.5934
Sample #			
S94T5,67	IODINE 129 = 6.43E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SMF			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
12/13/94			
Time			
12:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	6.43E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	59.3%

Data Entry by:	[signature]	Date:	12/14/94
Approved by:	[signature]	Date:	12/15/94

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			SAMPLE
Gross Weight	(wt2)		2.7335
Tare Weight	(wt1)		2.7163
Mass Precipitate	(net wt)		0.0172
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.2583E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		2.2092
Carrier Fractional Recovery	(Rec)		0.5639

Type	SAMPLE
Work List	233
Test Code	@I129-01
Matrix	SOLID
Sample #	S94T5
Instrument Code	WC38931
Analyst	SMF
Date	12/13/94
Time	12:00 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	5.02E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	56.4%

Data Entry by:	M G Bierman	Date:	12/15/94
Approved by:	S A Cates	Date:	12/15/94

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			DU[PLICATE
Type	Gross Weight	(wt2)	2.7831
DU[PLICATE	Tare Weight	(wt1)	2.7621
Work List	Mass Precipitate	(net wt)	0.021
233	I-129 µCi / Sample from GEA	(I-129 GEA)	<7.1906E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	2.216
SOLID	Carrier Fractional Recovery	(Rec)	0.6885
Sample #			
S94T5			
Instrument Code			
WC38931			
Analyst			
SMF			
Date			
12/13/94			
Time			
12:00 PM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	4.71E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	68.9%

Data Entry by:	[illegible]	Date:	12/15/94
Approved by:	[illegible]	Date:	12/15/94

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			BLANK
Type	Gross Weight	(wt2)	2.7042
BLANK	Tare Weight	(wt1)	2.6860
Work List	Mass Precipitate	(net wt)	0.0182
233	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.5430E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	1.82
SOLID	Carrier Fractional Recovery	(Rec)	0.5967
Sample #			
S94T67			
Instrument Code			
WC38931			
Analyst			
SMF			
Date			
12/13/94			
Time			
12:00 PM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	6.02E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	59.7%

Data Entry by:	M. Sullivan	Date:	12/15/94
Approved by:	S.R. Patton	Date:	12/15/94

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.7210
SAMPLE	Tare Weight	(wt1)	2.7028
Work List	Mass Precipitate	(net wt)	0.0182
233	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.7543E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	1.82
SOLID	Carrier Fractional Recovery	(Rec)	0.5967
Sample #			
S94T67			
Instrument Code			
WC38931			
Analyst			
SMF			
Date			
12/13/94			
Time			
12:00 PM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(DF)}{(Rec)(SS)(Dg/L)}$$

RESULT	IODINE 129	=	<	6.22E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	59.7%

Data Entry by:	[signature]	Date:	12/15/94
Approved by:	[signature]	Date:	12/15/94

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7660
Tare Weight	(wt1)		2.7529
Mass Precipitate	(net wt)		0.0131
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.6974E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		1.8964
Carrier Fractional Recovery	(Rec)		0.4295

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
DUPLICATE	233	@I129-01	SOLID	S94T67	WC38931	SMF	12/13/94	12:00 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	8.22E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	43.0%

Data Entry by: [signature] Date: 12/15/94

Approved by: [signature] Date: 12/15/94

Form 378103S2 Rev. 1.2 1589 Page 1 of 1

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-DEC-1994 04:05:46.97                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T-5-BLK#1
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6042.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.37 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-DEC-1994 02:25:06.64
Decayed to:               14-DEC-1994 02:25:06.64
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: AL Johnson

date: 12-14-94

Machelor 12/14/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	85.75*	197	3.01	171.60	166	12	81.5			
0	609.61*	75	1.44	1218.91	1213	13	96.6			
0	662.06*	119	1.26	1323.60	1318	10	45.4			
0	1122.22	117	1.36	2240.59	2234	14	41.9			
0	1464.73	1162	1.99	2921.55	2912	18	6.7			
0	1516.25	47	4.39	3023.86	3008	35	74.3			
0	1598.18	35	1.17	3186.50	3181	16	66.1			
0	1771.14	98	1.62	3529.57	3522	16	27.2			

Sample ID : S94T-5-BLK#1 Acquisition date : 14-DEC-1994 02:25:06

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

* There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T-5-BLK#1 Acquisition date : 14-DEC-1994 02:25:06

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	363.	39.60	6.5703E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-DEC-1994 02:20:37.86                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                I129-SHIFT-STD
Sample Size:              1.00000E+00 ML
   ution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6041.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.17 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-DEC-1994 00:39:59.24
Decayed to:               14-DEC-1994 00:39:59.24
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by:

date: 12-14-94

12/14/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

*	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.67	2726	1.07	59.30	55	9	5.8			
0	33.77	734	1.14	67.51	64	8	14.8			
0	39.71	514	0.99	79.41	75	9	21.3		I-129	3.813E-04
0	511.17*	174	1.99	1022.36	1015	18	57.2			
0	609.61*	89	1.43	1218.92	1213	13	83.7			
0	662.13*	162	1.18	1323.73	1320	8	29.6			
0	912.55*	54	1.65	1823.08	1818	13	93.5			
0	1121.97	60	1.07	2240.11	2236	11	76.7			
0	1240.79	56	1.36	2476.48	2473	10	64.0			
0	1415.83	63	10.94	2824.42	2811	29	60.4			
0	1464.68	1157	1.85	2921.46	2913	18	6.2			
0	1771.29	75	2.64	3529.88	3517	21	35.4			

Sample ID : I129-SHIFT-STD Acquisition date : 14-DEC-1994 00:39:59

Total number of lines in spectrum	12	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	2	16.67%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	3.813E-04	3.813E-04	0.811E-04	21.27	
		Total Activity :	3.813E-04	3.813E-04			
		Grand Total Activity :	3.813E-04	3.813E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : I129-SHIFT-STD Acquisition date : 14-DEC-1994 00:39:59

All nuclides have been identified. No MDA report generated.

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-DEC-1994 05:50:05.99                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T000005-SAM
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6043.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.84 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-DEC-1994 04:09:25.13
Decayed to:               14-DEC-1994 04:09:25.13
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [signature]

date: 12-14-94

[signature] 12/14/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL.
3	75.05*	139	1.15	150.18	142	16	76.6	3.45E+00		
0	662.09*	184	1.33	1323.65	1318	13	36.5			
0	1122.34	97	0.94	2240.84	2235	11	41.3			
0	1380.75	16	1.38	2754.71	2753	9	126.0			
0	1464.83	1176	1.69	2921.75	2914	16	6.5			
0	1514.36	27	1.09	3020.10	3014	14	76.1			
0	1770.91	108	1.54	3529.12	3520	17	24.5			

Sample ID : S94T000005-SAM
Acquisition date : 14-DEC-1994 04:09:25

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T000005-SAM
Acquisition date : 14-DEC-1994 04:09:25

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	330.	39.60	6.2583E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-DEC-1994 07:41:27.06                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T000005-DUP
Sample Size:              1.00000E+00 ML
  .ution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6044.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.24 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-DEC-1994 06:00:44.54
Decayed to:               14-DEC-1994 06:00:44.54
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [signature]

date: 12-14-94

[signature] 12/14/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

T+	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.17	527	1.06	64.30	60	10	24.0			
0	36.80	110	0.73	73.58	71	6	70.3			
0	241.85*	72	1.35	484.03	482	5	99.1			
0	662.07*	3373	1.35	1323.62	1316	15	4.1			
0	912.50*	70	1.78	1822.98	1815	16	80.1			
0	969.85*	98	0.80	1937.23	1925	28	90.3			
0	1121.87	110	1.72	2239.90	2233	15	46.8			
0	1464.70	1222	1.91	2921.50	2911	21	6.5			
0	1771.09	92	1.31	3529.48	3522	15	27.8			

Sample ID : S94T000005-DUP
Acquisition date : 14-DEC-1994 06:00:44

Total number of lines in spectrum	9	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T000005-DUP
Acquisition date : 14-DEC-1994 06:00:44

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
.29	435.	39.60	7.1906E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-DEC-1994 09:24:15.35                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T000067-BLK
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6045.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.29 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-DEC-1994 07:43:34.17
Decayed to:               14-DEC-1994 07:43:34.17
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: _____

date: _____

B Bachelor 12/14/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL.
0	295.07*	113	1.66	590.48	585	11	95.1			
0	662.01*	435	1.42	1323.50	1318	12	16.6			
0	1121.77	136	1.69	2239.71	2231	17	36.9			
0	1464.79	1215	1.99	2921.66	2913	17	6.4			
0	1482.75	22	1.67	2957.33	2950	11	78.6			
0	1771.00	100	2.71	3529.30	3523	12	20.0			

Sample ID : S94T000067-BLK Acquisition date : 14-DEC-1994 07:43:34

Total number of lines in spectrum	6	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	0	0.00%

* There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T000067-BLK Acquisition date : 14-DEC-1994 07:43:34

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	360.	39.60	6.5430E-05

WHC-SD-WM-DP-074, REV. 0

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-DEC-1994 11:09:31.94                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T67SAMPLE
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6046.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:09.97 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-DEC-1994 09:28:48.06
Decayed to:               14-DEC-1994 09:28:48.06
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 12.14.94

B Bachelor 12/14/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	609.52*	100	1.51	1218.74	1213	13	74.1			
0	662.04*	249	1.47	1323.55	1319	10	23.4			
0	1122.04	134	2.16	2240.25	2230	17	36.1			
0	1464.75	1210	2.10	2921.59	2913	18	6.6			
0	1735.52	35	2.06	3458.94	3453	12	33.8			
0	1770.68	83	2.12	3528.68	3523	18	32.9			
0	1794.31	47	18.24	3575.50	3556	45	57.7			
0	1855.45	35	6.28	3696.69	3686	23	48.9			

Sample ID : S94T67SAMPLE
Acquisition date : 14-DEC-1994 09:28:48

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T67SAMPLE
Acquisition date : 14-DEC-1994 09:28:48

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
29	384.	39.60	6.7543E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-DEC-1994 12:59:45.87                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T67DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6047.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:05.89 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-DEC-1994 11:19:06.22
Decayed to:               14-DEC-1994 11:19:06.22
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by:

date: 12/14/94

12/14/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL.
0	351.63*	159	1.46	703.57	697	13	68.4			
0	662.24*	230	1.33	1323.96	1316	16	36.7			
0	1122.94	101	1.79	2242.04	2235	15	48.3			
0	1240.74	97	2.06	2476.39	2471	14	41.1			
0	1380.32	20	0.61	2753.85	2751	10	114.9			
0	1464.75	1190	1.99	2921.60	2911	20	6.4			
0	1771.17	96	1.97	3529.64	3521	17	26.5			

Sample ID : S94T67DUP
Acquisition date : 14-DEC-1994 11:19:06

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T67DUP
Acquisition date : 14-DEC-1994 11:19:06

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	377.	39.60	6.6974E-05

5y/105 1

LABCORE Data Entry Template for Worklist# 289

Analyst: RDM **Instrument:** GEA00 01 **Method:** LA-378-103 B-3

Worklist Comment: I129-299/300 Use 1mL sample size and 2 mL of standard sac

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				@I129-01 I129-01	SOLID			N/A	uCi/g
1	BLNK-PREP				@I129-01 I129-01C	SOLID			N/A	% Rec
1	BLNK-PREP				@I129-01 I129-01E	SOLID			N/A	% Ct.
2	STD				@I129-01 I129-01	SOLID			N/A	uCi/g
2	STD				@I129-01 I129-01C	SOLID			N/A	% Rec
2	STD				@I129-01 I129-01E	SOLID			N/A	% Ct.
3	SAMPLE	S94T000299	0	WF	@I129-01 I129-01	SOLID	N/A			uCi/g
3	SAMPLE	S94T000299	0	WF	@I129-01 I129-01C	SOLID	N/A			% Rec
3	SAMPLE	S94T000299	0	WF	@I129-01 I129-01E	SOLID	N/A			% Ct.
4	DUP	S94T000299	0	WF	@I129-01 I129-01	SOLID			N/A	uCi/g
4	DUP	S94T000299	0	WF	@I129-01 I129-01C	SOLID			N/A	% Rec
4	DUP	S94T000299	0	WF	@I129-01 I129-01E	SOLID			N/A	% Ct.
5	SAMPLE	S94T000300	0	WF	@I129-01 I129-01	SOLID	N/A			uCi/g
5	SAMPLE	S94T000300	0	WF	@I129-01 I129-01C	SOLID	N/A			% Rec
5	SAMPLE	S94T000300	0	WF	@I129-01 I129-01E	SOLID	N/A			% Ct.
6	DUP	S94T000300	0	WF	@I129-01 I129-01	SOLID			N/A	uCi/g
6	DUP	S94T000300	0	WF	@I129-01 I129-01C	SOLID			N/A	% Rec
6	DUP	S94T000300	0	WF	@I129-01 I129-01E	SOLID			N/A	% Ct.

NR 7-7-95 WHC-SD-WM-DP-074, REV. 0

Data Entry Comments: Standard 3B52

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 289

Analyst: RDM **Instrument:** GEA00 _____ **Method:** LA-378-103

Worklist Comment: I129-299/300 Use 1mL sample size and 2 mL of standard sac

Seg Type	Sample#	Rep Al	Test	Matrix	Actual	Found	DL	Unit

Final page for worklist # 289

Analyst Signature

12/22/94
Date

12/27/94

WHC-SD-WM-DP-074, REV. 0

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			BLANK
Gross Weight	(wt2)		2.7678
Tare Weight	(wt1)		2.7567
Mass Precipitate	(net wt)		0.0111
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.6202E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		1.7448
Carrier Fractional Recovery	(Rec)		0.3639

Type	BLANK
Work List	289
Test Code	@I129-01
Matrix	SOLID
Sample #	S94T299,300
Instrument Code	WC38931
Analyst	RDM
Date	12/22/94
Time	02:40 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	1.04E-01	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	36.4%

Data Entry by:	[illegible]	Date:	12/27/94
Approved by:	[illegible]	Date:	12/28-94

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.7713
STANDARD	Tare Weight	(wt1)	2.7546
Work List	Mass Precipitate	(net wt)	0.0167
289	I-129 µCi / Sample from GEA	(I-129 GEA)	3.799E-4
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.5475
Sample #			
S94T299,300	IODINE 129 = 6.94E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
RDM			
Date	Carrier Percent Recovery = (wt2-wt1) (100) / 0.0305		
12/22/94			
Time			
02:40 PM	I-129 µCi/L = (I-129 GEA) (1000mL/L) (DF) (DDF) / (Rec) (SS)	µCi/mL = µCi/L / 1000mL/L	

RESULT	IODINE 129	=	6.94E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	54.8%

Data Entry by:	[illegible]	Date:	12/27/94
Approved by:	[illegible]	Date:	12/28/94

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			SAMPLE
Gross Weight	(wt2)		2.7741
Tare Weight	(wt1)		2.7673
Mass Precipitate	(net wt)		0.0068
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.5231E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		1.7448
Carrier Fractional Recovery	(Rec)		0.2230

Type	SAMPLE
Work List	289
Test Code	@I129-01
Matrix	SOLID
Sample #	S94T299
Instrument Code	WC38931
Analyst	RDM
Date	12/22/94
Time	02:40 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	1.68E-01	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	22.3%

Data Entry by:	[signature]	Date:	12/27/94
Approved by:	[signature]	Date:	12/28/94

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7733
Tare Weight	(wt1)		2.7697
Mass Precipitate	(net wt)		0.0036
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.6611E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		1.824
Carrier Fractional Recovery	(Rec)		0.1180

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
DUPLICATE	289	@I129-01	SOLID	S94T299	WC38931	RDM	12/22/94	02:40 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	3.09E-01	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	11.8%

Data Entry by:	[illegible]	Date:	12/27/94
Approved by:	[illegible]	Date:	12/28/94

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			SAMPLE
Gross Weight	(wt2)		2.7654
Tare Weight	(wt1)		2.7597
Mass Precipitate	(net wt)		0.0057
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.9165E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		2.5308
Carrier Fractional Recovery	(Rec)		0.1869

Type	SAMPLE
Work List	289
Test Code	@I129-01
Matrix	SOLID
Sample #	S94T300
Instrument Code	WC38931
Analyst	RDM
Date	12/22/94
Time	02:40 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	1.46E-01	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	18.7%

Data Entry by:	M G Bielamowicz	Date:	12/27/94
Approved by:	S H Bates	Date:	12/28/94

Form 378103S2 Rev. 1.2

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-3) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7632
Tare Weight	(wt1)		2.7481
Mass Precipitate	(net wt)		0.0151
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.6414E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		2.5532
Carrier Fractional Recovery	(Rec)		0.4951

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
DUPLICATE	289	@I129-01	SOLID	S94T300	WC38931	RDM	12/22/94	02:40 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	5.25E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	49.5%

Data Entry by: [signature] Date: 12/27/94

Approved by: [signature] Date: 12/28/94

Form 378103S2 Rev. 1.2

```
*****************************************************************************
* 222-S Laboratory Counting Room   23-DEC-1994 05:27:39.07                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                STANDARD
Sample Size:              1.00000E+00 ML
   ution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6065.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.94 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        23-DEC-1994 03:46:59.56
Decayed to:               23-DEC-1994 03:46:59.56
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  EMB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:      7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [illegible]

date: 12-23-94

[illegible] 12/27/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

J+	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
3	29.71	2866	0.99	59.38	54	20	4.7	1.04E+01		
3	33.61	809	1.40	67.19	54	20	14.2			
0	39.75	512	0.97	79.48	75	10	23.0		I-129	3.799E-04
0	511.04*	91	1.79	1022.09	1015	15	99.6			
0	662.05*	285	1.66	1323.57	1319	10	21.1			
0	970.62	81	1.24	1938.78	1933	11	57.3			
0	1121.82	90	1.54	2239.81	2236	12	48.7			
0	1464.81	1179	2.03	2921.71	2912	18	6.4			
0	1598.07	40	7.50	3186.28	3168	29	115.0			
0	1771.10	106	2.75	3529.50	3520	20	22.0			

Sample ID : STANDARD
Acquisition date : 23-DEC-1994 03:46:59

Total number of lines in spectrum	10	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	2	20.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	3.799E-04	3.799E-04	0.875E-04	23.03	
		Total Activity :	3.799E-04	3.799E-04			
		Grand Total Activity :	3.799E-04	3.799E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

All nuclides have been identified. No MDA report generated.

```
*****************************************************************************
* 222-S Laboratory Counting Room   23-DEC-1994 07:10:26.69                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                BLANK
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6066.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.91 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        23-DEC-1994 05:29:47.29
Decayed to:               23-DEC-1994 05:29:47.29
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  EMB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [signature]

date: 12/23/94

[signature] 12/27/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
5	72.85*	187	1.86	145.78	141	17	64.6	3.88E+00		
0	661.99*	300	1.39	1323.45	1316	15	26.3			
0	727.86*	52	1.07	1454.87	1449	12	101.6			
0	1122.15	86	1.12	2240.47	2235	12	51.6			
0	1464.86	1177	1.78	2921.81	2912	20	6.7			
0	1735.80	18	1.62	3459.51	3453	13	76.8			
0	1771.35	98	1.69	3529.99	3521	18	28.5			

Sample ID : BLANK Acquisition date : 23-DEC-1994 05:29:47

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

* There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : BLANK
Acquisition date : 23-DEC-1994 05:29:47

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	369.	39.60	6.6202E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   23-DEC-1994 09:29:38.63                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T299SAMPLE
Sample Size:              1.00000E+00 ML
  ution Factor:           1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6067.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.77 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        23-DEC-1994 07:49:00.84
Decayed to:               23-DEC-1994 07:49:00.84
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by:

date: 12/23/94

12/27/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	511.37*	92	2.63	1022.75	1016	16	102.6			
0	609.58*	91	1.45	1218.86	1212	14	80.6			
0	662.06*	444	1.19	1323.59	1317	12	16.2			
0	1121.99	96	1.53	2240.14	2233	13	43.8			
0	1464.81	1144	2.06	2921.71	2912	17	6.4			
0	1771.30	104	2.23	3529.89	3522	20	26.7			

Sample ID : S94T299SAMPLE Acquisition date : 23-DEC-1994 07:49:00

Total number of lines in spectrum	6	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T299SAMPLE Acquisition date : 23-DEC-1994 07:49:00

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
29	358.	39.60	6.5231E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   23-DEC-1994 11:27:50.87                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T299DUPLICATE
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6068.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.09 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        23-DEC-1994 09:47:12.41
Decayed to:               23-DEC-1994 09:47:12.41
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: M C Brown

date: 12/23/94

B Machelor 12/27/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL.
0	74.20*	397	2.61	148.47	142	12	40.8			
0	609.73*	87	1.29	1219.16	1212	14	84.5			
0	662.17*	347	1.53	1323.81	1319	14	21.1			
0	1122.38	78	1.82	2240.92	2234	13	62.1			
0	1240.26	47	1.08	2475.43	2468	13	91.4			
0	1464.83	1195	1.90	2921.76	2913	16	6.2			
0	1771.12	93	1.77	3529.53	3522	17	33.8			

Sample ID : S94T299DUPLICATE Acquisition date : 23-DEC-1994 09:47:12

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

* There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T299DUPLICATE
Acquisition date : 23-DEC-1994 09:47:12

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	373.	39.60	6.6611E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   23-DEC-1994 13:09:49.45                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T300SAMPLE
Sample Size:              1.00000E+00 ML
   ution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6069.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:08.36 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        23-DEC-1994 11:29:09.32
Decayed to:               23-DEC-1994 11:29:09.32
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by:

date: 12/23/94

12/27/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

J+	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	186.12*	115	1.63	372.51	368	8	98.0			
0	511.28*	116	2.36	1022.58	1014	19	92.7			
0	609.40*	84	1.62	1218.51	1211	13	85.0			
0	662.00*	327	1.44	1323.48	1319	13	23.1			
0	1122.77	125	2.01	2241.70	2234	17	43.8			
0	1240.24	64	1.22	2475.40	2469	13	66.2			
0	1464.82	1187	2.01	2921.74	2913	20	6.4			
0	1771.16	104	2.01	3529.63	3519	22	30.2			

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T300SAMPLE
Acquisition date : 23-DEC-1994 11:29:09

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I29	402.	39.60	6.9165E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   23-DEC-1994 14:52:08.26                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T300DUPLICATE
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]lg6070.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:09.79 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        23-DEC-1994 13:11:24.53
Decayed to:               23-DEC-1994 13:11:24.53
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [signature]

date: 12/23/94

[signature] 12/27/94

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL.
0	295.72*	117	1.69	591.77	587	10	87.2			
0	609.67*	50	1.43	1219.03	1215	8	114.5			
0	662.08*	311	1.33	1323.64	1318	12	20.8			
0	971.11	122	1.87	1939.74	1935	14	38.2			
0	1240.08	70	3.55	2475.09	2469	13	55.6			
0	1464.80	1229	1.92	2921.70	2911	22	6.4			
0	1771.17	100	1.44	3529.65	3522	15	24.7			

Sample ID : S94T300DUPLICATE
Acquisition date : 23-DEC-1994 13:11:24

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

* There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T300DUPLICATE
Acquisition date : 23-DEC-1994 13:11:24

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	371.	39.60	6.6414E-05

Sy 103

LABCORE Data Entry Template for Worklist# 457

Analyst: RAG **Instrument:** GEA00 Det #1 **Method:** LA-378-103 B3

Worklist Comment: Use 2 mL of Itank for the standard. sac WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
✓ 1	BLNK-PREP				@I129-01	I129-01	SOLID			N/A	uCi/g
1	BLNK-PREP				@I129-01	I129-01C	SOLID			N/A	% Rec
1	BLNK-PREP				@I129-01	I129-01E	SOLID			N/A	% Ct.
2	STD				@I129-01	I129-01	SOLID			N/A	uCi/g
✓ 2	STD				@I129-01	I129-01C	SOLID			N/A	% Rec
2	STD				@I129-01	I129-01E	SOLID			N/A	% Ct.
✓ 3	SAMPLE	S94T000267	0	W	@I129-01	I129-01	SOLID	N/A			uCi/g
3	SAMPLE	S94T000267	0	W	@I129-01	I129-01C	SOLID	N/A			% Rec
3	SAMPLE	S94T000267	0	W	@I129-01	I129-01E	SOLID	N/A			% Ct.
✓ 4	DUP	S94T000267	0	W	@I129-01	I129-01	SOLID			N/A	uCi/g
4	DUP	S94T000267	0	W	@I129-01	I129-01C	SOLID			N/A	% Rec
	DUP	S94T000267	0	W	@I129-01	I129-01E	SOLID			N/A	% Ct.
✓ 5	SAMPLE	S94T000279	0	W	@I129-01	I129-01	SOLID	N/A			uCi/g
5	SAMPLE	S94T000279	0	W	@I129-01	I129-01C	SOLID	N/A			% Rec
5	SAMPLE	S94T000279	0	W	@I129-01	I129-01E	SOLID	N/A			% Ct.
✓ 6	DUP	S94T000279	0	W	@I129-01	I129-01	SOLID			N/A	uCi/g
6	DUP	S94T000279	0	W	@I129-01	I129-01C	SOLID			N/A	% Rec
6	DUP	S94T000279	0	W	@I129-01	I129-01E	SOLID			N/A	% Ct.
✓ 7	SAMPLE	S94T000280	0	W	@I129-01	I129-01	SOLID	N/A			uCi/g
7	SAMPLE	S94T000280	0	W	@I129-01	I129-01C	SOLID	N/A			% Rec

Data Entry Comments: Standard #3852

Samples to be resum. sac

LOW STD & CARRIER RECOVERIES

Units shown for QC (SPK) may not reflect the actual units.

1637

LABCORE Data Entry Template for Worklist# 457

Analyst: RAG **Instrument:** GEA00 1 **Method:** LA-378-103 B-3

• **Worklist Comment:** Use 2 mL of Itank for the standard. sac WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
7	SAMPLE	S94T000280	0	W	@I129-01	I129-01E	SOLID	N/A			% Ct.
✓8	DUP	S94T000280	0	W	@I129-01	I129-01	SOLID			N/A	uCi/g
8	DUP	S94T000280	0	W	@I129-01	I129-01C	SOLID			N/A	% Rec
8	DUP	S94T000280	0	W	@I129-01	I129-01E	SOLID			N/A	% Ct.
✓9	SAMPLE	S94T000281	0	W	@I129-01	I129-01	SOLID	N/A			uCi/g
9	SAMPLE	S94T000281	0	W	@I129-01	I129-01C	SOLID	N/A			% Rec
9	SAMPLE	S94T000281	0	W	@I129-01	I129-01E	SOLID	N/A			% Ct.
✓10	DUP	S94T000281	0	W	@I129-01	I129-01	SOLID			N/A	uCi/g
10	DUP	S94T000281	0	W	@I129-01	I129-01C	SOLID			N/A	% Rec
10	DUP	S94T000281	0	W	@I129-01	I129-01E	SOLID			N/A	% Ct.

Final page for worklist # 457

Rae Ann Green
Analyst Signature

Jan 31, 1995
Date

MBicl
2/3/95

Data Entry Comments:

Units shown for QC (SPK) may not reflect the actual units.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			BLANK
Gross Weight	(wt2)	2.7722
Tare Weight	(wt1)	2.7587
Mass Precipitate	(net wt)	0.0135
I-129 µCi / Sample from GEA	(I-129 GEA)	<6.9994E-5
Sample Volume in mL	(SS)	1
Dilution Factor	(DF)	1
Digest Grams of Solids / Liter	(Dg/L)	10.442
Carrier Fractional Recovery	(Rec)	0.4426

Type	BLANK
Work List	457
Test Code	@I129-01
Matrix	SOLID
Sample #	S94T267
Instrument Code	WC38931
Analyst	RAG
Date	01/31/95
Time	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	1.51E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	44.3%

Data Entry by: [signature] Date: 02/03/95

Approved by: [signature] Date: 2/6/95

Form 378103S2 Rev. 1.2

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.7596
STANDARD	Tare Weight	(wt1)	2.744
Work List	Mass Precipitate	(net wt)	0.0156
457	I-129 µCi / Sample from GEA	(I-129 GEA)	3.867E-4
Test Code	Sample Volume in mL	(SS)	2
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.5115
Sample #			
WORKLIST#457	IODINE 129 = 3.78E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
RAG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
01/31/95			
Time			
07:30 AM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	3.78E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	51.1%

Data Entry by:	[signature]	Date:	02/03/95
Approved by:	[signature]	Date:	2/6/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.7498
SAMPLE	Tare Weight	(wt1)	2.7516
Work List	Mass Precipitate	(net wt)	-0.0018
457	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.7689E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	10.442
SOLID	Carrier Fractional Recovery	(Rec)	-0.0590
Sample #			
S94T267			
Instrument Code			
WC38931			
Analyst			
RAG			
Date			
01/31/95			
Time			
07:30 AM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	-1.10E-01	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	-5.9%

Data Entry by:	[illegible]	Date:	02/03/95
Approved by:	[illegible]	Date:	2/6/95

Form 378103S2 Rev. 1.2 Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Type	Gross Weight	(wt2)	2.7392
DUPLICATE	Tare Weight	(wt1)	2.7292
Work List	Mass Precipitate	(net wt)	0.01
457	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.6824E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	10.442
SOLID	Carrier Fractional Recovery	(Rec)	0.3279
Sample #			
S94T267			
Instrument Code			
WC38931			
Analyst			
RAG			
Date			
01/31/95			
Time			
07:30 AM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(DF)}{(Rec)(SS)(Dg/L)}$$

RESULT	IODINE 129	=	<	1.95E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	32.8%

Data Entry by:	[illegible]	Date:	02/03/95
Approved by:	[illegible]	Date:	3/6/95

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.7460
SAMPLE	Tare Weight	(wt1)	2.7357
Work List	Mass Precipitate	(net wt)	0.0103
457	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.8436E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	10.328
SOLID	Carrier Fractional Recovery	(Rec)	0.3377
Sample #			
S94T279			
Instrument Code			
WC38931			
Analyst			
RAG			
Date			
01/31/95			
Time			
07:30 AM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(DF)}{(Rec)(SS)(Dg/L)}$$

RESULT	IODINE 129	=	<	1.96E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	33.8%

Data Entry by:	[signature]	Date:	02/03/95
Approved by:	[signature]	Date:	2/6/95

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7700
Tare Weight	(wt1)		2.7588
Mass Precipitate	(net wt)		0.0112
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.6094E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		10.296
Carrier Fractional Recovery	(Rec)		0.3672

Type
DUPLICATE
Work List
457
Test Code
@I129-01
Matrix
SOLID
Sample #
S94T279
Instrument Code
WC38931
Analyst
RAG
Date
01/31/95
Time
07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	1.75E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	36.7%

Data Entry by:	M C Brown	Date:	02/03/95
Approved by:	S R Cook	Date:	2/6/95

Form 378103S2 Rev. 1.2 Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Gross Weight	(wt2)		2.7560
Tare Weight	(wt1)		2.7485
Mass Precipitate	(net wt)		0.0075
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.5547E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		10.226
Carrier Fractional Recovery	(Rec)		0.2459

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
SAMPLE	457	@I129-01	SOLID	S94T280	WC38931	RAG	01/31/95	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	2.61E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	24.6%

Data Entry by: [illegible] Date: 02/03/95

Approved by: [illegible] Date: 2/6/95

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Type	Gross Weight	(wt2)	2.7610
DUPLICATE	Tare Weight	(wt1)	2.7490
Work List	Mass Precipitate	(net wt)	0.012
457	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.7658E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	10.228
SOLID	Carrier Fractional Recovery	(Rec)	0.3934
Sample #			
S94T280			
Instrument Code			
WC38931			
Analyst			
RAG			
Date			
01/31/95			
Time			
07:30 AM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	1.68E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	39.3%

Data Entry by:	[signature]	Date:	02/03/95
Approved by:	[signature]	Date:	2/6/95

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.7305
SAMPLE	Tare Weight	(wt1)	2.7217
Work List	Mass Precipitate	(net wt)	0.0088
457	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.6803E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	10.516
SOLID	Carrier Fractional Recovery	(Rec)	0.2885
Sample #			
S94T281			
Instrument Code			
WC38931			
Analyst			
RAG			
Date			
01/31/95			
Time			
07:30 AM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	2.20E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	28.9%

Data Entry by:	[signature]	Date:	02/03/95
Approved by:	[signature]	Date:	2/6/95

Form 378103S2 Rev. 1.2

Page 1 of 1

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7604
Tare Weight	(wt1)		2.7530
Mass Precipitate	(net wt)		0.0074
I-129 µCi / Sample from GEA	(I-129 GEA)		<6.6545E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		10.396
Carrier Fractional Recovery	(Rec)		0.2426

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
DUPLICATE	457	@I129-01	SOLID	S94T281	WC38931	RAG	01/31/95	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	2.64E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	24.3%

Data Entry by: [signature] Date: 02/03/95

Approved by: [signature] Date: 2/6/95

Form 378103S2 Rev. 1.2

```
*****************************************************************************
* 222-S Laboratory Counting Room    1-FEB-1995 21:44:23.48                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T000267-BLK
Sample Size:              1.00000E+00 ML
   ution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6186.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.62 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        1-FEB-1995 20:03:45.54
Decayed to:               1-FEB-1995 20:03:45.54
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by:

date: 2-1-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

-	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	662.25*	376	1.38	1323.98	1319	11	18.2			
0	970.87	93	1.88	1939.27	1933	11	44.6			
0	1122.15	92	1.71	2240.47	2233	13	47.4			
0	1381.96	25	1.57	2757.13	2754	8	72.9			
0	1465.29	1174	2.06	2922.67	2916	18	6.8			
0	1771.79	100	1.71	3530.86	3526	15	26.4			

Sample ID : S94T000267-BLK Acquisition date : 1-FEB-1995 20:03:45

Total number of lines in spectrum	6	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T000267-BLK
Acquisition date : 1-FEB-1995 20:03:45

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I29	412.	39.60	6.9994E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room    1-FEB-1995 20:01:14.30                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T000267-STD
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]lg6185.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.25 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        1-FEB-1995 18:20:32.18
Decayed to:               1-FEB-1995 18:20:32.18
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: A. K. Johansen

date: 2-1-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.61	2996	1.02	59.18	55	8	5.4			
0	33.76	781	0.99	67.49	65	7	14.2			
0	39.60	522	0.95	79.20	76	8	20.0		I-129	3.867E-04
0	662.11*	421	1.36	1323.69	1317	15	19.4			
0	912.52*	46	1.94	1823.02	1817	12	113.1			
0	970.91	127	1.52	1939.35	1934	13	36.1			
0	1122.61	83	1.06	2241.37	2237	12	51.7			
0	1241.19	44	1.41	2477.28	2474	9	72.1			
0	1465.19	1175	1.76	2922.46	2912	20	6.6			
0	1598.87	26	1.51	3187.87	3184	9	55.8			
0	1771.76	117	2.11	3530.80	3522	20	22.7			

Sample ID : S94T000267-STD Acquisition date : 1-FEB-1995 18:20:32

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	3.867E-04	3.867E-04	0.772E-04	19.95	
		Total Activity :	3.867E-04	3.867E-04			
		Grand Total Activity :	3.867E-04	3.867E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T000267-STD Acquisition date : 1-FEB-1995 18:20:32

All nuclides have been identified. No MDA report generated.

```
*************************************************************************
* 222-S Laboratory Counting Room    1-FEB-1995 23:36:51.80              *
*************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T000267-SAM
Sample Size:              1.00000E+00 ML
  ution Factor:           1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6187.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.31 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        1-FEB-1995 21:56:11.31
Decayed to:               1-FEB-1995 21:56:11.31
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*************************************************************************
```

Removed by: Raymond

date: 2-2-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

T*	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	662.03*	365	1.52	1323.54	1316	16	22.4	1.04E+00		
0	1122.58	80	1.18	2241.31	2237	9	45.2			
0	1465.30	1195	1.89	2922.69	2913	20	6.6			
0	1597.78	31	1.97	3185.71	3182	11	69.2			
0	1772.02	101	1.92	3531.33	3524	17	27.3			

Sample ID : S94T000267-SAM Acquisition date : 1-FEB-1995 21:56:11

Total number of lines in spectrum	5	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T000267-SAM Acquisition date : 1-FEB-1995 21:56:11

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
-129	385.	39.60	6.7689E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-FEB-1995 02:01:12.51                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T-267-DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6188.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.35 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        2-FEB-1995 00:20:33.48
Decayed to:               2-FEB-1995 00:20:33.48
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 2-2-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL
0	662.30*	468	1.64	1324.07	1318	12	15.1			
0	912.84	172	1.41	1823.65	1819	12	26.6			
0	1122.41	120	1.45	2240.99	2235	12	36.6			
0	1465.36	1129	1.82	2922.81	2913	19	6.5			
0	1543.13	13	1.18	3077.23	3075	5	55.5			
0	1597.71	31	2.02	3185.56	3181	13	64.5			
0	1771.51	89	1.85	3530.32	3521	19	35.9			

Sample ID : S94T-267-DUP Acquisition date : 2-FEB-1995 00:20:33

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T-267-DUP Acquisition date : 2-FEB-1995 00:20:33

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	376.	39.60	6.6824E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-FEB-1995 03:55:53.52                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T-279-SAM
 ample Size:              1.00000E+00 ML
 ilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6189.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.50 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        2-FEB-1995 02:15:13.14
Decayed to:               2-FEB-1995 02:15:13.14
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 2-2-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

˜t	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	351.81*	91	1.19	703.93	699	10	95.7			
0	363.90	58	1.04	728.09	724	7	93.1			
0	662.24*	382	1.52	1323.96	1318	15	20.9			
0	912.81	159	1.33	1823.59	1820	10	27.5			
0	971.06	111	1.63	1939.65	1935	12	39.8			
0	1122.68	113	2.44	2241.52	2234	20	53.7			
0	1465.43	1148	1.90	2922.94	2915	19	6.5			
0	1771.72	102	1.94	3530.74	3523	18	27.8			

Sample ID : S94T-279-SAM Acquisition date : 2-FEB-1995 02:15:13

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T-279-SAM
Acquisition date : 2-FEB-1995 02:15:13

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
·129	394.	39.60	6.8436E-05

WHC-SD-WM-DP-074, REV. 0

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-FEB-1995 05:59:47.56                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T-279-DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6190.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.16 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        2-FEB-1995 04:19:08.28
Decayed to:               2-FEB-1995 04:19:08.28
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 2-2-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	662.55*	364	1.56	1324.57	1318	15	20.9			
0	1122.65	88	1.46	2241.45	2235	11	46.3			
0	1465.44	1175	2.10	2922.97	2914	21	6.9			
0	1518.99	13	0.62	3029.31	3027	6	81.4			
0	1596.84	51	6.16	3183.84	3175	20	51.5			
0	1736.99	19	0.87	3461.87	3458	8	73.0			
0	1771.69	90	2.05	3530.67	3523	14	27.5			

Sample ID : S94T-279-DUP
Acquisition date : 2-FEB-1995 04:19:08

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T-279-DUP Acquisition date : 2-FEB-1995 04:19:08

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	368.	39.60	6.6094E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-FEB-1995 09:14:49.50                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S-94T280-SAM
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              NI3AF:2.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.99 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        2-FEB-1995 06:11:02.40
Decayed to:               2-FEB-1995 06:11:02.40
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  DM
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: D. H. Milbrin

date: 2-2-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	609.60*	79	1.36	1218.89	1212	14	93.3			
0	661.93*	301	1.39	1323.33	1317	14	26.8			
0	727.84*	61	1.22	1454.84	1448	13	89.6			
0	1122.76	101	1.46	2241.68	2234	12	43.3			
0	1465.45	1210	1.91	2922.98	2914	16	6.1			
0	1562.51	13	0.57	3115.70	3112	7	63.4			
0	1771.70	97	1.98	3530.70	3523	17	26.2			

Sample ID : S-94T280-SAM Acquisition date : 2-FEB-1995 06:11:02

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S-94T280-SAM Acquisition date : 2-FEB-1995 06:11:02

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	361.	39.60	6.5547E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-FEB-1995 11:02:06.88                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S-94T280-DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6192.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:08.06 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        2-FEB-1995 09:21:26.02
Decayed to:               2-FEB-1995 09:21:26.02
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  DM
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by:

D Hmilicia

date: 2-2-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL
0	662.18*	277	1.66	1323.83	1318	11	22.6			
0	912.83	202	1.90	1823.63	1817	16	26.6			
0	970.60	111	1.10	1938.73	1934	10	36.3			
0	1123.19	140	1.36	2242.53	2236	15	34.5			
0	1306.35	38	0.79	2606.85	2602	11	65.6			
0	1465.44	1175	1.98	2922.97	2914	20	6.8			
0	1771.57	73	1.70	3530.43	3524	16	36.1			

Sample ID : S-94T280-DUP Acquisition date : 2-FEB-1995 09:21:26

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S-94T280-DUP Acquisition date : 2-FEB-1995 09:21:26

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	385.	39.60	6.7658E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-FEB-1995 13:00:12.45                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S-94T281-SAM
 mple Size:               1.00000E+00 ML
 ilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6193.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.49 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        2-FEB-1995 11:19:32.50
Decayed to:               2-FEB-1995 11:19:32.50
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  DM
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [signature]

date: 2-2-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

't	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	609.65*	95	1.45	1219.00	1212	15	79.3			
0	662.24*	273	1.59	1323.97	1317	12	25.2			
0	728.40*	40	2.37	1455.95	1452	9	105.2			
0	970.93	127	1.81	1939.39	1933	16	45.0			
0	1122.65	91	1.54	2241.47	2236	12	49.7			
0	1241.47	35	0.97	2477.85	2472	12	125.1			
0	1465.45	1139	1.92	2922.99	2913	21	6.6			
0	1626.69	28	2.46	3243.07	3240	8	47.8			
0	1771.58	108	0.90	3530.46	3520	20	21.8			

Sample ID : S-94T281-SAM Acquisition date : 2-FEB-1995 11:19:32

Total number of lines in spectrum	9	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S-94T281-SAM Acquisition date : 2-FEB-1995 11:19:32

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
·129	375.	39.60	6.6803E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room    2-FEB-1995 15:05:33.32                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T281-DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6194.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.97 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        2-FEB-1995 13:24:51.65
Decayed to:               2-FEB-1995 13:24:51.65
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:      7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by:

D. H. Milicia

date: 2-2-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL
7	72.73*	148	1.69	145.53	141	12	77.0	2.08E+00		
0	662.12*	322	1.25	1323.72	1317	13	21.6			
0	970.76	116	1.87	1939.04	1935	10	32.8			
0	1122.74	95	1.53	2241.63	2235	11	44.0			
0	1240.51	44	1.70	2475.94	2471	11	86.8			
0	1318.59	27	4.34	2631.17	2625	12	100.0			
0	1465.37	1143	1.88	2922.82	2914	19	7.0			
0	1772.10	83	2.34	3531.49	3521	20	34.3			

Sample ID : S94T281-DUP Acquisition date : 2-FEB-1995 13:24:51

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T281-DUP Acquisition date : 2-FEB-1995 13:24:51

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	373.	39.60	6.6545E-05

5y103

LABCORE Data Entry Template for Worklist# 525

Analyst: DCD **Instrument:** GEA00 1 **Method:** LA-378-103/3-3

Worklist Comment: Use 2 mL of standard. This is rerun #1. sac WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test	Matrix	Actual	Found	DL	Unit
1	BLNK-PREP				@I129-01 I129-01	SOLID			N/A	uCi/g
1	BLNK-PREP				@I129-01 I129-01C	SOLID			N/A	% Rec
1	BLNK-PREP				@I129-01 I129-01E	SOLID			N/A	% Ct.
2	STD 3B52				@I129-01 I129-01	SOLID			N/A	uCi/g
2	STD				@I129-01 I129-01C	SOLID			N/A	% Rec
2	STD				@I129-01 I129-01E	SOLID			N/A	% Ct.
3	SAMPLE	S94T000267	0	W	@I129-01 I129-01	SOLID	N/A			uCi/g
3	SAMPLE	S94T000267	0	W	@I129-01 I129-01C	SOLID	N/A			% Rec
3	SAMPLE	S94T000267	0	W	@I129-01 I129-01E	SOLID	N/A			% Ct.
4	DUP	S94T000267	0	W	@I129-01 I129-01	SOLID			N/A	uCi/g
4	DUP	S94T000267	0	W	@I129-01 I129-01C	SOLID			N/A	% Rec
4	DUP	S94T000267	0	W	@I129-01 I129-01E	SOLID			N/A	% Ct.
5	SAMPLE	S94T000279	0	W	@I129-01 I129-01	SOLID	N/A			uCi/g
5	SAMPLE	S94T000279	0	W	@I129-01 I129-01C	SOLID	N/A			% Rec
5	SAMPLE	S94T000279	0	W	@I129-01 I129-01E	SOLID	N/A			% Ct.
6	DUP	S94T000279	0	W	@I129-01 I129-01	SOLID			N/A	uCi/g
6	DUP	S94T000279	0	W	@I129-01 I129-01C	SOLID			N/A	% Rec
6	DUP	S94T000279	0	W	@I129-01 I129-01E	SOLID			N/A	% Ct.
7	SAMPLE	S94T000280	0	W	@I129-01 I129-01	SOLID	N/A			uCi/g
7	SAMPLE	S94T000280	0	W	@I129-01 I129-01C	SOLID	N/A			% Rec

Data Entry Comments:

Rerun #1

Sample will be rerun when additional digest available. sac

Units shown for QC (SPK) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 525

Analyst: DCD **Instrument:** GEA00 1 **Method:** LA-378-103/B-3

Worklist Comment: Use 2 mL of standard. This is rerun #1. sac WHC-SD-WM-DP-074, REV. 0

Seg	Type	Sample#	Rep	Al	Test		Matrix	Actual	Found	DL	Unit
7	SAMPLE	S94T000280	0	W	@I129-01	I129-01E	SOLID	N/A			% Ct.
8	DUP	S94T000280	0	W	@I129-01	I129-01	SOLID			N/A	uCi/g
8	DUP	S94T000280	0	W	@I129-01	I129-01C	SOLID			N/A	% Rec
8	DUP	S94T000280	0	W	@I129-01	I129-01E	SOLID			N/A	% Ct.
9	SAMPLE	S94T000281	0	W	@I129-01	I129-01	SOLID	N/A			uCi/g
9	SAMPLE	S94T000281	0	W	@I129-01	I129-01C	SOLID	N/A			% Rec
9	SAMPLE	S94T000281	0	W	@I129-01	I129-01E	SOLID	N/A			% Ct.
10	DUP	S94T000281	0	W	@I129-01	I129-01	SOLID			N/A	uCi/g
10	DUP	S94T000281	0	W	@I129-01	I129-01C	SOLID			N/A	% Rec
10	DUP	S94T000281	0	W	@I129-01	I129-01E	SOLID			N/A	% Ct.

Final page for worklist # 525

David C Dunham
Analyst Signature

3-19-95
Date

MC Brian
3-20-95

Data Entry Comments: Insufficient Sample for S94T279 SAM
S94T280 SAM
S94T281 SAM & DUP

Units shown for QC (SPK) may not reflect the actual units.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			BLANK
Type	Gross Weight	(wt2)	2.7229
BLANK	Tare Weight	(wt1)	2.7206
Work List	Mass Precipitate	(net wt)	0.0023
525	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.9856E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	10.442
SOLID	Carrier Fractional Recovery	(Rec)	0.0754
Sample #			
S94T267			
Instrument Code			
WC38931			
Analyst			
DCD			
Date			
03/19/95			
Time			
07:30 AM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	8.87E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	7.5%

Data Entry by:	[signature]	Date:	03/20/95
Approved by:	[signature]	Date:	3/20/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.7834
STANDARD	Tare Weight	(wt1)	2.7666
Work List	Mass Precipitate	(net wt)	0.0168
525	I-129 µCi / Sample from GEA	(I-129 GEA)	5.661E-4
Test Code	Sample Volume in mL	(SS)	2
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.5508
Sample #			
WORKLIST@525	IODINE 129 = 5.14E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DCD			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
03/19/95			
Time			
07:30 AM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	5.14E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	55.1%

Data Entry by:	[signature]	Date:	03/20/95
Approved by:	[signature]	Date:	3/20/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Gross Weight	(wt2)		2.7498
Tare Weight	(wt1)		2.7446
Mass Precipitate	(net wt)		0.0052
I-129 µCi / Sample from GEA	(I-129 GEA)		<7.455E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		10.442
Carrier Fractional Recovery	(Rec)		0.1705

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
SAMPLE	525	@I129-01	SOLID	S94T267	WC38931	DCD	03/19/95	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	4.19E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	17.0%

Data Entry by: [signature] Date: 03/20/95

Approved by: [signature] Date: 3/24/95

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7406
Tare Weight	(wt1)		2.7332
Mass Precipitate	(net wt)		0.0074
I-129 µCi / Sample from GEA	(I-129 GEA)		<7.3438E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		10.442
Carrier Fractional Recovery	(Rec)		0.2426

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
DUPLICATE	525	@I129-01	SOLID	S94T267	WC38931	DCD	03/19/95	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	2.90E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	24.3%

Data Entry by:	[signature]	Date:	03/20/95
Approved by:	[signature]	Date:	3/20/95

Form 378103S2 Rev. 1.2

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Type	Gross Weight	(wt2)	0.0000
SAMPLE	Tare Weight	(wt1)	0.0000
Work List	Mass Precipitate	(net wt)	0
525	I-129 µCi / Sample from GEA	(I-129 GEA)	INSUFF. SAMPL
Test Code	Sample Volume in mL	(SS)	0
@I129-01	Dilution Factor	(DF)	0
Matrix	Digest Grams of Solids / Liter	(Dg/L)	10.328
SOLID	Carrier Fractional Recovery	(Rec)	0.0000
Sample #			
S94T279			
Instrument Code			
WC38931			
Analyst			
DCD			
Date			
03/19/95			
Time			
07:30 AM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	ERR	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	0.0%

Data Entry by:	[signature]	Date:	03/20/95
Approved by:	[signature]	Date:	3/20/95

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7457
Tare Weight	(wt1)		2.7398
Mass Precipitate	(net wt)		0.0059
I-129 µCi / Sample from GEA	(I-129 GEA)		<7.3959E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		10.296
Carrier Fractional Recovery	(Rec)		0.1934

Type	DUPLICATE
Work List	525
Test Code	@I129-01
Matrix	SOLID
Sample #	S94T279
Instrument Code	WC38931
Analyst	DCD
Date	03/19/95
Time	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	3.71E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	19.3%

Data Entry by: [signature] Date: 03/20/95

Approved by: [signature] Date: 3/20/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Gross Weight	(wt2)		0.0000
Tare Weight	(wt1)		0.0000
Mass Precipitate	(net wt)		0
I-129 µCi / Sample from GEA	(I-129 GEA)		INSUFF. SAMPL
Sample Volume in mL	(SS)		0
Dilution Factor	(DF)		0
Digest Grams of Solids / Liter	(Dg/L)		10.226
Carrier Fractional Recovery	(Rec)		0.0000

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
SAMPLE	525	@I129-01	SOLID	S94T280	WC38931	DCD	03/19/95	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	ERR	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	0.0%

Data Entry by:		Date:	03/20/95
Approved by:		Date:	3/20/95

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7565
Tare Weight	(wt1)		2.7462
Mass Precipitate	(net wt)		0.0103
I-129 µCi / Sample from GEA	(I-129 GEA)		<7.0471E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		10.228
Carrier Fractional Recovery	(Rec)		0.3377

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
DUPLICATE	525	@I129-01	SOLID	S94T280	WC38931	DCD	03/19/95	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(DF)}{(Rec)(SS)(Dg/L)}$$

RESULT	IODINE 129	=	<	2.04E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	33.8%

Data Entry by: [signature] Date: 03/20/95

Approved by: [signature] Date: 3/20/95

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Type	Gross Weight	(wt2)	0.0000
SAMPLE	Tare Weight	(wt1)	0.0000
Work List	Mass Precipitate	(net wt)	0
525	I-129 µCi / Sample from GEA	(I-129 GEA)	INSUFF. SAMPL
Test Code	Sample Volume in mL	(SS)	0
@I129-01	Dilution Factor	(DF)	0
Matrix	Digest Grams of Solids / Liter	(Dg/L)	10.516
SOLID	Carrier Fractional Recovery	(Rec)	0.0000
Sample #			
S94T281			
Instrument Code			
WC38931			
Analyst			
DCD			
Date			
03/19/95			
Time			
07:30 AM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(DF)}{(Rec)(SS)(Dg/L)}$$

RESULT	IODINE 129	=	ERR	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	0.0%

Data Entry by:	[signature]	Date:	03/20/95
Approved by:	[signature]	Date:	3/20/95

Form 378103S2 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		0.0000
Tare Weight	(wt1)		0.0000
Mass Precipitate	(net wt)		0
I-129 µCi / Sample from GEA	(I-129 GEA)		INSUFF. SAMPL
Sample Volume in mL	(SS)		0
Dilution Factor	(DF)		0
Digest Grams of Solids / Liter	(Dg/L)		10.396
Carrier Fractional Recovery	(Rec)		0.0000

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
DUPLICATE	525	@I129-01	SOLID	S94T281	WC38931	DCD	03/19/95	07:30 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(DF)}{(Rec)(SS)(Dg/L)}$$

RESULT	IODINE 129	=	ERR	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	0.0%

Data Entry by: M G Brown Date: 03/20/95

Approved by: [illegible] Date: 3/20/95

Form 378103S2 Rev. 1.2

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Page 1 of 1

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-MAR-1995 14:57:32.26                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                WORKLIST#525-BLK
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6789.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.50 sec

      >>>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-MAR-1995 13:16:50.69
Decayed to:               19-MAR-1995 13:16:50.69
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by:

date: 3-19-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	31.89	334	1.19	63.76	60	9	32.7			
0	117.39	104	1.07	234.95	233	6	93.8			
0	583.43*	79	1.30	1166.64	1162	11	78.4			
0	662.20*	1770	1.40	1323.87	1317	13	6.0			
0	913.16	213	1.91	1824.31	1816	17	26.7			
0	1122.93	109	1.79	2242.01	2236	13	40.6			
0	1465.24	1221	1.74	2922.56	2914	17	6.6			

Sample ID : WORKLIST#525-BLK Acquisition date : 19-MAR-1995 13:16:50

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : WORKLIST#525-BLK
Acquisition date : 19-MAR-1995 13:16:50

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	411.	39.60	6.9856E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-MAR-1995 13:15:30.77                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                WORKLIST#525-STD
Sample Size:              1.00000E+00 ML   SEE worklist 2ml
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00
```

Removed by: [signature]

date: 3-19-95

WHC-SD-WM-DP-074, REV. 0

```
      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6788.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.97 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-MAR-1995 11:34:50.40
Decayed to:               19-MAR-1995 11:34:50.40
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL
0	29.61	4628	1.03	59.18	55	8	4.2			
0	33.71	810	0.99	67.40	65	8	17.3			
0	39.59	763	0.90	79.17	77	6	12.4		I-129	5.661E-04
0	662.13*	1411	1.50	1323.73	1315	18	7.7			
0	1122.47	162	1.27	2241.11	2235	13	28.6			
0	1465.20	1262	1.71	2922.49	2913	18	6.0			
0	1736.64	24	1.21	3461.17	3458	11	56.5			
0	1772.14	105	1.86	3531.57	3524	18	27.0			

Sample ID : WORKLIST#525-STD Acquisition date : 19-MAR-1995 11:34:50

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	5.661E-04	5.661E-04	0.703E-04	12.41	
		Total Activity :	5.661E-04	5.661E-04			
		Grand Total Activity :	5.661E-04	5.661E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

All nuclides have been identified. No MDA report generated.

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-MAR-1995 16:40:08.90                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T000267-SAM
 mple Size:               1.00000E+00 ML
 lution Factor:           1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6790.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.08 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-MAR-1995 14:59:27.98
Decayed to:               19-MAR-1995 14:59:27.98
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [signature]

date: 3.19.95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

~t	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.12	600	1.13	64.21	60	9	20.4			
0	36.49	182	1.26	72.96	69	8	57.0			
0	662.04*	2743	1.59	1323.56	1316	13	4.6			
0	1122.07	91	0.88	2240.30	2233	15	52.8			
0	1464.81	1125	2.35	2921.72	2913	18	7.0			
0	1771.08	70	2.24	3529.46	3519	20	47.6			

Sample ID : S94T000267-SAM Acquisition date : 19-MAR-1995 14:59:27

Total number of lines in spectrum	6	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T000267-SAM
Acquisition date : 19-MAR-1995 14:59:27

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	468.	39.60	7.4550E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-MAR-1995 18:23:59.15                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T267-DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6791.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:08.82 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-MAR-1995 16:43:19.49
Decayed to:               19-MAR-1995 16:43:19.49
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 3-19-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPL
0	32.03	1222	0.98	64.04	60	10	12.0			
0	36.51	290	1.07	73.01	69	8	36.7			
0	238.36*	116	1.11	477.04	473	9	104.1			
0	255.28	81	1.68	510.88	509	7	105.5			
0	609.35*	73	1.24	1218.40	1213	11	91.1			
0	661.88*	6252	1.45	1323.24	1315	14	2.8			
0	1464.47	1153	2.30	2921.04	2912	19	6.3			
0	1520.02	44	11.52	3031.35	3015	42	124.1			
0	1735.58	19	0.85	3459.07	3452	14	62.4			
0	1770.84	111	1.84	3528.99	3521	16	23.5			

Sample ID : S94T267-DUP Acquisition date : 19-MAR-1995 16:43:19

Total number of lines in spectrum	10	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	0	0.00%

** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T267-DUP Acquisition date : 19-MAR-1995 16:43:19

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	454.	39.60	7.3438E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-MAR-1995 20:25:24.24                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T279-DUP
 mple Size:               1.00000E+00 ML
 lution Factor:           1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6792.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:09.88 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-MAR-1995 18:44:42.63
Decayed to:               19-MAR-1995 18:44:42.63
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 3-19-95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.04	1740	1.08	64.04	60	9	8.3			
0	36.48	531	1.12	72.95	69	10	24.5			
0	662.16*	9578	1.45	1323.80	1316	14	2.2	3.11E+00		
0	912.73	219	1.85	1823.44	1816	17	28.2			
0	970.89	124	1.51	1939.30	1934	12	37.4			
0	1122.34	106	1.78	2240.85	2234	16	49.6			
0	1465.17	1182	2.07	2922.43	2914	15	6.2			
0	1771.45	75	1.90	3530.20	3522	18	35.3			

Sample ID : S94T279-DUP Acquisition date : 19-MAR-1995 18:44:42

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T279-DUP Acquisition date : 19-MAR-1995 18:44:42

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	460.	39.60	7.3959E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-MAR-1995 23:02:13.73                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S94T280-DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6793.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:08.21 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-MAR-1995 21:21:34.76
Decayed to:               19-MAR-1995 21:21:34.76
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 3.19.95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLI
0	32.09	820	1.06	64.15	60	9	14.0			
0	36.45	255	0.87	72.88	69	9	41.4			
0	63.28*	79	1.50	126.62	124	6	110.0			
0	662.18*	3995	1.42	1323.84	1316	16	3.8	3.60E+00		
0	1123.00	135	1.27	2242.15	2236	13	34.2			
0	1371.96	40	4.98	2737.25	2727	25	105.7			
0	1465.19	1228	2.12	2922.47	2912	17	6.0			
0	1595.77	61	5.70	3181.72	3170	23	52.1			
0	1626.33	16	1.51	3242.35	3239	14	115.3			
0	1739.54	45	3.59	3466.92	3452	30	68.0			
0	1771.64	83	1.45	3530.57	3523	16	30.8			

Sample ID : S94T280-DUP Acquisition date : 19-MAR-1995 21:21:34

Total number of lines in spectrum	11	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S94T280-DUP
Acquisition date : 19-MAR-1995 21:21:34

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	418.	39.60	7.0471E-05

LABCORE Data Entry Template for Worklist# 1147

Analyst: DBB **Instrument:** GEA00 1 **Book #** 3852

Method: LA-378-103 Rev/Mod B-4 WHC-SD-WM-DP-074, REV. 0

Worklist Comment: Use 2 mL of std.

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD	3B52			@I129-01 I129-01	SOLID			N/A	uCi/g
		1	STD				@I129-01 I129-01C	SOLID			N/A	% Recovery
		1	STD				@I129-01 I129-01E	SOLID			N/A	% Ct. Error
		2	BLNK-PREP				@I129-01 I129-01	SOLID			N/A	uCi/g
		2	BLNK-PREP				@I129-01 I129-01C	SOLID			N/A	% Recovery
		2	BLNK-PREP				@I129-01 I129-01E	SOLID			N/A	% Ct. Error
94000020	SY-103	3	SAMPLE	S95T000291	0	W	@I129-01 I129-01	SOLID	N/A			uCi/g
94000020	SY-103	3	SAMPLE	S95T000291	0	W	@I129-01 I129-01C	SOLID	N/A			% Recovery
94000020	SY-103	3	SAMPLE	S95T000291	0	W	@I129-01 I129-01E	SOLID	N/A			% Ct. Error
94000020	SY-103	4	DUP	S95T000291	0	W	@I129-01 I129-01	SOLID			N/A	uCi/g
94000020	SY-103	4	DUP	S95T000291	0	W	@I129-01 I129-01C	SOLID			N/A	% Recovery
94000020	SY-103	4	DUP	S95T000291	0	W	@I129-01 I129-01E	SOLID			N/A	% Ct. Error

Final page for worklist # 1147

D B Buffum 4-19-95
Analyst Signature **Date**

[illegible] 4-24-95
Analyst Signature **Date**

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.7381
STANDARD	Tare Weight	(wt1)	2.7245
Work List	Mass Precipitate	(net wt)	0.0136
1147	I-129 µCi / Sample from GEA	(I-129 GEA)	6.585E-4
Test Code	Sample Volume in mL	(SS)	2
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.4459
Sample #			
WORKLIST#1147	IODINE 129 = 7.38E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DGG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
04/19/95			
Time			
05:30 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	7.38E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	44.6%

Data Entry by:	[signature]	Date:	04/21/95
Approved by:	[signature]	Date:	APR 24 1995

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			BLANK
Type	Gross Weight	(wt2)	2.7768
BLANK	Tare Weight	(wt1)	2.7598
Work List	Mass Precipitate	(net wt)	0.017
1147	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.6511E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	5.213
SOLID	Carrier Fractional Recovery	(Rec)	0.5574
Sample #			
S95T291			
Instrument Code			
WC38931			
Analyst			
DGG			
Date			
04/19/95			
Time			
05:30 PM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(\text{DF})}{(\text{Rec})(\text{SS})(\text{Dg/L})}$$

RESULT	IODINE 129	=	<	2.29E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	55.7%

Data Entry by:		Date:	04/21/95
Approved by:		Date:	APR 24 1995

Form 378103S2 Rev. 1.2

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.7746
SAMPLE	Tare Weight	(wt1)	2.7565
Work List	Mass Precipitate	(net wt)	0.0181
1147	I-129 µCi / Sample from GEA	(I-129 GEA)	<7.2364E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Grams of Solids / Liter	(Dg/L)	5.213
SOLID	Carrier Fractional Recovery	(Rec)	0.5934
Sample #			
S95T291			
Instrument Code			
WC38931			
Analyst			
DGG			
Date			
04/19/95			
Time			
05:30 PM			

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(DF)}{(Rec)(SS)(Dg/L)}$$

RESULT	IODINE 129	=	<	2.34E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	59.3%

Data Entry by: [signature] Date: 04/21/95

Approved by: [signature] Date: APR 24 1995

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PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) SOLIDS

			DUPLICATE
Gross Weight	(wt2)		2.7513
Tare Weight	(wt1)		2.7331
Mass Precipitate	(net wt)		0.0182
I-129 µCi / Sample from GEA	(I-129 GEA)		<7.0798E-5
Sample Volume in mL	(SS)		1
Dilution Factor	(DF)		1
Digest Grams of Solids / Liter	(Dg/L)		5.324
Carrier Fractional Recovery	(Rec)		0.5967

Type	Work List	Test Code	Matrix	Sample #	Instrument Code	Analyst	Date	Time
DUPLICATE	1147	@I129-01	SOLID	S95T291	WC38931	DGG	04/19/95	05:30 PM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)(100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})(1000\ \text{mL/L})(DF)}{(Rec)(SS)(Dg/L)}$$

RESULT	IODINE 129	=	<	2.23E-02	µCi/g

RESULT	CARRIER PERCENT RECOVERY	=	59.7%

Data Entry by: [signature] Date: 04/21/95

Approved by: [signature] Date: APR 24 1995

Form 378103S2 Rev. 1.2

1713

Page 1 of 1

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-APR-1995 20:12:11.56                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                STD-WORKLIST1147
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6811.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.60 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-APR-1995 18:31:29.17
Decayed to:               19-APR-1995 18:31:29.17
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 4.19.95

RD Bachelor 4/21/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.58	4027	0.96	59.11	55	8	4.6			
0	33.72	953	1.04	67.41	64	8	13.7			
0	39.63	888	1.00	79.24	75	9	12.9		I-129	6.585E-04
0	511.69*	141	2.10	1023.39	1016	17	72.7	2.22E+00		
0	662.23*	665	1.44	1323.94	1317	14	13.0			
0	1122.70	121	1.85	2241.55	2236	13	37.3			
0	1465.23	1191	1.81	2922.55	2913	18	6.4			
0	1597.61	44	0.96	3185.36	3177	16	64.9			
0	1771.75	93	2.85	3530.79	3524	17	25.3			

Sample ID : STD-WORKLIST1147 Acquisition date : 19-APR-1995 18:31:29

Total number of lines in spectrum	9	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	2	22.22%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	6.585E-04	6.585E-04	0.847E-04	12.86	
		Total Activity :	6.585E-04	6.585E-04			
		Grand Total Activity :	6.585E-04	6.585E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

All nuclides have been identified. No MDA report generated.

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-APR-1995 22:01:51.47                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                BLK-WORKLIST1147
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]lg6812.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.94 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-APR-1995 20:21:12.23
Decayed to:               19-APR-1995 20:21:12.23
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]lGBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 4.19.95

B Marchelor 4/21/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.03	107	1.11	64.03	60	8	89.0			
0	662.21*	709	1.52	1323.89	1319	12	11.4			
0	912.45*	93	1.81	1822.88	1816	15	54.6			
0	1124.05	70	2.14	2244.25	2233	15	76.2			
0	1240.34	81	0.78	2475.59	2468	15	59.5			
0	1379.81	25	2.31	2752.85	2751	14	118.9			
0	1465.10	1205	1.88	2922.30	2912	20	6.4			
0	1771.69	99	1.69	3530.67	3524	14	20.1			
0	1853.87	8	0.80	3693.57	3687	17	243.5			
0	2035.32	36	7.72	4052.94	4037	32	33.3			

Sample ID : BLK-WORKLIST1147 Acquisition date : 19-APR-1995 20:21:12

Total number of lines in spectrum	10	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : BLK-WORKLIST1147 Acquisition date : 19-APR-1995 20:21:12

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
-129	372.	39.60	6.6511E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   19-APR-1995 23:50:10.04                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T291-SAM
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6813.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.07 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-APR-1995 22:09:30.24
Decayed to:               19-APR-1995 22:09:30.24
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: D.H Mirbia

date: 4-20-95

BBMachelor 4/21/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLI
0	31.88	164	1.16	63.73	60	8	58.0			
0	609.73*	103	1.58	1219.16	1212	16	82.5			
0	662.13*	679	1.38	1323.73	1317	15	12.5			
0	970.56	92	1.43	1938.64	1934	11	46.0			
0	1123.15	88	2.43	2242.45	2234	19	73.3			
0	1382.63	53	3.05	2758.46	2751	16	54.6			
0	1465.16	1162	1.73	2922.41	2912	17	6.5			
0	1514.16	34	0.83	3019.72	3011	16	67.6			
0	1771.38	95	1.81	3530.06	3524	12	23.0			

Sample ID : S95T291-SAM Acquisition date : 19-APR-1995 22:09:30

Total number of lines in spectrum	9	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T291-SAM Acquisition date : 19-APR-1995 22:09:30

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	441.	39.60	7.2364E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   20-APR-1995 01:36:47.02                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T291-DUP
 ımple Size:              1.00000E+00 ML
ɔilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6814.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.24 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        19-APR-1995 23:56:04.95
Decayed to:               19-APR-1995 23:56:04.95
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  DM
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: D. H. Mizbicia

date: 4-20-95

B Bachelor 4/21/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

t	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.01	159	0.84	63.99	60	9	66.7			
0	62.88*	139	1.08	125.81	122	9	82.0			
0	238.62*	111	1.30	477.56	474	8	95.1			
0	662.17*	800	1.39	1323.82	1318	11	9.9			
0	967.22	18	2.08	1932.00	1926	9	200.3			
0	970.57	130	1.27	1938.67	1935	10	28.7			
0	1122.65	94	1.68	2241.46	2238	12	44.8			
0	1465.14	1132	1.91	2922.37	2911	22	7.1			
0	1597.76	45	1.80	3185.67	3180	15	55.3			
0	1771.92	88	1.84	3531.13	3524	15	27.0			

Sample ID : S95T291-DUP Acquisition date : 19-APR-1995 23:56:04

Total number of lines in spectrum	10	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T291-DUP
Acquisition date : 19-APR-1995 23:56:04

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
-129	422.	39.60	7.0798E-05

worklistrpt Version 2.0 02/21/95
05/02/95 09:27

LABCORE Data Entry Template for Worklist# 1284

Analyst: WBB **Instrument:** GEA00 _____ **Book #** 120B52

Method: LA-378-103 Rev/Mod ~~B3~~ 6-3950.33 B-4

Worklist Comment: Use 2 mL of standard. Sample size 1 mL.

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@I129-01 I129-01	LIQUID			N/A	uCi/mL
		1	STD				@I129-01 I129-01C	LIQUID			N/A	% Recovery
		1	STD				@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
		2	BLNK-PREP				@I129-01 I129-01	LIQUID			N/A	uCi/mL
		2	BLNK-PREP				@I129-01 I129-01C	LIQUID			N/A	% Recovery
		2	BLNK-PREP				@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
94000020	SY-103	3	SAMPLE	S95T000332	0	V	@I129-01 I129-01	LIQUID	N/A			uCi/mL
94000020	SY-103	3	SAMPLE	S95T000332	0	V	@I129-01 I129-01C	LIQUID	N/A			% Recovery
94000020	SY-103	3	SAMPLE	S95T000332	0	V	@I129-01 I129-01E	LIQUID	N/A			% Ct. Error
94000020	SY-103	4	DUP	S95T000332	0	V	@I129-01 I129-01	LIQUID			N/A	uCi/mL
94000020	SY-103	4	DUP	S95T000332	0	V	@I129-01 I129-01C	LIQUID			N/A	% Recovery
94000020	SY-103	4	DUP	S95T000332	0	V	@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
94000020	SY-103	5	SAMPLE	S95T000333	0	V	@I129-01 I129-01	LIQUID	N/A			uCi/mL
94000020	SY-103	5	SAMPLE	S95T000333	0	V	@I129-01 I129-01C	LIQUID	N/A			% Recovery
94000020	SY-103	5	SAMPLE	S95T000333	0	V	@I129-01 I129-01E	LIQUID	N/A			% Ct. Error
94000020	SY-103	6	DUP	S95T000333	0	V	@I129-01 I129-01	LIQUID			N/A	uCi/mL
94000020	SY-103	6	DUP	S95T000333	0	V	@I129-01 I129-01C	LIQUID			N/A	% Recovery
94000020	SY-103	6	DUP	S95T000333	0	V	@I129-01 I129-01E	LIQUID			N/A	% Ct. Error

Data Entry Comments:

Sample results were rejected due to low carrier recoveries. JAC RR

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# 1284

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Final page for worklist # 1284

D B Griffin 5-20-95
Analyst Signature **Date**

Sharon L Clark 5-22-95
Analyst Signature **Date**

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.7651
STANDARD	Tare Weight	(wt1)	2.7533
Work List	Mass Precipitate	(net wt)	0.0118
1284	I-129 µCi / Sample from GEA	(I-129 GEA)	3.124E-4
Test Code	Sample Volume in mL	(SS)	2
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.3869
Sample #			
WORKLIST#1284	IODINE 129 = 4.04E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DGG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
05/20/95			
Time			
06:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	4.04E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	38.7%

Data Entry by:	[signature]	Date:	05/22/95
Approved by:	[signature]	Date:	5/26/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			BLANK
	Gross Weight	(wt2)	2.773
BLANK	Tare Weight	(wt1)	2.7672
	Mass Precipitate	(net wt)	0.0058
1284	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.3938E-5
	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.1902

S95T332	IODINE 129 = < 3.36E-01 µCi/L
wc38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.
DDG	
05/20/95	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$
06:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$ µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$

RESULT	IODINE 129	=	<	3.36E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	19.0%

Data Entry by:	[signature]	Date:	05/26/95
Approved by:	[signature]	Date:	5/26/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			SAMPLE
	Gross Weight	(wt2)	2.7411
SAMPLE	Tare Weight	(wt1)	2.7386
	Mass Precipitate	(net wt)	0.0025
1284	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.5318E-5
	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.0820

S95T332 — IODINE 129 = < 7.97E-01 µCi/L

wc38931

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

DDG

05/20/95

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)\,(100)}{0.0305}$$

06:00 PM

$$\text{I-129 µCi/L} = \frac{\text{(I-129 GEA) (1000mL/L) (DF) (DDF)}}{\text{(Rec) (SS)}} \qquad \text{µCi/mL} = \frac{\text{µCi/L}}{\text{1000mL/L}}$$

RESULT	IODINE 129	=	<	7.97E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	8.2%

Data Entry by:	[illegible]	Date:	05/26/95
Approved by:	[illegible]	Date:	5/26/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

				DUPLICATE
Type	Gross Weight		(wt2)	2.748
DUPLICATE	Tare Weight		(wt1)	2.7471
Weight	Mass Precipitate		(net wt)	0.0009
1284	I-129 µCi / Sample from GEA		(I-129 GEA)	<7.2654E-5
Sample Vol	Sample Volume in mL		(SS)	1
@I129-01	Dilution Factor		(DF)	1
Matrix	Digest Dilution Factor		(DDF)	1
LIQUID	Carrier Fractional Recovery		(Rec)	0.0295
Sample#				
S95T332	IODINE 129	= <	2.46E+00 µCi/L	
Instrument Code				
wc38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.			
Analyst				
DDG				
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$			
05/20/95				
Time				
06:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$		µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	= <	2.46E-03	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	3.0%

Data Entry by:	[signature]	Date:	05/26/95
Approved by:	[signature]	Date:	5/26/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			SAMPLE
	Gross Weight	(wt2)	2.7664
SAMPLE	Tare Weight	(wt1)	2.7615
	Mass Precipitate	(net wt)	0.0049
1284	I-129 µCi / Sample from GEA	(I-129 GEA)	<7.0777E-5
	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.1607

Sample #: S95T333

IODINE 129 = < 4.41E-01 µCi/L

Instrument Code: wc38931

Analyst: DDG

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

Date: 05/20/95

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)\,(100)}{0.0305}$$

Time: 06:00 PM

$$\text{I-129 µCi/L} = \frac{(\text{I-129 GEA})\,(1000\text{mL/L})\,(\text{DF})\,(\text{DDF})}{(\text{Rec})\,(\text{SS})} \qquad \text{µCi/mL} = \frac{\text{µCi/L}}{1000\text{mL/L}}$$

RESULT	IODINE 129	=	<	4.41E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	16.1%

Data Entry by: [signature] Date: 05/26/95

Approved by: [signature] Date: 5/26/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			DUPLICATE
	Gross Weight	(wt2)	2.7515
DUPLICATE	Tare Weight	(wt1)	2.7491
	Mass Precipitate	(net wt)	0.0024
1284	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.7738E-5
	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.0787
Sample#			
S95T333	IODINE 129 = < 8.61E-01 µCi/L		
Instrument Code			
wc38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DDG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
05/20/95			
Time			
06:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	8.61E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	7.9%

Data Entry by:		Date:	05/26/95
Approved by:		Date:	5/26/95

Form 378103L1 Rev. 1.2

```
*****************************************************************************
* 222-S Laboratory Counting Room   21-MAY-1995 00:00:31.51                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                WORKLIST#1284-ST
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6856.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.74 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        20-MAY-1995 22:19:50.17
Decayed to:               20-MAY-1995 22:19:50.17
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 5-21-95

Verified by:

WHC-SD-WM-DP-074. REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.60	2983	1.02	59.16	55	8	5.4			
0	33.67	788	1.11	67.32	64	9	16.3			
0	39.66	421	0.88	79.30	76	8	24.6		I-129	3.124E-04
8	623.90	83	3.32	1247.44	1211	43	75.2	1.70E+00		
0	662.30*	418	1.51	1324.08	1318	13	16.4			
0	912.82	168	1.85	1823.62	1819	10	25.6			
0	971.08	98	1.62	1939.69	1936	10	38.3			
0	1122.74	79	1.11	2241.63	2238	8	41.7			
0	1465.48	1154	1.97	2923.05	2913	20	6.7			
0	1772.27	108	2.75	3531.81	3525	16	25.2			

Sample ID : WORKLIST#1284-ST Acquisition date : 20-MAY-1995 22:19:50

Total number of lines in spectrum	10	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	2	20.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	3.124E-04	3.124E-04	0.768E-04	24.59	
		Total Activity :	3.124E-04	3.124E-04			
		Grand Total Activity :	3.124E-04	3.124E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

All nuclides have been identified. No MDA report generated.

```
*****************************************************************************
* 222-S Laboratory Counting Room   21-MAY-1995 02:21:23.41                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                WORKLIST-1284-BL
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6858.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:05.82 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        21-MAY-1995 00:31:56.29
Decayed to:               21-MAY-1995 00:31:56.29
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 5-21-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	583.73*	62	1.78	1167.26	1163	10	96.2			
0	662.35*	424	1.21	1324.19	1318	13	18.7			
0	913.03	180	1.72	1824.03	1818	15	30.5			
5	967.00	42	1.54	1931.56	1929	16	55.3	1.08E+00		
5	970.92	122	1.85	1939.37	1929	16	33.9			
0	1122.89	135	2.00	2241.95	2235	18	39.4			
0	1241.41	61	1.91	2477.73	2473	19	100.7			
0	1465.56	1184	1.98	2923.21	2915	19	6.1			
0	1771.91	96	1.57	3531.10	3522	18	29.1			

Sample ID : WORKLIST-1284-BL Acquisition date : 21-MAY-1995 00:31:56

Total number of lines in spectrum	9	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : WORKLIST-1284-BL Acquisition date : 21-MAY-1995 00:31:56

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
_-129	344.	39.60	6.3938E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   21-MAY-1995 04:05:13.17                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T332-SAM
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6859.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.70 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        21-MAY-1995 02:24:31.31
Decayed to:               21-MAY-1995 02:24:31.31
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Raymond

date: 5.21.95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	662.38*	424	1.31	1324.24	1317	13	17.5			
0	970.66	73	1.74	1938.84	1935	11	61.0			
0	1122.67	87	1.05	2241.50	2235	14	53.1			
0	1338.82	16	0.67	2671.40	2671	11	132.6			
0	1382.17	52	1.09	2757.54	2752	15	46.2			
0	1465.57	1193	1.82	2923.22	2913	19	6.4			
0	1771.76	101	2.00	3530.80	3523	19	28.8			

Sample ID : S95T332-SAM Acquisition date : 21-MAY-1995 02:24:31

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T332-SAM
Acquisition date : 21-MAY-1995 02:24:31

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	359.	39.60	6.5318E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   21-MAY-1995 06:54:43.43                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T332-DUP
 mple Size:               1.00000E+00 ML
 lution Factor:           1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6860.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.80 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        21-MAY-1995 05:14:03.07
Decayed to:               21-MAY-1995 05:14:03.07
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Jm Barclay

date: 5-21-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Rt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	351.79*	122	1.17	703.89	698	11	77.5			
0	662.34*	462	1.50	1324.16	1319	11	15.4			
0	912.73	171	1.68	1823.43	1818	13	28.3			
0	971.64	117	1.06	1940.80	1934	16	47.4			
0	1122.64	101	1.31	2241.45	2233	16	50.2			
0	1242.85	99	1.18	2480.59	2472	19	50.3			
0	1465.56	1168	1.82	2923.20	2913	19	6.7			
0	1772.09	92	1.99	3531.45	3526	12	23.5			

Sample ID : S95T332-DUP Acquisition date : 21-MAY-1995 05:14:03

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T332-DUP Acquisition date : 21-MAY-1995 05:14:03

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	444.	39.60	7.2654E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   21-MAY-1995 09:42:29.46                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T333-SAM
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6861.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.57 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        21-MAY-1995 08:01:48.41
Decayed to:               21-MAY-1995 08:01:48.41
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  EMB
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Em Barber

date: 5-21-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	662.40*	455	1.36	1324.27	1317	15	17.2			
0	912.56*	59	1.73	1823.11	1815	16	101.6			
0	969.24*	65	1.54	1936.02	1927	17	88.5			
0	1123.01	78	1.79	2242.17	2237	12	55.6			
0	1389.22	22	0.78	2771.55	2769	8	62.2			
0	1465.55	1196	1.88	2923.19	2914	19	6.4			
0	1772.21	105	1.74	3531.69	3524	17	23.4			

Sample ID : S95T333-SAM Acquisition date : 21-MAY-1995 08:01:48

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T333-SAM
Acquisition date : 21-MAY-1995 08:01:48

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	421.	39.60	7.0777E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   21-MAY-1995 11:25:40.70                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:              S95T333-DUP
Sample Size:            1.00000E+00 ML
  lution Factor:        1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:            GEA1
File Number:            dka300:[spec.GEA1]1g6862.cnf
Geometry:               1
Description:
Count Time:             0 01:40:00.00 sec
Real Time:              0 01:40:07.42 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:      21-MAY-1995 09:44:58.06
Decayed to:             21-MAY-1995 09:44:58.06
Standard Deviations:    2
Analysis Library:       I129
Analyst:                EMB
Background Subtract:    DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: Em Barker

date: 5-21-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	662.36*	404	1.44	1324.19	1319	11	17.3	6.94E-01		
0	913.01	149	1.45	1823.99	1818	13	36.0			
0	971.19	117	1.95	1939.90	1936	13	39.8			
0	1122.86	96	1.50	2241.87	2235	14	51.0			
0	1465.50	1220	1.83	2923.08	2914	18	6.5			
7	1598.20	41	4.05	3186.54	3173	22	75.0	2.88E+00		
0	1638.66	32	6.40	3266.83	3251	34	86.9			
0	1772.35	90	1.61	3531.98	3524	14	27.5			
0	1854.02	15	4.04	3693.86	3687	16	116.9			

Sample ID : 595T333-DUP Acquisition date : 21-MAY-1995 09:44:58

Total number of lines in spectrum	9	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T333-DUP Acquisition date : 21-MAY-1995 09:44:58

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	386.	39.60	6.7738E-05

LABCORE Data Entry Template for Worklist# 1286

Analyst: JBB **Instrument:** GEA00 **Book #** 120B52

Method: LA-378-103 Rev/Mod B-4

WHC-SD-WM-DP-074, REV. 0

Worklist Comment: Use 2 mL of standard. Sample size 1 mL. SAC

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				aI129-01 I129-01	LIQUID			N/A	uCi/mL
		1	STD				aI129-01 I129-01C	LIQUID			N/A	% Recovery
		1	STD				aI129-01 I129-01E	LIQUID			N/A	% Ct. Error
		2	BLNK-PREP				aI129-01 I129-01	LIQUID			N/A	uCi/mL
		2	BLNK-PREP				aI129-01 I129-01C	LIQUID			N/A	% Recovery
		2	BLNK-PREP				aI129-01 I129-01E	LIQUID			N/A	% Ct. Error
94000020	SY-103	3	SAMPLE	S95T000334	0	V	aI129-01 I129-01	LIQUID	N/A			uCi/mL
94000020	SY-103	3	SAMPLE	S95T000334	0	V	aI129-01 I129-01C	LIQUID	N/A			% Recovery
94000020	SY-103	3	SAMPLE	S95T000334	0	V	aI129-01 I129-01E	LIQUID	N/A			% Ct. Error
94000020	SY-103	4	DUP	S95T000334	0	V	aI129-01 I129-01	LIQUID			N/A	uCi/mL
94000020	SY-103	4	DUP	S95T000334	0	V	aI129-01 I129-01C	LIQUID			N/A	% Recovery
94000020	SY-103	4	DUP	S95T000334	0	V	aI129-01 I129-01E	LIQUID			N/A	% Ct. Error
94000020	SY-103	5	SAMPLE	S95T000335	0	V	aI129-01 I129-01	LIQUID	N/A			uCi/mL
94000020	SY-103	5	SAMPLE	S95T000335	0	V	aI129-01 I129-01C	LIQUID	N/A			% Recovery
94000020	SY-103	5	SAMPLE	S95T000335	0	V	aI129-01 I129-01E	LIQUID	N/A			% Ct. Error
94000020	SY-103	6	DUP	S95T000335	0	V	aI129-01 I129-01	LIQUID			N/A	uCi/mL
94000020	SY-103	6	DUP	S95T000335	0	V	aI129-01 I129-01C	LIQUID			N/A	% Recovery
94000020	SY-103	6	DUP	S95T000335	0	V	aI129-01 I129-01E	LIQUID			N/A	% Ct. Error

Data Entry Comments:

Carrier recoveries too low. Sample will be rerun. SJB

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# 1286

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Final page for worklist # 1286

Analyst Signature Date 5-28-95

Analyst Signature Date 5.30.95

WHC-SD-WM-DP-074, REV. 0

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.7618
STANDARD	Tare Weight	(wt1)	2.7526
Work List	Mass Precipitate	(net wt)	0.0092
1286	I-129 µCi / Sample from GEA	(I-129 GEA)	2.381E-4
Test Code	Sample Volume in mL	(SS)	2
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.3016
Sample #			
WORKLIST#1286	IODINE 129 = 3.95E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DGG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)(100)}{0.0305}$		
05/28/95			
Time			
10:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)(1000mL/L)(DF)(DDF)}{(Rec)(SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	3.95E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	30.2%

Data Entry by:	Shawn L Walch	Date:	05/30/95
Approved by:	LoPatt	Date:	6/1/95

Form 378103L1 Rev. 1.2

1754

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			BLANK
Type	Gross Weight	(wt2)	2.7392
BLANK	Tare Weight	(wt1)	2.7349
Work List	Mass Precipitate	(net wt)	0.0043
1286	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.7016E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.1410
Sample #			
S95T334	IODINE 129 = < 4.75E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DGG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
05/28/95			
Time			
10:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	4.75E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	14.1%

Data Entry by:	Sharon L Until	Date:	05/30/95
Approved by:	[illegible]	Date:	6/1/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.7344
SAMPLE	Tare Weight	(wt1)	2.7284
Work List	Mass Precipitate	(net wt)	0.006
1286	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.8218E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.1967
Sample #			
S95T334	IODINE 129 = < 3.47E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DGG	Carrier Percent Recovery = $\frac{(wt2-wt1)(100)}{0.0305}$		
Date			
05/28/95			
Time			
10:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)(1000mL/L)(DF)(DDF)}{(Rec)(SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	3.47E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	19.7%

Data Entry by:	Shawna L Hedin	Date:	05/30/95
Approved by:	[illegible]	Date:	6/1/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			DUPLICATE
Type	Gross Weight	(wt2)	2.7234
DUPLICATE	Tare Weight	(wt1)	2.7198
Work List	Mass Precipitate	(net wt)	0.0036
1286	I-129 µCi / Sample from GEA	(I-129 GEA)	<7.0390E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.1180
Sample #			
S95T334	IODINE 129 = < 5.96E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DGG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
05/28/95			
Time			
10:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	5.96E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	11.8%

Data Entry by: Sharon L Nold		Date:	05/30/95
Approved by: [illegible]		Date:	6/1/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.7562
SAMPLE	Tare Weight	(wt1)	2.7517
Work List	Mass Precipitate	(net wt)	0.0045
1286	I-129 µCi / Sample from GEA	(I-129 GEA)	<7.0213E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.1475
Sample #			
S95T335	IODINE 129 = < 4.76E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DGG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
05/28/95			
Time			
10:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	4.76E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	14.8%

Data Entry by:	Shyneep L. Wilson	Date:	05/30/95
Approved by:	D A Cates	Date:	6/1/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			DUPLICATE
Type	Gross Weight	(wt2)	2.7337
DUPLICATE	Tare Weight	(wt1)	2.7255
Work List	Mass Precipitate	(net wt)	0.0082
1286	I-129 µCi / Sample from GEA	(I-129 GEA)	<6.8824E-5
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.2689
Sample #			
S95T335	IODINE 129 = < 2.56E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
DGG			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
05/28/95			
Time			
10:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	= <	2.56E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	26.9%

Data Entry by: Sharon L Uhlik		Date:	05/30/95
Approved by: [illegible]		Date:	6/1/95

Form 378103L1 Rev. 1.2

```
*****************************************************************************
* 222-S Laboratory Counting Room   29-MAY-1995 01:44:26.43                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                WORKLIST#1286-STD
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6869.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.19 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        29-MAY-1995 00:03:44.83
Decayed to:               29-MAY-1995 00:03:44.83
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [signature]

date: 5-29-95

Verified by: [signature] 5/30/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.61	1942	1.02	59.18	55	9	7.8			
0	33.64	465	0.93	67.24	65	8	24.2			
0	39.55	321	0.87	79.09	75	8	30.5		I-129	2.381E-04
0	662.37*	319	1.25	1324.22	1318	13	22.6			
0	912.74	179	1.26	1823.47	1817	11	26.2			
0	971.13	107	1.24	1939.79	1934	12	45.5			
0	1122.67	123	1.64	2241.49	2235	13	34.7			
0	1241.24	53	1.49	2477.38	2475	7	49.6			
0	1465.55	1153	1.78	2923.19	2916	14	6.6			
0	1514.83	25	1.18	3021.04	3016	15	103.5			
0	1598.31	23	1.64	3186.76	3182	14	94.3			
0	1771.97	92	1.65	3531.23	3522	16	34.5			

Sample ID : WORKLIST#1286-ST Acquisition date : 29-MAY-1995 00:03:44

Total number of lines in spectrum	12	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	2	16.67%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	2.381E-04	2.381E-04	0.725E-04	30.46	
		Total Activity :	2.381E-04	2.381E-04			
		Grand Total Activity :	2.381E-04	2.381E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

All nuclides have been identified. No MDA report generated.

```
*****************************************************************************
* 222-S Laboratory Counting Room   29-MAY-1995 03:37:11.68                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                WORKLIST#1286-BLK
 ample Size:              1.00000E+00 ML
 .lution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6870.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.36 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        29-MAY-1995 01:56:31.65
Decayed to:               29-MAY-1995 01:56:31.65
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: [signature]

date: 5-29-95

Verified by: [signature] 5/30/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

**	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	63.25*	73	1.05	126.55	124	6	112.0			
0	662.40*	307	1.45	1324.29	1319	12	21.8			
0	912.77	144	2.14	1823.53	1817	14	36.9			
0	970.57	85	1.39	1938.67	1934	13	59.6			
0	1123.17	73	1.13	2242.50	2234	13	67.5			
0	1465.50	1178	1.85	2923.08	2915	15	6.3			
0	1736.59	18	0.64	3461.07	3458	9	56.1			
0	1772.11	80	1.93	3531.49	3522	19	34.2			

Sample ID : WORKLIST#1286-BL Acquisition date : 29-MAY-1995 01:56:31

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : WORKLIST#1286-BL Acquisition date : 29-MAY-1995 01:56:31

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	378.	39.60	6.7016E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   29-MAY-1995 05:30:41.76                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T334-SAM
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6871.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.32 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        29-MAY-1995 03:50:01.44
Decayed to:               29-MAY-1995 03:50:01.44
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: AJ Johansen

date: 5-29-95

Verified by: RB Bachelor 5/30/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLI
0	32.07	151	1.16	64.11	60	8	61.9			
0	238.60*	123	1.27	477.53	473	9	90.7			
0	511.57*	133	2.52	1023.16	1015	19	77.8			
0	662.37*	909	1.46	1324.21	1318	14	9.7			
0	912.92	157	1.19	1823.82	1817	14	36.2			
0	970.62	104	1.78	1938.78	1934	10	39.2			
0	1122.67	92	1.42	2241.51	2237	9	38.1			
0	1412.88	35	1.38	2818.56	2814	13	58.4			
0	1465.46	1140	2.12	2923.00	2913	19	6.3			
0	1736.66	26	1.30	3461.21	3457	10	51.5			
0	1772.49	80	1.82	3532.25	3529	9	28.9			

Sample ID : S95T334-SAM Acquisition date : 29-MAY-1995 03:50:01

Total number of lines in spectrum 11
Number of unidentified lines 11
Number of lines tentatively identified by NID 0 0.00%
*** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T334-SAM Acquisition date : 29-MAY-1995 03:50:01

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	392.	39.60	6.8218E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   29-MAY-1995 07:43:08.40                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T334-DUP
 ample Size:              1.00000E+00 ML
 .lution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6872.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:08.37 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        29-MAY-1995 06:02:29.31
Decayed to:               29-MAY-1995 06:02:29.31
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  ALJ
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:  2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: D. H. Milligan

date: 5-29-95

Verified by: [illegible] 5/30/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	662.33*	308	1.69	1324.14	1319	12	22.0			
0	912.29*	53	1.67	1822.56	1815	15	105.3			
0	1122.66	77	2.32	2241.48	2236	11	51.1	1.38E+00		
0	1241.34	54	1.59	2477.58	2472	10	64.6			
0	1465.40	1219	1.83	2922.88	2913	18	6.3			
0	1772.13	105	2.42	3531.55	3524	18	25.4			

Sample ID : S95T334-DUP Acquisition date : 29-MAY-1995 06:02:29

Total number of lines in spectrum	6	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T334-DUP
Acquisition date : 29-MAY-1995 06:02:29

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	417.	39.60	7.0390E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   29-MAY-1995 09:30:53.82                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T335-SAM
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6873.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:06.96 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        29-MAY-1995 07:50:13.43
Decayed to:               29-MAY-1995 07:50:13.43
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  DM
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: D. H. Milicia

date: 5-29-95

Verified by: B. Machelor 5/30/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	662.38*	319	1.41	1324.23	1320	10	19.2			
0	1122.68	80	1.93	2241.52	2237	11	55.7			
0	1465.41	1253	1.84	2922.90	2914	19	6.5			
0	1636.72	21	1.45	3262.97	3260	9	67.9			
0	1771.75	105	1.63	3530.79	3523	17	21.4			

Sample ID : S95T335-SAM
Acquisition date : 29-MAY-1995 07:50:13

Total number of lines in spectrum	5	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	0	0.00%

** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T335-SAM Acquisition date : 29-MAY-1995 07:50:13

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	415.	39.60	7.0213E-05

```
*****************************************************************************
* 222-S Laboratory Counting Room   29-MAY-1995 11:53:37.79                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T335-DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA1
File Number:              dka300:[spec.GEA1]1g6874.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:07.97 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        29-MAY-1995 10:12:58.62
Decayed to:               29-MAY-1995 10:12:58.62
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  DM
Background Subtract:      DKA300:[SPEC.GEA1]1GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       7-DEC-1994 12:30:33.45
 Date of last efficiency calibration:   2-DEC-1994 13:49:42.28
*****************************************************************************
```

Removed by: D. H. Milbrin

date: 5-29-95

Verified by: B Bachelor 5/30/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.28	115	1.34	64.53	61	8	76.0			
0	662.29*	312	1.59	1324.06	1318	12	20.9	6.81E-01		
0	971.09	100	2.15	1939.70	1934	11	45.7			
0	1122.44	64	1.32	2241.04	2236	14	76.7			
0	1465.30	1152	1.86	2922.69	2913	20	6.5			
0	1736.95	47	2.07	3461.80	3451	21	45.5			
0	1772.01	84	2.23	3531.31	3525	16	28.5			
0	1855.98	26	1.85	3697.73	3693	11	39.2			

Sample ID : S95T335-DUP Acquisition date : 29-MAY-1995 10:12:58

Total number of lines in spectrum	8	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T335-DUP
Acquisition date : 29-MAY-1995 10:12:58

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	399.	39.60	6.8824E-05

LABCORE Data Entry Template for Worklist# 1539

Analyst: SAC **Instrument:** GEA00 7 **Book #** 120B52

Method: LA-378-103 Rev/Mod B4 WHC-SD-WM-DP-074, REV. 0

Worklist Comment: Use 1 mL sample. Use one mL standard. sac

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				@I129-01 I129-01	LIQUID			N/A	uCi/mL
		1	STD				@I129-01 I129-01C	LIQUID			N/A	% Recovery
		1	STD				@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
		2	BLNK-PREP				@I129-01 I129-01	LIQUID			N/A	uCi/mL
		2	BLNK-PREP				@I129-01 I129-01C	LIQUID			N/A	% Recovery
		2	BLNK-PREP				@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
94000020	SY-103	3	SAMPLE	S95T000332	0	V	@I129-01 I129-01	LIQUID	N/A			uCi/mL
94000020	SY-103	3	SAMPLE	S95T000332	0	V	@I129-01 I129-01C	LIQUID	N/A			% Recovery
94000020	SY-103	3	SAMPLE	S95T000332	0	V	@I129-01 I129-01E	LIQUID	N/A			% Ct. Error
94000020	SY-103	4	DUP	S95T000332	0	V	@I129-01 I129-01	LIQUID			N/A	uCi/mL
94000020	SY-103	4	DUP	S95T000332	0	V	@I129-01 I129-01C	LIQUID			N/A	% Recovery
94000020	SY-103	4	DUP	S95T000332	0	V	@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
94000020	SY-103	5	SAMPLE	S95T000333	0	V	@I129-01 I129-01	LIQUID	N/A			uCi/mL
94000020	SY-103	5	SAMPLE	S95T000333	0	V	@I129-01 I129-01C	LIQUID	N/A			% Recovery
94000020	SY-103	5	SAMPLE	S95T000333	0	V	@I129-01 I129-01E	LIQUID	N/A			% Ct. Error
94000020	SY-103	6	DUP	S95T000333	0	V	@I129-01 I129-01	LIQUID			N/A	uCi/mL
94000020	SY-103	6	DUP	S95T000333	0	V	@I129-01 I129-01C	LIQUID			N/A	% Recovery
94000020	SY-103	6	DUP	S95T000333	0	V	@I129-01 I129-01E	LIQUID			N/A	% Ct. Error

Data Entry Comments: Carrier 4251-D

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# 1539

GROUP	PROJECT	S TYPE	SAMPLE#	R A -------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Final page for worklist # 1539

Analyst Signature 6/13/95 Date

Analyst Signature 6-16-95 Date

WHC-SD-WM-DP-074, REV. 0

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.1184
STANDARD	Tare Weight	(wt1)	2.0976
Work List	Mass Precipitate	(net wt)	0.0208
1539	I-129 µCi / Sample from GEA	(I-129 GEA)	2.971E-4
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.6820
Sample #			
WORKLIST#1539	IODINE 129 = 4.36E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SAC			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
06/14/95			
Time			
12:30 AM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	4.36E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	68.2%

Data Entry by:	Sherry de Walt	Date:	06/14/95
Approved by:	[illegible]	Date:	6/16/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			BLANK
	Gross Weight	(wt2)	2.1162
BLANK	Tare Weight	(wt1)	2.1016
	Mass Precipitate	(net wt)	0.0146
1539	I-129 µCi / Sample from GEA	(I-129 GEA)	<2.8279E-6
	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.4787

WORKLIST#1539 — IODINE 129 = < 5.91E-01 µCi/L

WC38931

SAC

06/14/95

04:45 AM

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

$$\text{Carrier Percent Recovery} = \frac{(wt2-wt1)\ (100)}{0.0305}$$

$$\text{I-129 µCi/L} = \frac{\text{(I-129 GEA) (1000mL/L) (DF) (DDF)}}{\text{(Rec) (SS)}} \quad \text{µCi/mL} = \frac{\text{µCi/L}}{\text{1000mL/L}}$$

RESULT	IODINE 129	=	<	5.91E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	47.9%

Data Entry by:	S A Cotto	Date:	06/15/95
Approved by:	S A Cotto	Date:	6/15/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

I-129: LA-378-103 (B-4) LIQUIDS

			SAMPLE
	Gross Weight	(wt2)	2.1187
SAMPLE	Tare Weight	(wt1)	2.0961
	Mass Precipitate	(net wt)	0.0226
1539	I-129 µCi / Sample from GEA	(I-129 GEA)	<3.5382E-6
	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.7410

Sample	
S95T000332	IODINE 129 = < 4.78E-01 µCi/L
Instrument Code	
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.
Analyst	
SAC	
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$
06/13/95	
Time	
01:05 AM	I-129 µCi/L = $\frac{(\text{I-129 GEA})\ (1000\text{mL/L})\ (\text{DF})\ (\text{DDF})}{(\text{Rec})\ (\text{SS})}$ µCi/mL = $\frac{\text{µCi/L}}{1000\text{mL/L}}$

RESULT	IODINE 129	=	<	4.78E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	74.1%

Data Entry by:	[illegible]	Date:	06/15/95
Approved by:	[illegible]	Date:	6/15/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

I-129: LA-378-103 (B-4) LIQUIDS

			DUPLICATE
	Gross Weight	(wt2)	2.1348
DUPLICATE	Tare Weight	(wt1)	2.1107
	Mass Precipitate	(net wt)	0.0241
1539	I-129 µCi / Sample from GEA	(I-129 GEA)	1.51E-6
	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.7902

Sample #: S95T000332

IODINE 129 = 1.91E-01 µCi/L

Instrument Code: WC38931

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

Analyst: SAC

Date: 06/13/95

Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$

Time: 11:10 PM

I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$ µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$

RESULT	IODINE 129	=	1.91E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	79.0%

Data Entry by: D A Catts Date: 06/15/95

Approved by: D A Catts Date: 6/15/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			SAMPLE
	Gross Weight	(wt2)	2.1048
SAMPLE	Tare Weight	(wt1)	2.0816
	Mass Precipitate	(net wt)	0.0232
1539	I-129 µCi / Sample from GEA	(I-129 GEA)	1.442E-6
	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.7607

Sample #: S95T000333

IODINE 129 = 1.90E-01 µCi/L

Instrument Code: WC38931

The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.

Analyst: SAC

Date: 06/13/95

Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$

Time: 08:57 PM

I-129 µCi/L = $\frac{\text{(I-129 GEA) (1000mL/L) (DF) (DDF)}}{\text{(Rec) (SS)}}$ µCi/mL = $\frac{\text{µCi/L}}{\text{1000mL/L}}$

RESULT	IODINE 129	=	1.90E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	76.1%

Data Entry by: [signature] Date: 06/15/95

Approved by: [signature] Date: 6/15/95

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			DUPLICATE
Type	Gross Weight	(wt2)	2.1272
DUPLICATE	Tare Weight	(wt1)	2.1019
Worksheet	Mass Precipitate	(net wt)	0.0253
1539	I-129 µCi / Sample from GEA	(I-129 GEA)	1.604E-6
Sample Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.8295
Sample #			
S95T000333	IODINE 129 = 1.93E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SAC			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
06/13/95			
Time			
07:01 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	1.93E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	83.0%

Data Entry by:	L Scott	Date:	06/15/95
Approved by:	L Scott	Date:	6/15/95

Form 378103L1 Rev. 1.2

****
* 222-S Laboratory Counting Room 14-JUN-1995 04:35:23.45 *
****

>>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<

Sample ID: WRK.LST.#1539-ST
Sample Size: 1.00000E+00 ML
Dilution Factor: 1.00000E+00
Conversion ML to SAMPLE 1.00000E+00

Removed by:

date: 6-14-95

>>>>>>>>>> COUNT INFORMATION <<<<<<<<<<

Detector ID: GEA7
File Number: dka300:[spec.GEA7]7g7024.cnf
Geometry: 1
Description:
Count Time: 0 01:40:00.00 sec
Real Time: 0 01:40:34.15 sec

Verified by:

Bachelor 6/14/95

>>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<

WHC-SD-WM-DP-074, REV. 0

Sample Count Time: 14-JUN-1995 02:54:16.31
Decayed to: 14-JUN-1995 02:54:16.31
Standard Deviations: 2
Analysis Library: I129
Analyst: MB
Background Subtract: DKA300:[SPEC.GEA7]7GBACK

>>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<

Date of last energy calibration: 5-JUN-1995 14:54:43.68
Date of last efficiency calibration: 5-JUN-1995 14:57:32.67

****

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
7	20.20	869	1.83	99.52	83	30	13.2	1.25E+00		
7	21.61	252	0.65	106.63	83	30	24.5			
6	24.37	428	2.05	120.56	113	71	19.0	3.15E+01		
6	27.03	740	1.15	134.00	113	71	15.6			
6	29.85	21594	1.08	148.22	113	71	1.5			
6	33.96	6533	1.64	168.99	113	71	3.0			
0	39.68	3350	1.05	197.82	188	20	4.0		I-129	2.971E-04
10	655.81	28	0.27	3306.82	3305	8	94.7	1.08E+01		
10	656.41	34	0.26	3309.87	3305	8	82.9			

Sample ID : WRK.LST.#1539-ST Acquisition date : 14-JUN-1995 02:54:16

Total number of lines in spectrum	9	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	2	22.22%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	2.971E-04	2.971E-04	0.120E-04	4.02	
		Total Activity :	2.971E-04	2.971E-04			
		Grand Total Activity :	2.971E-04	2.971E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

All nuclides have been identified. No MDA report generated.

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-JUN-1995 06:28:30.18                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                WRKLST#1539-BLAN
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7025.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:42:22.21 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-JUN-1995 04:45:34.34
Decayed to:               14-JUN-1995 04:45:34.34
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by: [signature]

date: 6-14-95

Verified by: [signature] 6/15/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.15	111	0.89	159.86	154	14	30.4			
0	64.06	51	2.51	320.84	314	17	46.4			
0	604.20	10	0.41	3046.37	3044		7127.6			
0	655.38	12	0.57	3304.66	3303		6236.4			
0	656.41	18	0.39	3309.85	3308		4143.5			

Sample ID : WRKLST#1539-BLAN Acquisition date : 14-JUN-1995 04:45:34

Total number of lines in spectrum	5	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : WRKLST#1539-BLAN
Acquisition date : 14-JUN-1995 04:45:34

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
.-129	47.	39.60	2.8279E-06

WHC-SD-WM-DP-074, REV. 0

```
*****************************************************************************
* 222-S Laboratory Counting Room   14-JUN-1995 02:47:55.86                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T332-SAMPLE
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7023.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:42:19.91 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-JUN-1995 01:05:03.12
Decayed to:               14-JUN-1995 01:05:03.12
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MCB
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by: [signature]

date: 6-14-95

Verified by: [signature] 6/14/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLI
0	75.90	93	3.34	380.62	368	47	90.2			
0	656.23	87	0.67	3308.94	3306	7	53.2			

Sample ID : S95T332-SAMPLE Acquisition date : 14-JUN-1995 01:05:03

Total number of lines in spectrum	2	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T332-SAMPLE Acquisition date : 14-JUN-1995 01:05:03

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	74.	39.60	3.5382E-06

```
*************************************************************************
* 222-S Laboratory Counting Room   14-JUN-1995 00:53:25.84              *
*************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T332-DUP
 ample Size:              1.00000E+00 ML
 ilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7022.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:42:12.16 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        13-JUN-1995 23:10:38.28
Decayed to:               13-JUN-1995 23:10:38.28
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*************************************************************************
```

Removed by: M S Burns

date: 6-14-95

Verified by: D Bachelor 6/14/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

˜t	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.65	168	0.98	147.20	140	15	33.0		I-129	1.513E-06
0	46.67	48	2.28	233.10	225	21	89.8			
0	656.31	28	0.38	3309.35	3307		5115.8			

Sample ID : S95T332-DUP
Acquisition date : 13-JUN-1995 23:10:38

Total number of lines in spectrum	3	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	1	33.33%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	1.513E-06	1.513E-06	0.500E-06	33.04	
		Total Activity :	1.513E-06	1.513E-06			
		Grand Total Activity :	1.513E-06	1.513E-06			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

All nuclides have been identified. No MDA report generated.

```
*****************************************************************************
* 222-S Laboratory Counting Room   13-JUN-1995 22:39:36.09                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T333-SAM
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7021.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:42:04.65 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        13-JUN-1995 20:56:59.61
Decayed to:               13-JUN-1995 20:56:59.61
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by: Raymond

date: 6·13·95

Verified by: Bachelor 6/14/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLI
5	29.80	160	1.35	147.99	137	38	34.0	2.15E+00	I-129	1.442E-06
5	32.18	120	1.81	159.99	137	38	58.9			
0	92.54	49	1.39	464.57	460	13	49.1			
0	441.29	14	0.23	2224.36	2221	7	53.5			
0	656.25	92	0.85	3309.02	3306	7	48.5			

Sample ID : S95T333-SAM Acquisition date : 13-JUN-1995 20:56:59

Total number of lines in spectrum	5	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	1	20.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	1.442E-06	1.442E-06	0.490E-06	34.01	
		Total Activity :	1.442E-06	1.442E-06			
		Grand Total Activity :	**1.442E-06**	**1.442E-06**			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

All nuclides have been identified. No MDA report generated.

WHC-SD-WM-DP-074, REV. 0

```
*****************************************************************************
* 222-S Laboratory Counting Room   13-JUN-1995 20:43:32.30                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T333-DUP
 ample Size:              1.00000E+00 ML
 .lution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7020.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:41:55.14 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        13-JUN-1995 19:01:04.99
Decayed to:               13-JUN-1995 19:01:04.99
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by: Raymond

date: 6-13-95

Verified by: B Bachelor 6/14/95

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	29.69	179	1.12	147.43	140	16	26.0		I-129	1.604E-06
0	655.32	23	0.71	3304.36	3302	6	133.6			
0	656.36	34	0.75	3309.62	3307	5	98.7			

Sample ID : S95T333-DUP Acquisition date : 13-JUN-1995 19:01:04

Total number of lines in spectrum	3	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	1	33.33%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	1.604E-06	1.604E-06	0.417E-06	26.00	
		Total Activity :	1.604E-06	1.604E-06			
		Grand Total Activity :	**1.604E-06**	**1.604E-06**			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

WHC-SD-WM-DP-074, REV. 0

All nuclides have been identified. No MDA report generated.

LABCORE Data Entry Template for Worklist# 1568

Analyst: SAC **Instrument:** GEA00 **Book #** 120 B52

Method: LA-378-103 Rev/Mod B4

WHC-SD-WM-DP-074, REV. 0

Worklist Comment: Use 1 mL of standard. 1 mL of sample. sac

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				@I129-01 I129-01	LIQUID			N/A	uCi/mL
		1 STD				@I129-01 I129-01C	LIQUID			N/A	% Recovery
		1 STD				@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
		2 BLNK-PREP				@I129-01 I129-01	LIQUID			N/A	uCi/mL
		2 BLNK-PREP				@I129-01 I129-01C	LIQUID			N/A	% Recovery
		2 BLNK-PREP				@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
94000020	SY-103	3 SAMPLE	S95T000334	0	V	@I129-01 I129-01	LIQUID	N/A			uCi/mL
94000020	SY-103	3 SAMPLE	S95T000334	0	V	@I129-01 I129-01C	LIQUID	N/A			% Recovery
94000020	SY-103	3 SAMPLE	S95T000334	0	V	@I129-01 I129-01E	LIQUID	N/A			% Ct. Error
94000020	SY-103	4 DUP	S95T000334	0	V	@I129-01 I129-01	LIQUID			N/A	uCi/mL
94000020	SY-103	4 DUP	S95T000334	0	V	@I129-01 I129-01C	LIQUID			N/A	% Recovery
94000020	SY-103	4 DUP	S95T000334	0	V	@I129-01 I129-01E	LIQUID			N/A	% Ct. Error
94000020	SY-103	5 SAMPLE	S95T000335	0	V	@I129-01 I129-01	LIQUID	N/A			uCi/mL
94000020	SY-103	5 SAMPLE	S95T000335	0	V	@I129-01 I129-01C	LIQUID	N/A			% Recovery
94000020	SY-103	5 SAMPLE	S95T000335	0	V	@I129-01 I129-01E	LIQUID	N/A			% Ct. Error
94000020	SY-103	6 DUP	S95T000335	0	V	@I129-01 I129-01	LIQUID			N/A	uCi/mL
94000020	SY-103	6 DUP	S95T000335	0	V	@I129-01 I129-01C	LIQUID			N/A	% Recovery
94000020	SY-103	6 DUP	S95T000335	0	V	@I129-01 I129-01E	LIQUID			N/A	% Ct. Error

Data Entry Comments: Carrier 4751-D

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# 1568

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT

Final page for worklist # 1568

Analyst Signature 6/14/95 Date

Analyst Signature 6-21-95 Date

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.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

I-129: LA-378-103 (B-4) LIQUIDS

			STANDARD
Type	Gross Weight	(wt2)	2.1229
STANDARD	Tare Weight	(wt1)	2.1022
Work List	Mass Precipitate	(net wt)	0.0207
1568	I-129 µCi / Sample from GEA	(I-129 GEA)	3.351E-4
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	1
LIQUID	Carrier Fractional Recovery	(Rec)	0.6787
Sample #			
WORKLIST#1568	IODINE 129 = 4.94E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SAC			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
06/14/95			
Time			
09:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	4.94E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	67.9%

Data Entry by: Sharon L Hall		Date:	06/16/95
Approved by: S A Costa		Date:	JUN 19 ...

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			BLANK
Type	Gross Weight	(wt2)	2.1264
BLANK	Tare Weight	(wt1)	2.1124
Work List	Mass Precipitate	(net wt)	0.014
1568	I-129 µCi / Sample from GEA	(I-129 GEA)	<2.5867E-6
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.4590
Sample #			
S95T334	IODINE 129 = < 5.64E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SAC			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
06/14/95			
Time			
09:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	5.64E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	45.9%

Data Entry by:	Sharon L Waite	Date:	06/16/95
Approved by:	J A Cooper	Date:	JUN 19 1995

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.1267
SAMPLE	Tare Weight	(wt1)	2.105
Work List	Mass Precipitate	(net wt)	0.0217
1568	I-129 µCi / Sample from GEA	(I-129 GEA)	<3.4708E-6
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.7115
Sample #			
S95T334	IODINE 129 = < 4.88E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SAC			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
06/14/95			
Time			
09:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	4.88E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	71.1%

Data Entry by:	Shyrm Ellis	Date:	06/16/95
Approved by:	L A Cotto	Date:	JUN 19 1995

Form 378103LT Rev. 1.2

1808

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			DUPLICATE
Type	Gross Weight	(wt2)	2.1167
DUPLICATE	Tare Weight	(wt1)	2.1021
Work List	Mass Precipitate	(net wt)	0.0146
1568	I-129 µCi / Sample from GEA	(I-129 GEA)	<3.0816E-6
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.4787
Sample #			
S95T334	IODINE 129 = < 6.44E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SAC			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
06/14/95			
Time			
09:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	6.44E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	47.9%

Data Entry by:	[signature]	Date:	06/16/95
Approved by:	[signature]	Date:	JUN 19 1995

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			SAMPLE
Type	Gross Weight	(wt2)	2.1347
SAMPLE	Tare Weight	(wt1)	2.1135
Work List	Mass Precipitate	(net wt)	0.0212
1568	I-129 µCi / Sample from GEA	(I-129 GEA)	<3.1804E-6
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.6951
Sample #			
S95T335	IODINE 129 = < 4.58E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SAC			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
06/14/95			
Time			
09:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	4.58E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	69.5%

Data Entry by:	Shyn L Uden	Date:	06/16/95
Approved by:	L A Costa	Date:	JUN 19 1995

Form 378103L1 Rev. 1.2

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER WHC-SD-WM-DP-074, REV. 0

I-129: LA-378-103 (B-4) LIQUIDS

			DUPLICATE
Type	Gross Weight	(wt2)	2.1358
DUPLICATE	Tare Weight	(wt1)	2.1191
Work List	Mass Precipitate	(net wt)	0.0167
1568	I-129 µCi / Sample from GEA	(I-129 GEA)	<3.1841E-6
Test Code	Sample Volume in mL	(SS)	1
@I129-01	Dilution Factor	(DF)	1
Matrix	Digest Dilution Factor	(DDF)	100
LIQUID	Carrier Fractional Recovery	(Rec)	0.5475
Sample #			
S95T335	IODINE 129 = < 5.82E-01 µCi/L		
Instrument Code			
WC38931	The carrier solution contains 0.281131 gm's of KI/mL. One mL of the solution is equivalent to 0.0305 grams.		
Analyst			
SAC			
Date	Carrier Percent Recovery = $\frac{(wt2-wt1)\ (100)}{0.0305}$		
06/14/95			
Time			
09:00 PM	I-129 µCi/L = $\frac{(I\text{-}129\ GEA)\ (1000mL/L)\ (DF)\ (DDF)}{(Rec)\ (SS)}$	µCi/mL = $\frac{\mu Ci/L}{1000mL/L}$	

RESULT	IODINE 129	=	<	5.82E-04	µCi/mL

RESULT	CARRIER PERCENT RECOVERY	=	54.8%

Data Entry by:	Sharon L Uribe	Date:	06/16/95
Approved by:	[illegible]	Date:	JUN 19 [illegible]

Form 378103L1 Rev. 1.2

```
*****************************************************************************
* 222-S Laboratory Counting Room   15-JUN-1995 00:55:04.79                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                WORKLIST1568-STD
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7029.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:40:29.90 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        14-JUN-1995 23:14:02.24
Decayed to:               14-JUN-1995 23:14:02.24
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  VR
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by: M C Brew

date: 6-15-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
2	20.14	963	1.43	99.25	85	30	12.4	1.04E+01		
2	21.48	592	1.17	106.00	85	30	17.4			
0	24.22	187	1.27	119.83	114	12	39.2			
0	29.83	24833	1.17	148.11	136	24	1.7			
0	33.89	5764	1.23	168.62	159	24	3.9			
0	39.67	3779	1.09	197.80	187	21	3.7		I-129	3.351E-04
10	655.72	52	0.27	3306.39	3305	8	40.0	7.16E+00		
10	**656.22**	**37**	**0.26**	**3308.88**	**3305**	**8**	**90.3**			

Sample ID : WORKLIST1568-STD Acquisition date : 14-JUN-1995 23:14:02

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/SAMPLE	Wtd Mean Decay Corr uCi/SAMPLE	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
I-129	5.73E+09D	1.000	3.351E-04	3.351E-04	0.123E-04	3.67	
		Total Activity :	**3.351E-04**	**3.351E-04**			
		Grand Total Activity :	3.351E-04	3.351E-04			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

WHC-SD-WM-DP-074, REV. 0

All nuclides have been identified. No MDA report generated.

```
**********************************************************************
* 222-S Laboratory Counting Room    15-JUN-1995 01:12.36
**********************************************************************
      >>>>>>>>>>  SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                  WRKLST#1568-BLNK
Sample Size:                1.00000E+00 ML
Dilution Factor             1.00000E+00
Conversion ML to SAMPLE     1.00000E+00

      >>>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:                GEA7
File Number:                dka300:[spec.GEA7]7g7030.cnf
Geometry:                   1
Description:
Count Time:                 0 01:40:00.00 sec
Real Time:                  0 01:42:18.62 sec

      >>>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:          15-JUN-1995 01:03:17.89
Decayed to:                 15-JUN-1995 01:03:17.89
Standard Deviations:        2
Analysis Library:           I129
Analyst:                    MB
Background Subtract:        DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
**********************************************************************
```

Removed by:

date: 6-15-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.45	159	1.15	161.33	154	22	31.3			
0	656.12	73	0.51	3308.40	3306	6	68.8			

Sample ID : WRKLST#1568-BLNK Acquisition date : 15-JUN-1995 01:03:17

Total number of lines in spectrum	2	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : WRKLST#1568-BLNK
Acquisition date : 15-JUN-1995 01:03:17

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
·129	39.	39.60	2.5867E-06

```
*****************************************************************************
* 222-S Laboratory Counting Room   15-JUN-1995 04:33:39.77                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T334-SAMPLE
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7031.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:41:52.30 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        15-JUN-1995 02:51:13.67
Decayed to:               15-JUN-1995 02:51:13.67
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by: MB

date: 6-15-95

Verified by:

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.32	141	1.35	160.68	153	19	33.2			
0	74.57	21	0.43	373.89	370	8	101.0			
0	185.50	35	0.68	933.65	926	18	111.2			
0	656.28	123	0.63	3309.21	3307	6	44.0			

Sample ID : S95T334-SAMPLE
Acquisition date : 15-JUN-1995 02:51:13

Total number of lines in spectrum	4	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Minimum Detectable Activity Report
Sample ID : S95T334-SAMPLE

Acquisition date : 15-JUN-1995 02:51:13

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	71.	39.60	3.4708E-06

```
*****************************************************************************
* 222-S Laboratory Counting Room   15-JUN-1995 06:20:44.66                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T334-DUP
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7032.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:42:09.07 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        15-JUN-1995 04:38:03.00
Decayed to:               15-JUN-1995 04:38:03.00
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  S95T334-DUP
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by: M B Brown

date: 6-15-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

Tt	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.34	99	1.02	160.77	155	15	41.4			
0	46.44	35	1.16	231.92	226	15	53.6			
0	656.01	117	0.91	3307.85	3305	7	45.2			

Sample ID : S95T334-DUP Acquisition date : 15-JUN-1995 04:38:03

Total number of lines in spectrum	3	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T334-DUP
Acquisition date : 15-JUN-1995 04:38:03

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
129	56.	39.60	3.0816E-06

```
*****************************************************************************
* 222-S Laboratory Counting Room   15-JUN-1995 08:06:49.69                  *
*****************************************************************************
     >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T335-SAMPLE
Sample Size:              1.00000E+00 ML
Dilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

     >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7033.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:41:59.05 sec

     >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        15-JUN-1995 06:24:15.79
Decayed to:               15-JUN-1995 06:24:15.79
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  MB
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

     >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by: Em Barela

date: 6-15-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	656.12	101	0.69	3308.37	3305	7	49.3			

Total number of lines in spectrum	1	
Number of unidentified lines	1	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T335-SAMPLE
Acquisition date : 15-JUN-1995 06:24:15

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
I-129	60.	39.60	3.1804E-06

```
*****************************************************************************
* 222-S Laboratory Counting Room   15-JUN-1995 16:56:32.54                  *
*****************************************************************************
      >>>>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
Sample ID:                S95T335-DUP
 mple Size:               1.00000E+00 ML
 ilution Factor:          1.00000E+00
Conversion ML to SAMPLE1.00000E+00

      >>>>>>>>>> COUNT INFORMATION <<<<<<<<<<
Detector ID:              GEA7
File Number:              dka300:[spec.GEA7]7g7034.cnf
Geometry:                 1
Description:
Count Time:               0 01:40:00.00 sec
Real Time:                0 01:41:52.19 sec

      >>>>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
Sample Count Time:        15-JUN-1995 15:14:06.31
Decayed to:               15-JUN-1995 15:14:06.31
Standard Deviations:      2
Analysis Library:         I129
Analyst:                  EMB
Background Subtract:      DKA300:[SPEC.GEA7]7GBACK

      >>>>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration:       5-JUN-1995 14:54:43.68
 Date of last efficiency calibration:   5-JUN-1995 14:57:32.67
*****************************************************************************
```

Removed by:

date: 6-15-95

Verified by:

WHC-SD-WM-DP-074, REV. 0

Post-NID Peak Search Report

t	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/SAMPLE
0	32.18	84	1.00	160.00	152	17	59.5			
0	36.01	32	1.42	179.30	174	12	83.8			
0	656.06	63	0.70	3308.08	3306	6	69.1			

Sample ID : S95T335-DUP Acquisition date : 15-JUN-1995 15:14:06

Total number of lines in spectrum	3	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : S95T335-DUP Acquisition date : 15-JUN-1995 15:14:06

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/SAMPLE)
-129	60.	39.60	3.1841E-06

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