

Samples for this project were analyzed for total cyanide by SW846 method 9010/9012. Due to QC excursions, as noted on the accompanying spreadsheet, affected samples were redistilled and/or reanalyzed. These re-analyses were conducted outside the 14 day holding time. STL St. Louis has composed a spreadsheet documenting all the cyanide runs conducted on these project samples. In cases where samples were analyzed more than once, the individual runs were evaluated by our QA staff and we have selected what we believe to be the most meaningful results.

The evaluation process attempted to qualify the extent of the QC excursions (e.g. method blank detections above the reporting limit, LCS recovery excursion) versus the extent of re-analyses outside holding time. For example, marginal LCS recovery excursions for samples analyzed within holding time were noted as more beneficial than an acceptable LCS for samples analyzed outside holding time. Holding time was evaluated at both 14 days (1X) and 28 days (2X). Re-analyses outside 1X holding time with marginal QC performance were considered more beneficial than re-analyses outside 2X holding time with acceptable QC performance. Whether or not the analysis was conducted within the 1X or 2X holding time is noted on the spreadsheet. The sample analysis selected to be reported has been highlighted in green (and black in the leftmost column) on the spreadsheet.

For the majority of the project samples, irrespective of QC excursion or holding time, sample results are comparable across the individual runs. Likewise, project samples analyzed within holding time with acceptable QC results are comparable to other samples in this same project, which required multiple re-analyses.

CN Data Analyses

Reported Analysis	Laboratory Lot ID	Laboratory Work Order #	Sample Collection Date	Cyanide Result (%moisture corrected)	% solid result	Units	Preparation Date	Analysis Date	Prepared in 14 day Hold Time?	Prepared in 2X (28 day) Hold Time?	QC comments
F8K030310001	JHXJ01CW	ENSR110306	11/2/06	ND	85.35 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	
F8K030310002	JHXR01C5	ENSR110306	11/2/06	ND	93.53 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	
F8K030310003	JHXR11C3	ENSR110306	11/2/06	ND	90.12 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	
F8K030310004	JHXV21C6	ENSR110306	11/2/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K030310005	JHXV21C6	ENSR110306	11/2/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable
F8K030310006	JHXL11C1	ENSR110306	11/2/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K030310007	JHXL11C1	ENSR110306	11/2/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable
F8K040210001	JH1MX1C6	ENSR110306	11/3/06	ND	86.77 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	
F8K040210002	JH1NA1C2	ENSR110306	11/3/06	ND	92.63 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	
F8K040210003	JH1ND1C2	ENSR110306	11/3/06	ND	93.85 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	
F8K040210004	JH1NH1C2	ENSR110306	11/3/06	ND	88.05 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	
F8K040210005	JH1NN1C2	ENSR110306	11/3/06	ND	88.56 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210006	JH1NQ1C2	ENSR110306	11/3/06	ND	88.05 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210007	JH1NV1C2	ENSR110306	11/3/06	ND	76.99 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210008	JH1N11C2	ENSR110306	11/3/06	ND	92.69 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210009	JH1NS1C2	ENSR110306	11/3/06	ND	94.87 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210010	JH1N61C2	ENSR110306	11/3/06	ND	78.69 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210011	JH1N81C2	ENSR110306	11/3/06	ND	92.19 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210012	JH1PD1C2	ENSR110306	11/3/06	ND	94.01 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210013	JH1PJ1C2	ENSR110306	11/3/06	ND	80.59 mg/kg	mg/kg	11/13/06	11/16/06	yes	yes	LCS acceptable; LSCD high (120%); high bias ND
F8K040210014	JH1PN1C2	ENSR110306	11/3/06	ND	85.3 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K070276001	JH5H1C6	ENSR110306	11/6/06	ND	84.72 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K070276002	JH5H1C6	ENSR110306	11/6/06	ND	66.93 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K070276003	JH5H1C6	ENSR110306	11/6/06	ND	67.91 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K070276004	JH5JA1C6	ENSR110306	11/6/06	ND	81.62 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K070276005	JH5J1C6	ENSR110306	11/6/06	ND	83.25 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K070276006	JH5J1C6	ENSR110306	11/6/06	ND	84 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K070276007	JH5J1C6	ENSR110306	11/6/06	ND	89.13 mg/kg	mg/kg	11/16/06	12/04/06	yes	yes	LCS/LCSD acceptable
F8K070276008	JH5J1C6	ENSR110306	11/6/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable
F8K070276009	JH5J1C6	ENSR110306	11/6/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K070276010	JH5J1C6	ENSR110306	11/6/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K080215001	JH7LQ1C6	ENSR110306	11/7/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable
F8K080215002	JH7LQ1C6	ENSR110306	11/7/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K080215003	JH7LQ1C6	ENSR110306	11/7/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable
F8K080215004	JH7LQ1C6	ENSR110306	11/7/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K080215005	JH7LQ1C6	ENSR110306	11/7/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable
F8K080215006	JH7LQ1C6	ENSR110306	11/7/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K080215007	JH7LQ1C6	ENSR110306	11/7/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable
F8K080215008	JH7LQ1C6	ENSR110306	11/7/06	ND	91.72 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K080215009	JH7LQ1C6	ENSR110306	11/7/06	ND	60.91 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K080215010	JH7LQ1C6	ENSR110306	11/7/06	ND	72.42 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K080215011	JH7LQ1C6	ENSR110306	11/7/06	ND	89.99 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K080215012	JH7LQ1C6	ENSR110306	11/7/06	ND	90.48 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K080215013	JH7LQ1C6	ENSR110306	11/7/06	ND	86.83 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K080215014	JH7LQ1C6	ENSR110306	11/7/06	ND	74.2 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K080215015	JH7LQ1C6	ENSR110306	11/7/06	ND	64.43 mg/kg	mg/kg	11/16/06	11/16/06	yes	yes	LCS/LCSD acceptable
F8K080215016	JH7LQ1C6	ENSR110306	11/7/06	ND	67.6 mg/kg	mg/kg	11/16/06	12/04/06	yes	yes	LCS low (89%) HCS acceptable
F8K080215017	JH7LQ1C6	ENSR110306	11/7/06	ND	67.6 mg/kg	mg/kg	12/08/06	12/13/06	no	no	LCS low (70%)
F8K080215018	JH7LQ1C6	ENSR110306	11/7/06	ND	N/A ug/L	ug/L	11/22/06	11/27/06	yes	yes	LCS acceptable
F8K080215019	JH7LQ1C6	ENSR110306	11/8/06	ND	N/A ug/L	ug/L	11/22/06	12/04/06	yes	yes	LCS low (86%) blanks running - 3ppb
F8K080215020	JH7LQ1C6	ENSR110306	11/8/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K080215021	JH7LQ1C6	ENSR110306	11/8/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable
F8K080215022	JH7LQ1C6	ENSR110306	11/8/06	ND	N/A ug/L	ug/L	11/16/06	12/04/06	yes	yes	LCS low (77%) HCS acceptable
F8K080215023	JH7LQ1C6	ENSR110306	11/8/06	ND	N/A ug/L	ug/L	12/06/06	12/13/06	no	no	LCS acceptable



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F8K110180004	JJHF1C6	ENSR111006	11/10/06	6331214	ND	62.01 mg/kg	11/27/06	12/04/06	yes	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K110180004	JJHF1C6	ENSR111006	11/10/06	6331214	ND	62.01 mg/kg	12/13/06	12/13/06	no	LCS acceptable (96%)
F8K110180006	JJH81C6	ENSR111006	11/10/06	6326322	ND	N/A ug/L	11/22/06	11/27/06	yes	LCS acceptable
F8K110180006	JJH81C6	ENSR111006	11/10/06	6326322	ND	N/A ug/L	11/22/06	12/04/06	yes	LCS low (86%) blanks running - 3ppb
F8K110180006S	JJH81C6	ENSR111006	11/10/06	6326322	99.2	N/A ug/L	11/22/06	11/27/06	yes	LCS acceptable
F8K110180006S	JJH81C6	ENSR111006	11/10/06	6326322	79.04	N/A ug/L	11/22/06	12/04/06	yes	LCS low (86%) blanks running - 3ppb
F8K110180006X	JJH81C7	ENSR111006	11/10/06	6326322	ND	N/A ug/L	11/22/06	12/04/06	yes	LCS low (86%) blanks running - 3ppb
F8K110180006X	JJH81C7	ENSR111006	11/10/06	6326322	ND	N/A ug/L	11/22/06	11/27/06	yes	LCS acceptable
F8K140246001	JJNCF1C6	ENSR111006	11/13/06	6326322	ND	N/A ug/L	11/22/06	12/04/06	yes	LCS low (86%) blanks running - 3ppb
F8K140246001	JJNCF1C6	ENSR111006	11/13/06	6326322	ND	N/A ug/L	11/22/06	12/04/06	yes	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K140246003	JJNEQ1C6	ENSR111006	11/13/06	6331214	ND	93.56 mg/kg	12/11/06	12/04/06	yes	LCS acceptable (96%)
F8K140246003	JJNEQ1C6	ENSR111006	11/13/06	6331214	ND	93.56 mg/kg	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K140246004	JJNF1C2	ENSR111006	11/13/06	6331214	ND	93.74 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K140246004	JJNF1C2	ENSR111006	11/13/06	6331214	ND	93.74 mg/kg	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K140246005	JJNF41C6	ENSR111006	11/13/06	6331214	ND	93.7 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K140246005	JJNF41C6	ENSR111006	11/13/06	6331214	ND	93.7 mg/kg	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K140246007	JJNF91C1	ENSR111006	11/13/06	6331214	ND	91.07 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K140246007	JJNF91C1	ENSR111006	11/13/06	6331214	ND	91.07 mg/kg	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K140246008	JJNGH1C6	ENSR111006	11/13/06	6331214	ND	77.6 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K140246008	JJNGH1C6	ENSR111006	11/13/06	6331214	ND	77.6 mg/kg	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K150251001	JJQ101C6	ENSR111006	11/14/06	6331214	ND	94.22 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K150251001	JJQ101C6	ENSR111006	11/14/06	6331214	ND	94.22 mg/kg	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K150251001D	JJQ101EL	ENSR111006	11/14/06	6331214	ND	94.22 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K150251001D	JJQ101EL	ENSR111006	11/14/06	6331214	4.758	5.08421842	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K150251001S	JJQ101EK	ENSR111006	11/14/06	6331214	ND	94.22 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K150251001S	JJQ101EK	ENSR111006	11/14/06	6331214	5.421	5.80408682	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K150251002	JJQ271C4	ENSR111006	11/14/06	6331257	ND	86.15 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (98%)
F8K150251002	JJQ271C4	ENSR111006	11/14/06	6331257	ND	86.15 mg/kg	12/11/06	12/13/06	no	LCS low (2.6%) bks running -3ppb; distillation apparatus not sealed
F8K150251002D	JJQ271FE	ENSR111006	11/14/06	6331257	ND	86.15 mg/kg	11/27/06	12/04/06	yes	LCS low (2.6%) bks running -3ppb; distillation apparatus not sealed
F8K150251002D	JJQ271FE	ENSR111006	11/14/06	6331257	4.813	5.86878727	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K150251002S	JJQ271FD	ENSR111006	11/14/06	6331257	ND	86.15 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (98%)
F8K150251002S	JJQ271FD	ENSR111006	11/14/06	6331257	4.632	5.3766686	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K150251003	JJQ3H1C4	ENSR111006	11/14/06	6331214	ND	92.39 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K150251003	JJQ3H1C4	ENSR111006	11/14/06	6331214	ND	92.39 mg/kg	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K150251004	JJQ341CF	ENSR111006	11/14/06	6331214	ND	92.29 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (98%)
F8K150251004	JJQ341CF	ENSR111006	11/14/06	6331214	ND	92.29 mg/kg	12/11/06	12/13/06	no	LCS did not recover (0%); Distillation apparatus not properly sealed
F8K150251005	JJQ4Q1C1	ENSR111006	11/14/06	6331214	ND	94.97 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (96%)
F8K150251005	JJQ4Q1C1	ENSR111006	11/14/06	6331214	ND	94.97 mg/kg	12/11/06	12/13/06	no	LCS low (2.6%) bks running -3ppb; distillation apparatus not sealed
F8K150251006	JJQ4W1C6	ENSR111006	11/14/06	6331257	ND	67.41 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (98%)
F8K150251006	JJQ4W1C6	ENSR111006	11/14/06	6331257	ND	67.41 mg/kg	12/11/06	12/13/06	no	LCS low (2.6%) bks running -3ppb; distillation apparatus not sealed
F8K150251007	JJQ461C4	ENSR111006	11/14/06	6331257	ND	77.45 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (98%)
F8K150251007	JJQ461C4	ENSR111006	11/14/06	6331257	ND	77.45 mg/kg	12/11/06	12/13/06	no	LCS low (2.6%) bks running -3ppb; distillation apparatus not sealed
F8K150251008	JJQ6Q1CF	ENSR111006	11/14/06	6331257	ND	85.85 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (98%)
F8K150251008	JJQ6Q1CF	ENSR111006	11/14/06	6331257	ND	85.85 mg/kg	12/11/06	12/13/06	no	LCS low (2.6%) bks running -3ppb; distillation apparatus not sealed
F8K150251009	JJQ6V1CH	ENSR111006	11/14/06	6331257	ND	84.8 mg/kg	11/27/06	12/04/06	yes	LCS acceptable (98%)







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F6K170247007	JJ0WP1CP	ENSR111706	11/16/06	6333327	ND	94.77	mg/kg	11/29/06	12/04/06	yes	LCS low (1.8%)
F6K170247007	JJ0WP1CP	ENSR111706	11/16/06	6333327	1.2275	94.77	mg/kg	01/11/07	01/15/07	no	apparatus not sealed
F6K170247008	JJ0WQ	ENSR111706	11/16/06	6333327	ND	84.53	mg/kg	12/14/06	12/20/06	no	LCS acceptable (102%)
F6K170247008	JJ0WQ	ENSR111706	11/16/06	6333327	ND	84.53	mg/kg	12/14/06	12/20/06	yes	LCS low (82%); HCS 48%
F6K170247009	JJ0WV1CQ	ENSR111706	11/16/06	6333327	ND	84.53	mg/kg	11/29/06	12/04/06	yes	LCS low (1.8%)
F6K170247009	JJ0WV1CQ	ENSR111706	11/16/06	6333327	ND	84.53	mg/kg	01/11/07	01/15/07	no	apparatus not sealed
F6K170247009	JJ0W3	ENSR111706	11/16/06	6333327	ND	90.59	mg/kg	12/14/06	12/20/06	yes	LCS low (1.8%)
F6K170247009	JJ0W3	ENSR111706	11/16/06	6333327	ND	90.59	mg/kg	11/29/06	12/04/06	yes	apparatus not sealed
F6K170247010	JJ0X31CK	ENSR111706	11/16/06	6333327	ND	90.59	mg/kg	01/11/07	01/15/07	no	LCS acceptable (102%)
F6K170247010	JJ0X31CK	ENSR111706	11/16/06	6333327	0.5848	91.48	mg/kg	12/14/06	12/21/06	no	LCS low (82%); HCS 48%
F6K170247010	JJ0X31CK	ENSR111706	11/16/06	6333327	ND	91.48	mg/kg	11/29/06	12/04/06	yes	apparatus not sealed
F6K170247010	JJ0X31CK	ENSR111706	11/16/06	6333327	ND	91.48	mg/kg	12/14/06	12/21/06	no	LCS low (1.8%)
F6K170247011	JJ0X2	ENSR111706	11/16/06	6333327	ND	91.22	mg/kg	12/14/06	12/21/06	no	LCS acceptable (102%)
F6K170247011	JJ0X2	ENSR111706	11/16/06	6333327	ND	91.22	mg/kg	12/14/06	12/21/06	no	LCS low (1.8%)
F6K170247012	JJ0X21CP	ENSR111706	11/16/06	6333327	ND	91.22	mg/kg	12/14/06	12/21/06	no	apparatus not sealed
F6K170247012	JJ0X21CP	ENSR111706	11/16/06	6333327	ND	91.22	mg/kg	12/14/06	12/21/06	no	LCS low (1.8%)
F6K170247012	JJ0X5	ENSR111706	11/16/06	6333327	0.4665	86.06	mg/kg	12/14/06	12/21/06	no	apparatus not sealed
F6K170247012	JJ0X5	ENSR111706	11/16/06	6333327	0.4665	86.06	mg/kg	12/14/06	12/21/06	no	LCS low (1.8%)
F6K170247012	JJ0X51CQ	ENSR111706	11/16/06	6333327	ND	86.06	mg/kg	11/29/06	12/04/06	yes	apparatus not sealed
F6K170247012	JJ0X51CQ	ENSR111706	11/16/06	6333327	ND	86.06	mg/kg	01/11/07	01/15/07	no	LCS acceptable (102%)
F6K170247012	JJ0X5 D	ENSR111706	11/16/06	6333327	3.772	86.06	mg/kg	12/14/06	12/21/06	no	LCS low (82%); HCS 48%
F6K170247012	JJ0X51FW	ENSR111706	11/16/06	6333327	ND	86.06	mg/kg	11/29/06	12/04/06	yes	apparatus not sealed
F6K170247012	JJ0X51FW	ENSR111706	11/16/06	6333327	3.367	86.06	mg/kg	01/11/07	01/15/07	no	LCS acceptable (102%)
F6K170247012	JJ0X5 S	ENSR111706	11/16/06	6333327	99.63	86.06	mg/kg	12/14/06	12/21/06	no	LCS low (82%); HCS 48%
F6K170247012S	JJ0X51FV	ENSR111706	11/16/06	6333327	ND	86.06	mg/kg	11/29/06	12/04/06	yes	apparatus not sealed
F6K170247012S	JJ0X51FV	ENSR111706	11/16/06	6333327	2.7035	86.06	mg/kg	01/11/07	01/15/07	no	LCS acceptable (102%)
F6K170247013	JJ0E1CK	ENSR111706	11/16/06	6333348	ND	N/A	ug/L	12/01/06	12/04/06	no	LCS low (5%); apparatus not sealed
F6K170247013	JJ0E1CK	ENSR111706	11/16/06	6333348	5.23	N/A	ug/L	01/19/07	01/22/07	no	LCS acceptable (97%)
F6K180200001	JJ2B1F0	ENSR111706	11/17/06	6333348	ND	N/A	ug/L	12/04/06	12/04/06	yes	LCS acceptable (94%)
F6K180200001	JJ2B1F0	ENSR111706	11/17/06	6333348	ND	N/A	ug/L	12/13/06	12/13/06	yes	LCS acceptable (94%)
F6K180200001D	JJ2B1F0	ENSR111706	11/17/06	6333348	ND	N/A	ug/L	12/04/06	12/04/06	yes	LCS acceptable (94%)
F6K180200001D	JJ2B1F0	ENSR111706	11/17/06	6333348	ND	N/A	ug/L	12/13/06	12/13/06	yes	LCS acceptable (94%)
F6K180200001S	JJ2B1FX	ENSR111706	11/17/06	6333348	0.898	N/A	ug/L	12/13/06	12/13/06	yes	MS recovery 0%
F6K180200001S	JJ2B1FX	ENSR111706	11/17/06	6333348	0.898	N/A	ug/L	12/13/06	12/13/06	yes	LCS acceptable (94%)
F6K180200002	JJ2B1CV	ENSR111706	11/17/06	6333348	ND	N/A	ug/L	12/13/06	12/13/06	yes	LCS acceptable (94%)
F6K180200002	JJ2B1CV	ENSR111706	11/17/06	6333348	ND	N/A	ug/L	12/13/06	12/13/06	no	LCS low (7.0%)
F6K180200004	JJ2B1C0	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/01/06	12/04/06	yes	apparatus not sealed
F6K180200004	JJ2B1C0	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	yes	LCS low (53%)
F6K180200004	JJ2B1C0	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	01/12/07	01/15/07	no	HCS low (63%)
F6K180200004D	JJ2B1C0	ENSR111706	11/17/06	6338185	4.4785	95.21	mg/kg	12/13/06	12/20/06	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200004D	JJ2B1E5	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/01/06	12/04/06	yes	apparatus not sealed
F6K180200004D	JJ2B1E5	ENSR111706	11/17/06	6338185	5.2515	95.21	mg/kg	01/12/07	01/15/07	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200004S	JJ2B1E5	ENSR111706	11/17/06	6338185	4.81	95.21	mg/kg	12/13/06	12/20/06	yes	LCS low (7.0%)
F6K180200004S	JJ2B1E4	ENSR111706	11/17/06	6338185	0.3815	95.21	mg/kg	12/01/06	12/04/06	yes	apparatus not sealed
F6K180200004S	JJ2B1E4	ENSR111706	11/17/06	6338185	5.2165	95.21	mg/kg	01/12/07	01/15/07	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200004S	JJ2B1E4	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	LCS low (53%)
F6K180200005	JJ2B1E4	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	LCS low (7.0%)
F6K180200005	JJ2B1E4	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	apparatus not sealed
F6K180200005	JJ2B1E4	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200005	JJ2B1E4	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	LCS low (53%)
F6K180200006	JJ2B1CA	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/01/06	12/04/06	yes	apparatus not sealed
F6K180200006	JJ2B1CA	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	01/12/07	01/15/07	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200006	JJ2B1CA	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	LCS low (7.0%)
F6K180200006	JJ2B1CA	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	apparatus not sealed
F6K180200006	JJ2B1CH	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/01/06	12/04/06	yes	apparatus not sealed
F6K180200006	JJ2B1CH	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	01/12/07	01/15/07	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200007	JJ2B1W	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	LCS low (53%)
F6K180200007	JJ2B1W	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/13/06	12/20/06	no	LCS low (7.0%)
F6K180200007	JJ2B1W1CL	ENSR111706	11/17/06	6338185	ND	95.21	mg/kg	12/01/06	12/04/06	yes	apparatus not sealed

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F6K180200007	JJ28W1CL	ENSR111706	11/17/06	6338185	ND	ND	91.57 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200008	JJ28X	ENSR111706	11/17/06	6338185	ND	ND	73.44 mg/kg	12/13/06	12/20/06	no	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200009	JJ28Y1CP	ENSR111706	11/17/06	6338185	ND	ND	73.44 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200010	JJ28X1CP	ENSR111706	11/17/06	6338185	ND	ND	73.44 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200011	JJ280	ENSR111706	11/17/06	6338185	ND	ND	85.91 mg/kg	12/13/06	12/20/06	no	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200012	JJ2801CW	ENSR111706	11/17/06	6338185	ND	ND	85.91 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200013	JJ282	ENSR111706	11/17/06	6338185	ND	ND	90.37 mg/kg	12/13/06	12/20/06	no	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200014	JJ2821C2	ENSR111706	11/17/06	6338185	ND	ND	90.37 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200015	JJ2821C2	ENSR111706	11/17/06	6338185	ND	ND	95.68 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200016	JJ288	ENSR111706	11/17/06	6338185	ND	ND	95.68 mg/kg	12/13/06	12/20/06	yes	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200017	JJ2881CD	ENSR111706	11/17/06	6338185	ND	ND	95.68 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200018	JJ2881CD	ENSR111706	11/17/06	6338185	ND	ND	95.68 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200019	JJ290	ENSR111706	11/17/06	6338185	ND	ND	93.91 mg/kg	12/13/06	12/20/06	no	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200020	JJ29D1CH	ENSR111706	11/17/06	6338185	ND	ND	93.91 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200021	JJ29D1CH	ENSR111706	11/17/06	6338185	ND	ND	94.89 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200022	JJ29E	ENSR111706	11/17/06	6338185	ND	ND	94.89 mg/kg	12/13/06	12/20/06	no	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200023	JJ29E1CJ	ENSR111706	11/17/06	6338185	ND	ND	94.89 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200024	JJ29E1CJ	ENSR111706	11/17/06	6338185	ND	ND	94.89 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200025	JJ29F	ENSR111706	11/17/06	6338185	ND	ND	79.29 mg/kg	12/13/06	12/20/06	no	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200026	JJ29F1CK	ENSR111706	11/17/06	6338185	ND	ND	79.29 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200027	JJ29F1CK	ENSR111706	11/17/06	6338185	ND	ND	79.29 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200028	JJ29F D	ENSR111706	11/17/06	6338185	3.8665	4.876	79.29 mg/kg	12/13/06	12/20/06	no	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200029	JJ29F1FK	ENSR111706	11/17/06	6338185	0.367	0.4628	79.29 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200030	JJ29F1FK	ENSR111706	11/17/06	6338185	4.806	6.06129398	79.29 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200031	JJ29F S	ENSR111706	11/17/06	6338185	4.676	5.897	79.29 mg/kg	12/13/06	12/20/06	no	yes	LCS low (53%) HCS low (63%) LCS low (7.0%) bks running ~3ppb; distillation apparatus not sealed
F6K180200032	JJ29F1FJ	ENSR111706	11/17/06	6338185	0.442	0.557	79.29 mg/kg	12/01/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200033	JJ29F1FJ	ENSR111706	11/17/06	6338185	3.7005	4.66704502	79.29 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (99%); HCS acceptable (103%)
F6K180200034	JJ6MX1C0	ENSR111706	11/20/06	6338198	ND	ND	94.69 mg/kg	12/04/06	12/04/06	yes	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed
F6K180200035	JJ6MX1C0	ENSR111706	11/20/06	6338198	0.4075	0.4304	94.69 mg/kg	12/13/06	12/20/06	no	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed
F6K180200036	JJ6MX1C0	ENSR111706	11/20/06	6338198	ND	ND	94.69 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (92%)
F6K180200037	JJ6MX1C0	ENSR111706	11/20/06	6338198	5.2025	5.494	94.69 mg/kg	12/13/06	12/20/06	no	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed
F6K180200038	JJ6MX1E5	ENSR111706	11/20/06	6338198	ND	ND	94.69 mg/kg	12/04/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200039	JJ6MX1E5	ENSR111706	11/20/06	6338198	4.3925	4.639	94.69 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (92%)
F6K180200040	JJ6MX1E4	ENSR111706	11/20/06	6338198	ND	ND	94.69 mg/kg	12/13/06	12/20/06	no	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed; MS recovery 0%
F6K180200041	JJ6Q4	ENSR111706	11/20/06	6338198	ND	ND	94.35 mg/kg	12/13/06	12/20/06	no	yes	LCS acceptable (92%)
F6K180200042	JJ6Q41CA	ENSR111706	11/20/06	6338198	ND	ND	94.35 mg/kg	12/04/06	12/04/06	yes	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed
F6K180200043	JJ6Q41CA	ENSR111706	11/20/06	6338198	3.38	3.588	94.35 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (92%)
F6K180200044	JJ6Q4 D	ENSR111706	11/20/06	6338198	3.38	3.588	94.35 mg/kg	12/13/06	12/20/06	no	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed
F6K180200045	JJ6Q41FJ	ENSR111706	11/20/06	6338198	0.6245	0.662	94.35 mg/kg	12/04/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200046	JJ6Q41FJ	ENSR111706	11/20/06	6338198	3.5105	3.72072072	94.35 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (92%)
F6K180200047	JJ6Q4 S	ENSR111706	11/20/06	6338198	3.517	3.727	94.35 mg/kg	12/13/06	12/20/06	no	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed
F6K180200048	JJ6Q41FH	ENSR111706	11/20/06	6338198	ND	ND	94.35 mg/kg	12/04/06	12/04/06	yes	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed; MS recovery 0%
F6K180200049	JJ6Q41FH	ENSR111706	11/20/06	6338198	3.801	4.02861685	94.35 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (92%)
F6K180200050	JJ6RJ	ENSR111706	11/20/06	6338198	ND	ND	92.92 mg/kg	12/13/06	12/20/06	no	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed
F6K180200051	JJ6RJ1CH	ENSR111706	11/20/06	6338198	ND	ND	92.92 mg/kg	12/04/06	12/04/06	yes	yes	LCS acceptable (99%); HCS acceptable (103%)
F6K180200052	JJ6RJ1CH	ENSR111706	11/20/06	6338198	ND	ND	92.92 mg/kg	01/12/07	01/15/07	no	no	LCS acceptable (92%)
F6K180200053	JJ6RJ1	ENSR111706	11/20/06	6338198	ND	ND	92.92 mg/kg	12/13/06	12/20/06	no	yes	LCS low (86%) HCS low (56%) LCS low (0.6%) bks running ~3ppb; distillation apparatus not sealed



CN Data Analyses

Sample ID	Method	Date	Location	Concentration	Unit	Result	Notes
F6L050180001	JKR62ZCK	12/4/06	7012142	ND	ug/L	12/22/06	LCS low (78%); HCS acceptable
F6L050180002	JKR7D	12/4/06	6346474	ND	ug/L	12/13/06	LCS low (88%); HCS 69%
F6L050180003	JKR7D2CN	12/4/06	7012142	ND	ug/L	12/22/06	LCS low (78%); HCS acceptable
F6L050180004	JKR7F2CT	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L050180004S	JKR7G2CN	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L050180004S	JKR7G1HG	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MS misspiked
F6L050180005	JKR7G1HG	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MS misspiked
F6L050180006	JKR7T2CN	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L060222001	JKR7B2CN	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L060222002	JKQWQ2CX	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L060222003	JKQWQ2CX	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L060222004	JKQWQ2C6	12/4/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L070281001	JK1632CN	12/6/06	6349287	7.34	ug/L	12/15/06	LCS acceptable (106%); MB acceptable
F6L070281002	JK17W2CU	12/6/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L070281003	JK1732CU	12/6/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L070281004	JK1762CU	12/6/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L070281005	JK1772CU	12/6/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L070281006	JK1782CU	12/6/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L080240001	JK4XW2CK	12/7/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L080240002	JK40F2CQ	12/7/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L080240003	JK40F2CQ	12/7/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL
F6L080240004	JK40V2CQ	12/7/06	7012197	ND	ug/L	12/15/06	LCS acceptable (102%); MB hit above RL

<b>Due Dates:</b> Earliest:	Latest:	<b>Run Date:</b> 12-04-06			
<b>Method Name/#:</b> CN 335.1, 335.2, 335.4, 9010B, 9012A, 4500					
<b>Batch #:</b> 6338185, 6338198, 6346474, 6333274, 6333327					
<b>Lot #s:</b> F6K180200, F6K210226, F6L020205, F6L050180, F6K160199, F6K170247,					
<b>NCM's:</b>					
<b>Review Item</b>					
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Review</b>	
<b>Initial Calibration</b>					
Initial Calibration data in this package?	X			/	
If not, please specify initial calibration date:				/	
Initial Calibration meets method acceptance criteria:	X			/	
Corr. Coefficient = 0.995; Y-intercept < the absolute value of the RL					
Is the low level standard = the reporting limit?	X			/	
<b>Calibration Check (ICV)</b>					
ICV performed with initial calibration?	X			/	
ICV meets method acceptance criteria (max. 10% D)?	X			/	
<b>Continuing Calibration Verification (CCV)</b>					
CCV performed at the prescribed frequency?	X			/	
CCV meets method acceptance criteria (max. 10% D)?	X			/	
<b>Continuing Calibration Blank (CCB)</b>					
CCB performed after every CCV?	X			/	
CCB meets method acceptance criteria?	X			/	
Criteria: < the absolute value of the Reporting Limit (see client sheet for					
<b>Batch QC - Method Blanks</b>					
Is a Method Blank required for this analysis?	X			/	
Is the method blank below the Reporting Limit for targets of interest?	X			/	
<b>Batch QC - LCS</b>					
Is a LCS required for this analysis?	X			/	
Are the LCS (LCSD) recoveries within method acceptance?		X		/	
<b>Batch QC - MS/MSD</b>					
Is a MS/MSD or MS/Sample Duplicate required for this analysis?	X			/	
Are the MS(MSD) recoveries within method acceptance?		X		/	
<b>Batch QC - RPD</b>					
MS/MSD or Sample/Sample Duplicate RPD within acceptance criteria		X		/	
<b>Sample Results - Report</b>					
Are samples bracketed by acceptable CCV/CCB?	X			/	
Are results within the calibration range?	X			/	
Was analysis performed within Hold Time?	X			/	
Did samples require dilution due to: (check one if applicable)		X		/	
matrix interference					
high target analyte concentration					
If dilutions were performed, was it within Hold Time?			X		
If dilutions were performed, are the undiluted runs in this submission?			X		
If not, please indicate where found:					
<b>Sample Results - Misc. information</b>					
Are Batch sheets, Preparation Logs (if applicable) included?	X			/	
Are copies of run logs included, initialed and dated?	X			/	
Were manual calculations performed? reviewer must check calculations		X		/	
Were manual integrations performed, dated, and initialed?		X		/	
Client requirement sheets followed in data package?	X			/	
Reagents and Standards documented on prep/batch sheets?	X			/	
<b>Additional Comments:</b>					
<b>Analyst/Date:</b> DNT <i>DA 01-23-07</i>	<b>Reviewer/Date:</b> <i>DA 1/23/07</i>				



STL

STL St. Louis

CYANIDE DISTILLATION

Due Dates: <i>Hold</i> Earliest: 12/1 Latest: 12/1	Analyst/Run Date: <i>W 12-13-06</i> (1)
Method #/Name: CN- / 9012, 9012A	Sample Type: <u>SOIL</u> WATER
Batch #: 6338185	
Lot #s: F6K180250	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	BLK	1g	50 ml	MA	MA	
2	LCS		50 ml			
3	HCS		50 ml			
4	JJ28J		50 ml			
5	JJ28J-D		50 ml			
6	JJ28J-S		50 ml			
7	JJ28P		50 ml			
8	JJ28V		50 ml			
9	JJ28W		50 ml			
10	JJ28X		50 ml			
11	JJ280		50 ml			
12	JJ282		50 ml			
13	JJ288		50 ml			
14	JJ29D		50 ml			
15	JJ29E		50 ml			
16						
17			50 ml			
18			50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	<i>X</i>	
	Client Requirement Sheets	<i>X</i>	
	Quantums Batch Sheets	<i>X</i>	
	Distillation Prep STDlog	<i>X</i>	

Analyst/Date: <i>W 12-13-06</i>
Reviewer/Date:



RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/12/06  
Time: 17:24:24

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6338185	INITIALS:	DATA ENTRY:
PREP DATE:	12/14/06	PREP _____	INITIALS _____
COMP DATE:	12/14/06	ANAL _____	DATE _____
USER:	THOMASD		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJ28J-1-C0	F-6K180200-004	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28J-1-E5	F-6K180200-004-D	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28J-1-E4	F-6K180200-004-S	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28P-1-CA	F-6K180200-005	XX A 06 QP 01	Y-D	_____	SA8-10
JJ28V-1-CH	F-6K180200-006	XX A 06 QP 01	Y-D	_____	SA8-20
JJ28W-1-CL	F-6K180200-007	XX A 06 QP 01	Y-D	_____	SA8-30
JJ28X-1-CP	F-6K180200-008	XX A 06 QP 01	Y-D	_____	SA8-37
JJ280-1-CW	F-6K180200-009	XX A 06 QP 01	Y-D	_____	SA13-0.5
JJ282-1-C2	F-6K180200-010	XX A 06 QP 01	Y-D	_____	SA13-0.5D
JJ288-1-CD	F-6K180200-011	XX A 06 QP 01	Y-D	_____	SA13-10
JJ29D-1-CH	F-6K180200-012	XX A 06 QP 01	Y-D	_____	SA13-20
JJ29E-1-CJ	F-6K180200-013	XX A 06 QP 01	Y-D	_____	SA13-30
JJ29F-1-CK	F-6K180200-014	XX A 06 QP 01	Y-D	_____	SA13-40
JJ29F-1-FK	F-6K180200-014-D	XX A 06 QP 01	Y-D	_____	SA13-40
JJ29F-1-FJ	F-6K180200-014-S	XX A 06 QP 01	Y-D	_____	SA13-40
JKP79-1-AA	F-6L040000-185-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKP79-1-AC	F-6L040000-185-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

PDE115  
Date 1/22/2007  
Time 18:11:07

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6338185

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output I/DL	Dil.
JJ28U-1-CU	ND	mg/kg	0.5	12/13-12/20/06	95.21	N		ND	0.53	1.00
JJ28P-1-CA	ND	mg/kg	0.5	12/13-12/20/06	93.72	N		ND	0.53	1.00
JJ28V-1-CH	ND	mg/kg	0.5	12/13-12/20/06	95.33	N		ND	0.52	1.00
JJ28W-1-CL	ND	mg/kg	0.5	12/13-12/20/06	91.57	N		ND	0.55	1.00
JJ28X-1-CP	ND	mg/kg	0.5	12/13-12/20/06	73.44	N		ND	0.68	1.00
JJ280-1-CW	ND	mg/kg	0.5	12/13-12/20/06	85.91	N		ND	0.58	1.00
JJ282-1-C2	ND	mg/kg	0.5	12/13-12/20/06	90.37	N		ND	0.55	1.00
JJ288-1-CD	ND	mg/kg	0.5	12/13-12/20/06	95.68	N		ND	0.52	1.00
JJ29D-1-CH	ND	mg/kg	0.5	12/13-12/20/06	93.91	N		ND	0.53	1.00
JJ29E-1-CJ	ND	mg/kg	0.5	12/13-12/20/06	94.89	N		ND	0.53	1.00
JJ29F-1-CK	ND	mg/kg	0.5	12/13-12/20/06	79.29	N		ND	0.63	1.00
JKP79-1-AA	ND	mg/kg	0.5	12/13-12/20/06	.00			ND	0.50	1.00

Notes:

Check Standard	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
Work Order JKP79-1-AD		20.0	21.133	105.66	01/12-01/15/07	(90-110)	1.00
Work Order JKP79-1-AC		5.0	2.65 N	53.00	12/13-12/20/06	(90-110)	1.00

Notes:  
N Spiked analyte recovery is outside stated control limits.

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Dup	Pct. Recovered	Prep. - Anal.	Dil.
JJ28U-1-E4	ND	5	5	5.2165	5.2515	104.33	12/13-12/20/06	1.00
JJ29F-1-FJ	ND	5	5	3.7005 N	4.806	74.01	12/13-12/20/06	1.00

Notes:  
N Results and reporting limits have been adjusted for dry weight.  
N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0



STL

STL St. Louis

CYANIDE DISTILLATION

<b>Due Dates:</b> Earliest: <u>12/1</u> Latest: <u>12/4</u> <small>Hold</small>	<b>Analyst/Run Date:</b> <u>DA 12-13-06</u> (2)
<b>Method #/Name:</b> CN- / 9012, 9012A	<b>Sample Type:</b> <u>SOIL</u> WATER
<b>Batch #:</b> <u>6338185, 6338198</u> <span style="float: right;">148-15</span>	
<b>Lot #s:</b> <u>FK180200, FK210224</u>	














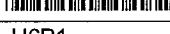
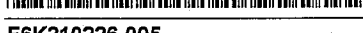
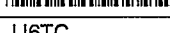
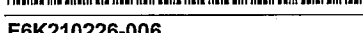
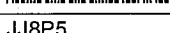
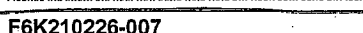


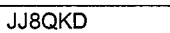
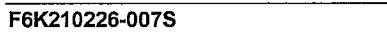
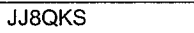
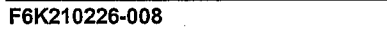




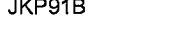




SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g—soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJ29F	1g	50 ml	NA	NA	
2	JJ29F-D		50 ml			
3	JJ29F-S		50 ml			
4	BLK		50 ml			
5	LCS		50 ml			
6	HCS		50 ml			
7	JJ6MX		50 ml			
8	JJ6MX-D		50 ml			
9	JJ6MX-S		50 ml			
10	JJ6Q4		50 ml			
11	JJ6Q4-D		50 ml			
12	JJ6Q4-S		50 ml			
13	JJ6RJ		50 ml			
14	JJ6RI		50 ml			
15	JJ6TC		50 ml			
16						
17	JJ8P5		50 ml			
18			50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	X	
	Client Requirement Sheets	X	
	Quantums Batch Sheets	X	
	Distillation Prep STDlog	X	

<b>Analyst/Date:</b> <u>DA 12-13-06</u>
<b>Reviewer/Date:</b>

<b>SEVERN TRENT</b>	<b>STL</b>	Barcode Report for Batch #: <b>6338198</b>	STL St. Louis 13715 Rider Trail North Earth City, MO 63045
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15

<u>Lot Number</u>	<u>WorkOrder No</u>
F6K210226-001 	JJ6MX 
F6K210226-001D 	JJ6MXD 
F6K210226-001S 	JJ6MXS 
F6K210226-002 	JJ6Q4 
F6K210226-002D 	JJ6Q4D 
F6K210226-002S 	JJ6Q4S 
F6K210226-003 	JJ6RJ 
F6K210226-004 	JJ6R1 
F6K210226-005 	JJ6TC 
F6K210226-006 	JJ8P5 
F6K210226-007 	JJ8QK 
F6K210226-007D 	JJ8QKD 
F6K210226-007S 	JJ8QKS 
F6K210226-008 	JJ8V6 
F6K210226-009 	JJ8WC 
F6L040000-198B 	JKP91B 
F6L040000-198C 	JKP91C 

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/12/06  
Time: 17:25:07

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6338198	INITIALS:	DATA ENTRY:
PREP DATE:	12/14/06	PREP _____	INITIALS _____
COMP DATE:	12/14/06	ANAL _____	DATE _____
USER:	THOMASD		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJ6MX-1-C0	F-6K210226-001	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6MX-1-E5	F-6K210226-001-D	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6MX-1-E4	F-6K210226-001-S	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6Q4-1-CA	F-6K210226-002	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6Q4-1-FJ	F-6K210226-002-D	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6Q4-1-FH	F-6K210226-002-S	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6RJ-1-CH	F-6K210226-003	XX A 06 QP 01	Y-D	_____	SA7-10D
JJ6R1-1-CL	F-6K210226-004	XX A 06 QP 01	Y-D	_____	SA7-20
JJ6TC-1-CP	F-6K210226-005	XX A 06 QP 01	Y-D	_____	SA7-30
JJ8P5-1-CT	F-6K210226-006	XX A 06 QP 01	Y-D	_____	SA7-34
JJ8QK-1-CA	F-6K210226-007	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8QK-1-FT	F-6K210226-007-D	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8QK-1-FR	F-6K210226-007-S	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8V6-1-CH	F-6K210226-008	XX A 06 QP 01	Y-D	_____	SA26-0.5D
JJ8WC-1-CP	F-6K210226-009	XX A 06 QP 01	Y-D	_____	SA26-10
JKP91-1-AA	F-6L040000-198-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKP91-1-AC	F-6L040000-198-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

Date 1/22/2007  
Time 18:11:27

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6338198

PDE115

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JJ6WX-1-CU	ND	mg/kg	0.5	12/13-12/20/06	94.69	N		ND	0.53	1.00
JJ6Q4-1-CA	ND	mg/kg	0.5	12/13-12/20/06	94.35	N		ND	0.53	1.00
JJ6RJ-1-CH	ND	mg/kg	0.5	12/13-12/20/06	92.92	N		ND	0.54	1.00
JJ6R1-1-CL	ND	mg/kg	0.5	12/13-12/20/06	92.37	N		ND	0.54	1.00
JJ6TC-1-CP	ND	mg/kg	0.5	12/13-12/20/06	93.72	N		ND	0.53	1.00
JJ8P5-1-CT	ND	mg/kg	0.5	12/13-12/20/06	76.66	N		ND	0.65	1.00
JJ8QK-1-CA	ND	mg/kg	0.5	12/13-12/20/06	92.95	N		ND	0.54	1.00
JJ8V6-1-CH	ND	mg/kg	0.5	12/13-12/20/06	91.26	N		ND	0.55	1.00
JJ8WC-1-CP	ND	mg/kg	0.5	12/13-12/20/06	89.12	N		ND	0.56	1.00
JKP91-1-AA	ND	mg/kg	0.5	12/13-12/20/06	.00			ND	0.50	1.00

Notes:

Check Standard	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
Work Order JKP91-1-AD		20.0	20.6955	103.47	01/12-01/15/07	(90-110)	1.00
Work Order JKP91-1-AC		5.0	4.3	86.00	12/13-12/20/06	(90-110)	1.00

Notes:

N Spiked analyte recovery is outside stated control limits.

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	SPIKE	Pct. Recovered	DUP	RPD	Prep. - Anal.	Dil.
JJ6WX-1-E4		ND	5	4.8605		97.721	76.02	.00	.00	12/13-12/20/06	1.00
JJ6Q4-1-FH		ND	5	3.801	3.5105	76.02	70.21	7.94	7.94	12/13-12/20/06	1.00
JJ8QK-1-FR		ND	5	3.299	5.242	65.98	104.84	45.49	45.49	12/13-12/20/06	1.00

Notes:

N Results and reporting limits have been adjusted for dry weight.  
N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	PRODUCTION TOTALS	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	0	.0



STL

STL St. Louis

CYANIDE DISTILLATION

Due Dates: <b>HOLD</b> Earliest: 12/4 Latest: 12/18	Analyst/Run Date: <u>DA 12-13-06</u> (3)
Method #/Name: CN- / 9012, 9012A	Sample Type: <u>SOIL</u> <u>WATER</u>
Batch #: 6338198, 6346474	
Lot #s: F6L210226, F6L070205	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJ80K	1g	50 ml	NA	NA	
2	JJ80K-D		50 ml			
3	JJ80K-S		50 ml			
4	JJ8V6		50 ml			
5	JJ8WC		50 ml			
6	B/K	50ml	50 ml			
7	LCS		50 ml			
8	HCS		50 ml			
9	JKPNX		50 ml			
10	JKPN2		50 ml			
11	JKPN5		50 ml			
12	JKPN5-D		50 ml			
13	JKPN5-S		50 ml			
14	JKR62		50 ml			
15	JKR70		50 ml			
16						
17			50 ml			
18			50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	X	
	Client Requirement Sheets	X	
	Quantums Batch Sheets	X	
	Distillation Prep STDlog	X	

Analyst/Date: <u>DA 12-13-06</u>
Reviewer/Date:



RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/10/07  
Time: 14:41:24

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6346474	INITIALS:		DATA ENTRY:	
PREP DATE:	12/22/06	PREP	_____	INITIALS	_____
COMP DATE:	12/22/06	ANAL	_____	DATE	_____
USER:	HOUGHGHC				

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JKPNX-1-CT	F-6L020205-004	XX I 06 QP 01	Y-D	_____	EB120106
JKPN2-1-CT	F-6L020205-005	XX I 06 QP 01	Y-D	_____	M13
JKPN5-1-CT	F-6L020205-006	XX I 06 QP 01	Y-D	_____	IAR
JKPN5-1-GG	F-6L020205-006-D	XX I 06 QP 01	Y-D	_____	IAR
JKPN5-1-GF	F-6L020205-006-S	XX I 06 QP 01	Y-D	_____	IAR
JKR62-1-CK	F-6L050180-001	XX I 06 QP 01	Y-D	_____	M76
JKR7D-1-CN	F-6L050180-002	XX I 06 QP 01	Y-D	_____	M100
JLA92-1-AA	F-6L120000-474-B	XX I 06 QP 01		_____	INTRA-LAB BLANK
JLA92-1-AD	F-6L120000-474-C	XX I 06 QP 01		_____	INTRA-LAB CHECK
JLA92-1-AC	F-6L120000-474-C	XX I 06 QP 01		_____	INTRA-LAB CHECK

J's created for 7012142  
from 10/29

Control Limits

(90-110)

(90-110)

(90-110)

(90-110)

PDE115  
Date 1/22/2007  
Time 18:11:46

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6346474

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output IDL	Dil.
JKPNX-1-CT	ND	ug/L	5	12/13-12/20/06	.00	N	R	ND	5.0	1.00
JKPN2-1-CT	ND	ug/L	5	12/13-12/20/06	.00	N	R	ND	5.0	1.00
JKPN5-1-CT	ND	ug/L	5	12/13-12/20/06	.00	N	R	ND	5.0	1.00
JKR62-1-CK	ND	ug/L	5	12/22-01/05/07	.00	N	R	ND	5.0	1.00
JKR7D-1-CN	ND	ug/L	5	12/22-01/05/07	.00	N	R	ND	5.0	1.00
JLA92-1-AA	ND	ug/L	5	12/13-12/20/06	.00	N	R	ND	5.0	1.00

Notes:

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JLA92-1-AD		400	378.14	94.53	12/22-01/05/07	(90-110)	1.00
JLA92-1-AC		100	88 N	88.00	12/13-12/20/06	(90-110)	1.00

Notes:

N Spiked analyte recovery is outside stated control limits.

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	SPIKE	Pct.	Recovered DUP	RPD	Prep. - Anal.	Dil.
JKPN5-1-GF		ND	100	40.59 N	ND	40.59	40.59	.00	200.00	12/13-12/20/06	1.00

Notes:

N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0



STL

STL St. Louis

CYANIDE DISTILLATION

Due Dates: <sup>HOLD</sup> Earliest: 4/29 Latest:	Analyst/Run Date: <sup>14</sup> 12-13-06
Method #/Name: CN- / 9012, 9012A	Sample Type: <u>SOIL</u> WATER
Batch #: 6333274	
Lot #: 66K160199	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g—soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	BK	1g	50 ml	NA	NA	
2	LCS		50 ml			
3	HCS		50 ml			
4	JJ74R		50 ml			
5	JJ744		50 ml			
6	JJ747		50 ml			
7	JJ75L		50 ml			
8	JJ75K		50 ml			
9	JJ75Q		50 ml			
10	JJ755		50 ml			
11	JJ758		50 ml			
12	JJ764		50 ml			
13	JJ77F		50 ml			
14	JJ77Q		50 ml			
15	JJ78N		50 ml			
16						
17	JJ787		50 ml			
18	JJ79D		50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	X	
	Client Requirement Sheets	X	
	Quantums Batch Sheets	X	
	Distillation Prep STDlog	X	

Analyst/Date: <sup>14</sup> 12-13-06
Reviewer/Date:



**STL**

Barcode Report for Batch #: **6333274**

STL St. Louis  
13715 Rider Trail North  
Earth City, MO 63045

10

<u>Lot Number</u>	<u>WorkOrder No</u>
F6K160199-002	JJT4R
F6K160199-003	JJT44
F6K160199-004	JJT47
F6K160199-005	JJT5C
F6K160199-006	JJT5K
F6K160199-007	JJT5Q
F6K160199-008	JJT55
F6K160199-009	JJT58
F6K160199-010	JJT66
F6K160199-011	JJT7F
F6K160199-012	JJT7Q
F6K160199-013	JJT8N
F6K160199-014	JJT87
F6K160199-015	JJT9D
F6K170247-001	JJ0QP
F6K170247-001D	JJ0QPD
F6K170247-001S	JJ0QPS
F6K290000-274B	JKGRKB
F6K290000-274C	JKGRKC

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/12/06  
Time: 15:59:20

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6333274	INITIALS:	DATA ENTRY:
PREP DATE:	12/13/06	PREP _____	INITIALS _____
COMP DATE:	12/13/06	ANAL _____	DATE _____
USER:	THOMASD		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJT4R-1-CW	F-6K160199-002	XX A 06 QP 01	Y-D	_____	SA17-0.5
JJT44-1-C2	F-6K160199-003	XX A 06 QP 01	Y-D	_____	SA17-0.5D
JJT47-1-CD	F-6K160199-004	XX A 06 QP 01	Y-D	_____	SA17-10
JJT5C-1-CG	F-6K160199-005	XX A 06 QP 01	Y-D	_____	SA17-20
JJT5K-1-CH	F-6K160199-006	XX A 06 QP 01	Y-D	_____	SA17-25
JJT5Q-1-CJ	F-6K160199-007	XX A 06 QP 01	Y-D	_____	SA18-0.5
JJT55-1-CM	F-6K160199-008	XX A 06 QP 01	Y-D	_____	SA18-0.5D
JJT58-1-CQ	F-6K160199-009	XX A 06 QP 01	Y-D	_____	SA18-10
JJT66-1-CR	F-6K160199-010	XX A 06 QP 01	Y-D	_____	SA18-20
JJT7F-1-CT	F-6K160199-011	XX A 06 QP 01	Y-D	_____	SA18-30
JJT7Q-1-C2	F-6K160199-012	XX A 06 QP 01	Y-D	_____	SA21-0.5
JJT8N-1-CD	F-6K160199-013	XX A 06 QP 01	Y-D	_____	SA21-10
JJT87-1-CJ	F-6K160199-014	XX A 06 QP 01	Y-D	_____	SA21-20
JJT9D-1-CK	F-6K160199-015	XX A 06 QP 01	Y-D	_____	SA21-20D
JJ0QP-1-C3	F-6K170247-001	XX A 06 QP 01	Y-D	_____	SA22-0.5
JJ0QP-1-E9	F-6K170247-001-D	XX A 06 QP 01	Y-D	_____	SA22-0.5
JJ0QP-1-E8	F-6K170247-001-S	XX A 06 QP 01	Y-D	_____	SA22-0.5
JKGRK-1-AA	F-6K290000-274-B	XX A 06 QP 01		_____	INTRA-LAB BLANK

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/12/06  
Time: 15:59:20

STL St. Louis

QC BATCH #: 6333274  
PREP DATE: 12/13/06  
COMP DATE: 12/13/06  
USER: THOMASD

INITIALS:  
PREP \_\_\_\_\_  
ANAL \_\_\_\_\_

DATA ENTRY:  
INITIALS \_\_\_\_\_  
DATE \_\_\_\_\_

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JKGRK-1-AC	F-6K290000-274-C	XX A 06 QP 01			INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

(90-110)

PDE115  
 Date 1/19/2007  
 Time 16:44:17

Severn Trent Laboratories, Inc.  
 Inorganics Batch Review  
 QC Batch 6333274

Method Code: Cyanide, Total  
 Analyst: Debbie Thomas

Work Order	Result	Units	IDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output IDL	Dil.
JJT4R-1-CW	ND	mg/kg	0.5	12/14-12/20/06	85.33	N		ND	0.59	1.00
JJT44-1-C2	ND	mg/kg	0.5	12/14-12/20/06	86.55	N		ND	0.58	1.00
JJT47-1-CD	ND	mg/kg	0.5	12/14-12/20/06	87.91	N		ND	0.57	1.00
JJT5C-1-CG	ND	mg/kg	0.5	12/14-12/20/06	94.25	N		ND	0.53	1.00
JJT5K-1-CH	ND	mg/kg	0.5	12/14-12/20/06	80.97	N		ND	0.62	1.00
JJT5Q-1-CJ	ND	mg/kg	0.5	12/14-12/20/06	91.71	N		ND	0.55	1.00
JJT55-1-CM	ND	mg/kg	0.5	12/14-12/20/06	95.14	N		ND	0.53	1.00
JJT58-1-CQ	ND	mg/kg	0.5	12/14-12/20/06	92.16	N		ND	0.54	1.00
JJT66-1-CR	ND	mg/kg	0.5	12/14-12/20/06	93.04	N		ND	0.54	1.00
JJT7F-1-CT	ND	mg/kg	0.5	12/14-12/20/06	90.88	N		ND	0.55	1.00
JJT7Q-1-C2	ND	mg/kg	0.5	12/14-12/20/06	95.68	N		ND	0.52	1.00
JJT8N-1-CD	ND	mg/kg	0.5	12/14-12/20/06	90.86	N		ND	0.55	1.00
JJT87-1-CJ	ND	mg/kg	0.5	12/14-12/20/06	90.46	N		ND	0.55	1.00
JJT9D-1-CK	ND	mg/kg	0.5	12/14-12/20/06	95.80	N		ND	0.52	1.00
JJ0QP-1-C3	ND	mg/kg	0.5	12/14-12/20/06	78.87	N		ND	0.63	1.00
JKGRK-1-AA	ND	mg/kg	0.5	12/14-12/20/06	.00			ND	0.50	1.00

Notes:

Check Standard	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JKGRK-1-AD		20.0	17.967	89.83	12/14-12/20/06	(90-110)	1.00
JKGRK-1-AC		5.0	3 N	60.00	12/14-12/20/06	(90-110)	1.00

Notes:  
 N Spiked analyte recovery is outside stated control limits.

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Pct. Recovered	SPIKE	DUP	RPD	Prep. - Anal.	Dil.
JJ0QP-1-E8		ND	5	5.06	101.20	79.80	23.64		12/14-12/20/06	1.00

Notes:

PDE115

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6333274

Date 1/19/2007  
Time 16:44:17

Method Code: Cyanide, Total  
Analyst: Debbie Thomas  
Notes:  
Results and reporting limits have been adjusted for dry weight.

TEST	TOTAL #	SAMPLE #	QC #	PRODUCTION TOTALS	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	0	0







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CYANIDE DISTILLATION

<b>Due Dates:</b> Earliest: <u>11/29</u> Latest: <u>11/30</u>	<b>Analyst/Run Date:</b> <u>WA 12-14-06</u> (2)
<b>Method #/Name:</b> CN- / 9012, 9012A	<b>Sample Type:</b> <u>SOIL</u> WATER
<b>Batch #:</b> <u>6333274, 6333327</u>	
<b>Lot #s:</b> <u>Flek160199, Flek180247</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJ0QP	1g	50 ml	NA	NA	
2	JJ0QP-D		50 ml			
3	JJ0QP-S		50 ml			
4	BK		50 ml			6333327 ↓
5	LCS		50 ml			
6	HCS		50 ml			
7	JJ0TF		50 ml			
8	JJ0TH		50 ml			
9	JJ0TN		50 ml			
10	JJ0TV		50 ml			
11	JJ0TV-D		50 ml			
12	JJ0TV-S		50 ml			
13	JJ0V5		50 ml			
14	JJ0W6		50 ml			
15	JJ0WP		50 ml			
16						
17	JJ0WA		50 ml			
18	JJ0W3		50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	X	
	Client Requirement Sheets	X	
	Quantums Batch Sheets	X	
	Distillation Prep STDlog	X	

<b>Analyst/Date:</b> <u>WA 12-14-06</u>
<b>Reviewer/Date:</b>



STL

STL St. Louis

**COPY**  
CYANIDE DISTILLATION

Due Dates: Earliest: <u>4/30</u> Latest: <u>12/15</u>	Analyst/Run Date: <u>12-14-06</u> (3)
Method #/Name: <u>CN- / 9012, 9012A</u>	Sample Type: <u>SOIL</u> <u>WATER</u>
Batch #: <u>63333274, 6346388 (1st) 6333327</u>	
Lot #s: <u>F6K170247, F6L010268</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJ0XF	1g	50 ml	NA	NA	
2	JJ0X2	↓	50 ml	↓	↓	
3	JJ0X5		50 ml			
4	JJ0X5-D		50 ml			
5	JJ0X5-S		50 ml			
6	BIK		50 ml			Y
7	LCS	Used for different water packets 12/2007	50 ml	↓	↓	
8	HCS		50 ml			
9	JKM64		50 ml			
10	JKM64-S		50 ml			
11	JKM64-X		50 ml			
12	JKMP1		50 ml			
13	JKMP1-S		50 ml			
14	JKMP1-X		50 ml			
15			50 ml			
16			50 ml			
17		50 ml				
18		50 ml				
19		50 ml				
20		50 ml				

ONLY

Sent To TRAACS	YES	NO
Distilled Cyanide Samples	X	
Client Requirement Sheets	X	
Quantums Batch Sheets	X	
Distillation Prep STDlog	X	

Analyst/Date: 12-14-06  
 Reviewer/Date:

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/19/07  
Time: 16:43:52

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6333327	INITIALS:	DATA ENTRY:
PREP DATE:	12/14/06	PREP _____	INITIALS _____
COMP DATE:	1/11/07	ANAL _____	DATE _____
USER:	HOUGHGHC		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJT9F-1-CL	F-6K160199-016	XX A 06 QP 01	Y-D	_____	SA21-30
JJ0TH-1-CE	F-6K170247-002	XX A 06 QP 01	Y-D	_____	SA22-10
JJ0TN-1-CK	F-6K170247-003	XX A 06 QP 01	Y-D	_____	SA22-20
JJ0TV-1-CE	F-6K170247-004	XX A 06 QP 01	Y-D	_____	SA20-0.5
JJ0TV-1-FN	F-6K170247-004-D	XX A 06 QP 01	Y-D	_____	SA20-0.5
JJ0TV-1-FM	F-6K170247-004-S	XX A 06 QP 01	Y-D	_____	SA20-0.5
JJ0V5-1-CK	F-6K170247-005	XX A 06 QP 01	Y-D	_____	SA20-0.5D
JJ0WG-1-CN	F-6K170247-006	XX A 06 QP 01	Y-D	_____	SA20-10
JJ0WP-1-CP	F-6K170247-007	XX A 06 QP 01	Y-D	_____	SA20-20
JJ0WQ-1-CQ	F-6K170247-008	XX A 06 QP 01	Y-D	_____	SA20-25
JJ0W3-1-CK	F-6K170247-009	XX A 06 QP 01	Y-D	_____	SA19-0.5
JJ0XF-1-CN	F-6K170247-010	XX A 06 QP 01	Y-D	_____	SA19-10
JJ0X2-1-CP	F-6K170247-011	XX A 06 QP 01	Y-D	_____	SA19-20
JJ0X5-1-CQ	F-6K170247-012	XX A 06 QP 01	Y-D	_____	SA19-25
JJ0X5-1-FW	F-6K170247-012-D	XX A 06 QP 01	Y-D	_____	SA19-25
JJ0X5-1-FV	F-6K170247-012-S	XX A 06 QP 01	Y-D	_____	SA19-25
JKG3J-1-AA	F-6K290000-327-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKG3J-1-AD	F-6K290000-327-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/19/07  
Time: 16:43:52

STL St. Louis

QC BATCH #: 6333327  
PREP DATE: 12/14/06  
COMP DATE: 1/11/07  
USER: HOUGHGHC

INITIALS:                   DATA ENTRY:  
PREP \_\_\_\_\_           INITIALS \_\_\_\_\_  
ANAL \_\_\_\_\_           DATE \_\_\_\_\_

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JKG3J-1-AC	F-6K290000-327-C	XX A 06 QP 01			INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)





Report Date: 1/12/07  
 Analysis Date: 12/20/06  
 Data File: CN1220B  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.997629  
 Corr: 0.998814  
 Std. Dev.: 9.435125

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
1	P			509.48		15:34:31
2	W			2.63	I	15:35:47
3	S1			0.00	sI	15:37:03
4	S2			5.04	s	15:38:19
5	S3			19.71	s	15:39:33
6	S4			107.07	s	15:40:47
7	S5			240.63	s	15:42:02
8	S6			305.87	s	15:43:17
9	S7			382.72	s	15:44:33
10	S8			512.34	s	15:45:48
11	ICV			192.25/200		15:47:03
12	ICB			1.77	I	15:48:18
13	BLK			0.02	I	15:49:33
14	LCS			53.22/100		15:50:49
15	HCS			317.49/400		15:52:04
16	JJ28J iCO			1.99	I	15:53:19
17	JJ28JD			89.57		15:54:34
18	JJ28JS			92.20		15:55:48
19	JJ28P			0.03	I	15:57:03
20	JJ28V			0.25	I	15:58:18
21	JJ28W			0.03	I	15:59:33
22	JJ28X			0.03	I	16:00:49
23	CCV			245.25/250		16:02:05
24	CCB			1.79	I	16:03:20
25	JJ280			0.03	I	16:04:35
26	JJ282			0.26	I	16:05:50
27	JJ288			0.04	I	16:07:05
28	JJ29D			0.04	I	16:08:20
29	JJ29E			0.04	I	16:09:35
30	JJ29F			1.36	I	16:10:50
31	JJ29FD			77.33		16:12:06
32	JJ29FS			93.53		16:13:21
33	BLK			6.83	I	16:14:36
34	LCS			85.87/100		16:15:51
35	CCV			261.47/250		16:17:06
36	CCB			6.62	I	16:18:21
37	HCS			278.11/400		16:19:36
38	JJ6MX iCO			8.15	I	16:20:51
39	JJ6MXD			104.05		16:22:07
40	JJ6MXS			87.85		16:23:22
41	JJ6Q4			4.00	I	16:24:37
42	JJ6Q4D			67.71		16:25:52
43	JJ6Q4S			70.34		16:27:07
44	JJ6RJ			3.56	I	16:28:22
45	JJ6R1			3.35	I	16:29:37



Report Date: 1/12/07  
 Analysis Date: 12/20/06  
 Data File: CN1220B  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.997629  
 Corr: 0.998814  
 Std. Dev.: 9.435125

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
46	JJ6TC			0.28	I	16:30:52
47	CCV			259.73/250		16:32:07
48	CCB			0.29	I	16:33:22
49	JJ8P5			3.35	I	16:34:37
50	JJ8QK			0.29	I	16:35:52
51	JJ8QKD			86.33		16:37:08
52	JJ8QKS			88.74		16:38:23
53	JJ8V6			0.07	I	16:39:38
54	JJ8WC			0.08	I	16:40:53
55	BLK			0.08	I	16:42:08
56	LCS	6346474		88.31/100		16:43:24
57	HCS			346.66/400		16:44:39
58	JKPNX1CT			2.71	I	16:45:54
59	CCV			239.82/250		16:47:09
60	CCB			1.62	I	16:48:24
61	JKPN2			0.00	-RI	16:49:40
62	JKPN5			3.37	I	16:50:56
63	JKPN5D			4.91		16:52:12
64	JKPN5S			40.59		16:53:25
65	JKR62			0.00	-RI	16:54:40
66	JKR7D			0.00	-RI	16:55:55
67	BLK			0.09	I	16:57:10
68	LCS	6332274		60.09/100		16:58:25
69	HCS			30.75/400		16:59:41
70	JJT4R1CW			0.10	I	17:00:56
71	CCV			257.36		17:02:11
72	CCB			1.41	I	17:03:26
73	JJT44			5.36		17:04:41
74	JJT47			5.80		17:05:58
75	JJT5C			0.11	I	17:07:12
76	JJT5K			0.11	I	17:08:27
77	JJT5Q			0.11	I	17:09:42
78	JJT55			1.86	I	17:10:57
79	JJT58			0.11	I	17:12:12
80	JJT66			0.11	I	17:13:27
81	JJT7F			0.11	I	17:14:42
82	JJT7Q			0.12	I	17:15:57
83	CCV			257.59		17:17:12
84	CCB			1.87	I	17:18:27
85	JJT8N			0.00	-RI	17:19:42
86	JJT87			0.00	-RI	17:20:57
87	JJT9D			0.00	-RI	17:22:12
88	JJOQP			2.53	I	17:23:27
89	JJOQPD			85.95		17:24:43
90	JJOQPS			110.04		17:25:58

Report Date: 1/12/07  
 Analysis Date: 12/20/06  
 Data File: CN1220B  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.997629  
 Corr: 0.998814  
 Std. Dev.: 9.435125

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
91	BLK			4.29		17:27:16
92	LCS			82.67/100		17:28:28
93	HCS			238.34/400		17:29:43
94	JJT9F			3.20	I	17:30:58
95	CCV			254.98/250		17:32:14
96	CCB			0.13	I	17:33:29
97	JJOTHICE			1.89	I	17:34:44
98	JJOTN			2.11	I	17:35:59
99	JJOTV			1.67	I	17:37:14
100	JJOTVD			93.19		17:38:30
101	JJOTVS			92.97		17:39:45
102	JJOV5			3.21	I	17:41:00
103	JJOWG			0.14	I	17:42:15
104	JJOWP			0.15	I	17:43:31
105	JJOWQ			0.59	I	17:44:47
106	JJOW3			0.00	-RI	17:46:03
107	CCV			244.93/250		17:47:19
108	CCB			0.15	I	17:48:33
109	JJOXF			3.00	I	17:49:47
110	JJOX2			141.15	M	17:51:18
111	JJOX5			306.67	M	17:52:11
112	JJOX5D			0.00	-RI	17:53:26
113	JJOX5S			0.00	-RI	17:54:41
114	BLK			0.00	-RI	17:55:56
115	LCS			0.00	-RI	17:57:11
116	HCS			0.00	-RI	17:58:26
117	JKM64			0.00	-RI	17:59:41
118	JKM64X			0.00	-RI	18:00:56
119	CCV			0.00	-RI	18:02:11
120	CCB			0.00	-RI	18:03:26
121	JKM64S			0.00	-RI	18:04:41
122	JKPM1			0.00	-RI	18:05:56
123	JKPM1X			0.00	-RI	18:07:11
124	JKPM1S			0.00	-RI	18:08:26
125	BLK			0.00	-RI	18:09:41
126	LCS			0.00	-RI	18:10:56
127	HCS			0.00	-RI	18:12:11
128	JKR7F 1CT			0.00	-RI	18:13:26
129	JKR7G			0.00	-RI	18:14:41
130	JKR7GD			0.00	-RI	18:15:56
131	CCV			0.00	-RI	18:17:11
132	CCB			0.00	-RI	18:18:26
133	JKR7GS			0.00	-RI	18:19:41
134	JKR7T			0.00	-RI	18:20:56
135	JKWQM			0.00	-RI	18:22:11

6333327

6346388

1AH 2AH  
 AL  
 AM  
 AN  
 AP

Not Run

6349287

12/15

Report Date: 1/12/07  
Analysis Date: 12/20/06  
Data File: CN1220B  
Method Name: CYANIDE  
Units: ug/L  
Description: Cyanide

R<sup>2</sup>: 0.997629  
Corr: 0.998814  
Std. Dev.: 9.435125

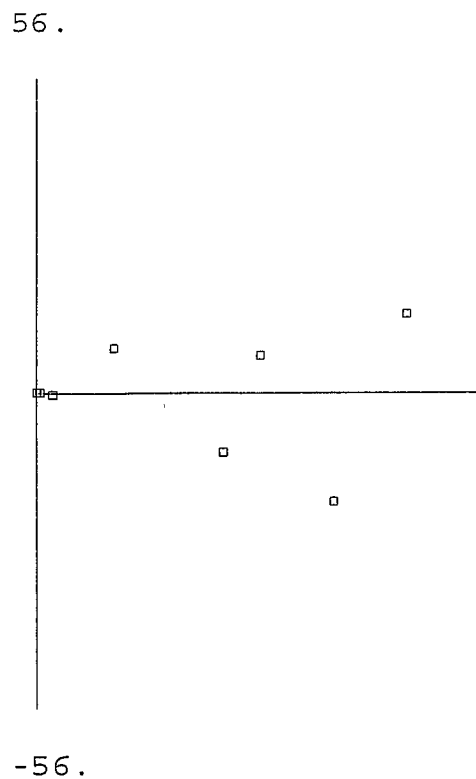
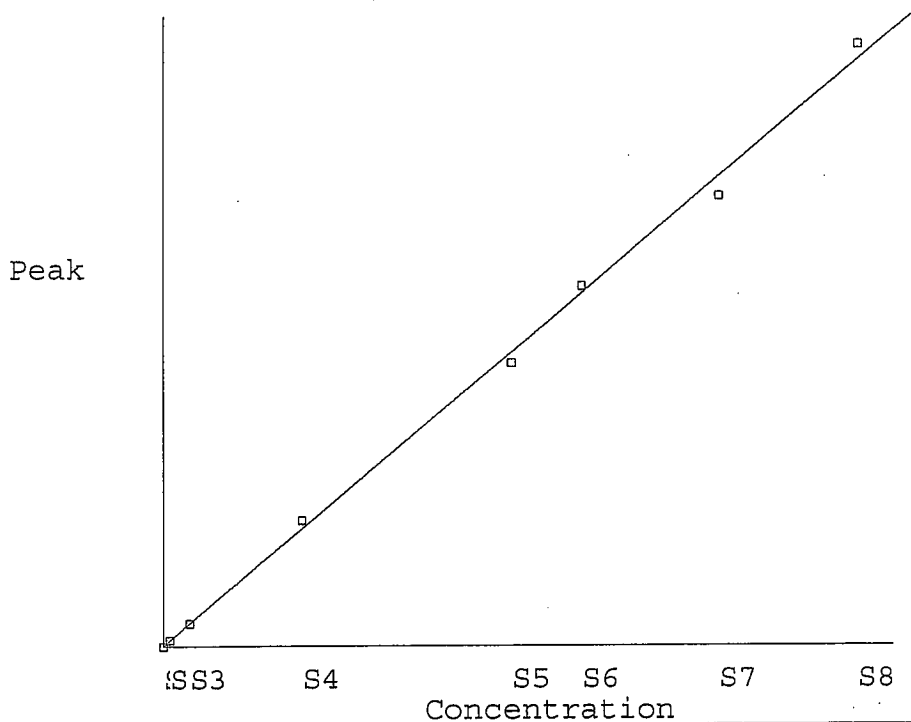
Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
136	JKWVW			0.00	-RI	18:23:26
137	JKWWK			0.00	-RI	18:24:41
138	JKWWQ			0.00	-RI	18:25:56
139	JK163			0.00	-RI	18:27:11
140	JK17W			0.00	-RI	18:28:26
141	JK173			0.00	-RI	18:29:41
142	JK176			0.00	-RI	18:30:56
143	CCV			0.00	-RI	18:32:11
144	CCB			0.00	-RI	18:33:26
145	JK177			0.00	-RI	18:34:41
146	JK178			0.00	-RI	18:35:56
147	JK4XW			0.00	-RI	18:37:11
148	JK40F			0.00	-RI	18:38:26
149	JK40P			0.00	-RI	18:39:41
150	JK40V			0.00	-RI	18:40:56
151	JKR78			0.00	-RI	18:42:11
152	CCV			0.00	-RI	18:43:26
153	CCB			0.00	-RI	18:44:41
154	HIGH			0.00	-RI	18:45:56
155	BLK			0.00	-RI	18:47:11

*not run*

Data File: CN1220B

Method File: CYANIDE

Sample Table File: CN1220B



S#	Peak	Value	Calc	Residual
S1	0.00	0.00	0.00	0.00
S2	0.56	5.00	5.04	0.04
S3	2.20	20.00	19.71	-0.29
S4	11.94	100.00	107.07	7.07
S5	26.84	250.00	240.63	-9.37
S6	34.12	300.00	305.87	5.87
S7	42.69	400.00	382.72	-17.28
S8	57.14	500.00	512.34	12.34

Coefficients:

Intercept : 0  
 Slope : 8.96565  
 Std Dev : 9.43513  
 Corr Coef : 0.998814 ✓  
 R<sup>2</sup> : 0.997629

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18:15

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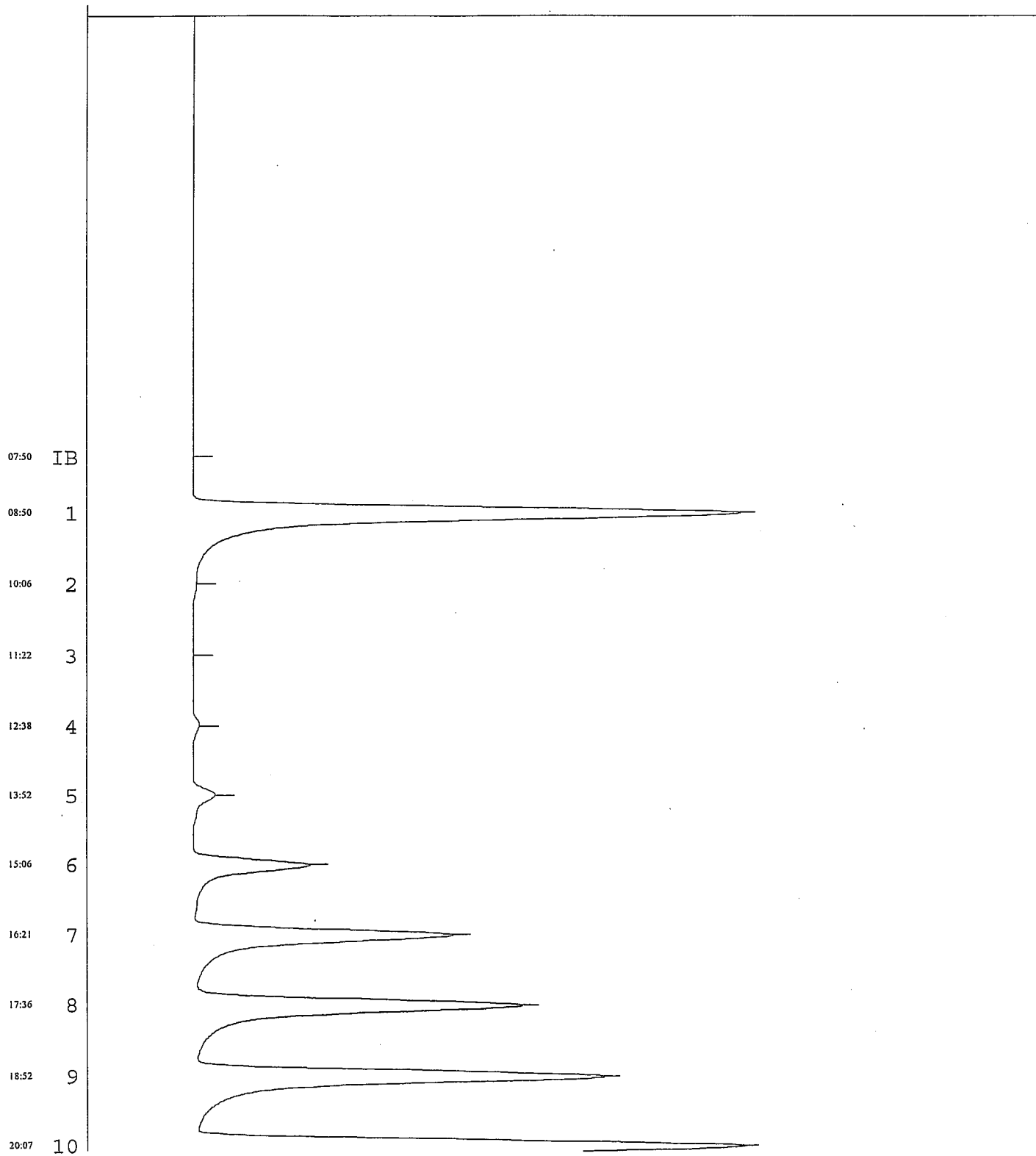
Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100



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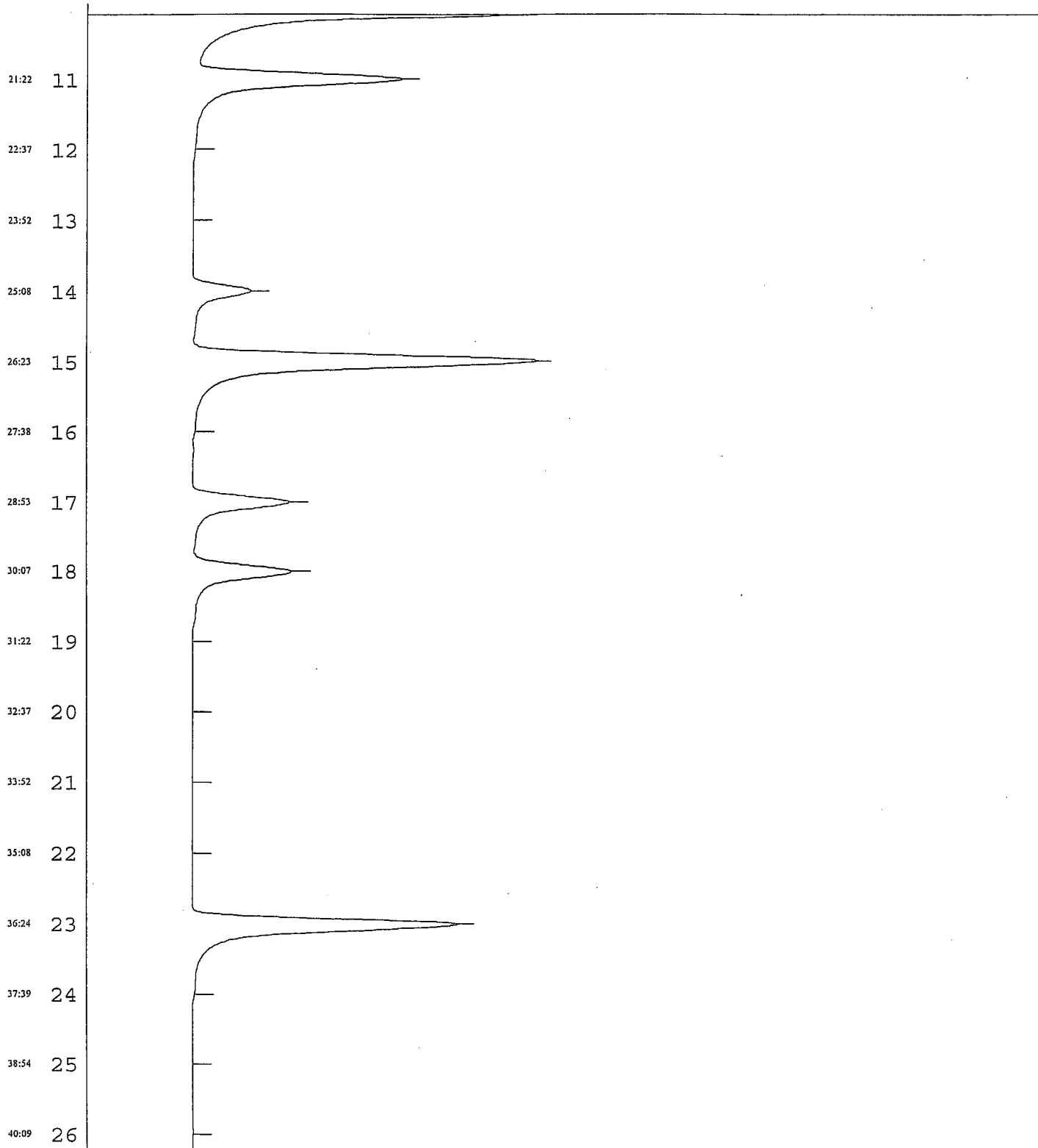
Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100



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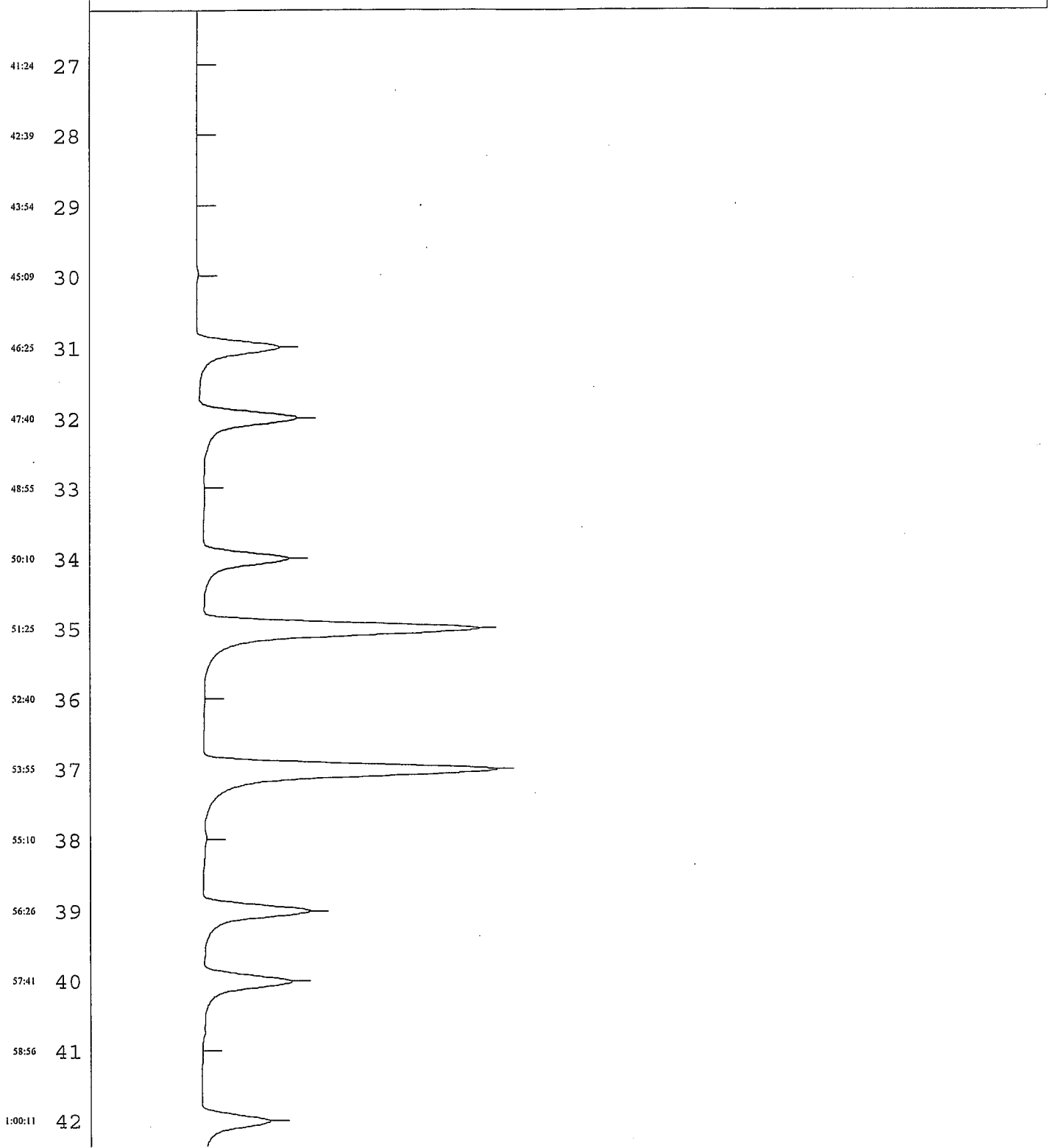
Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100



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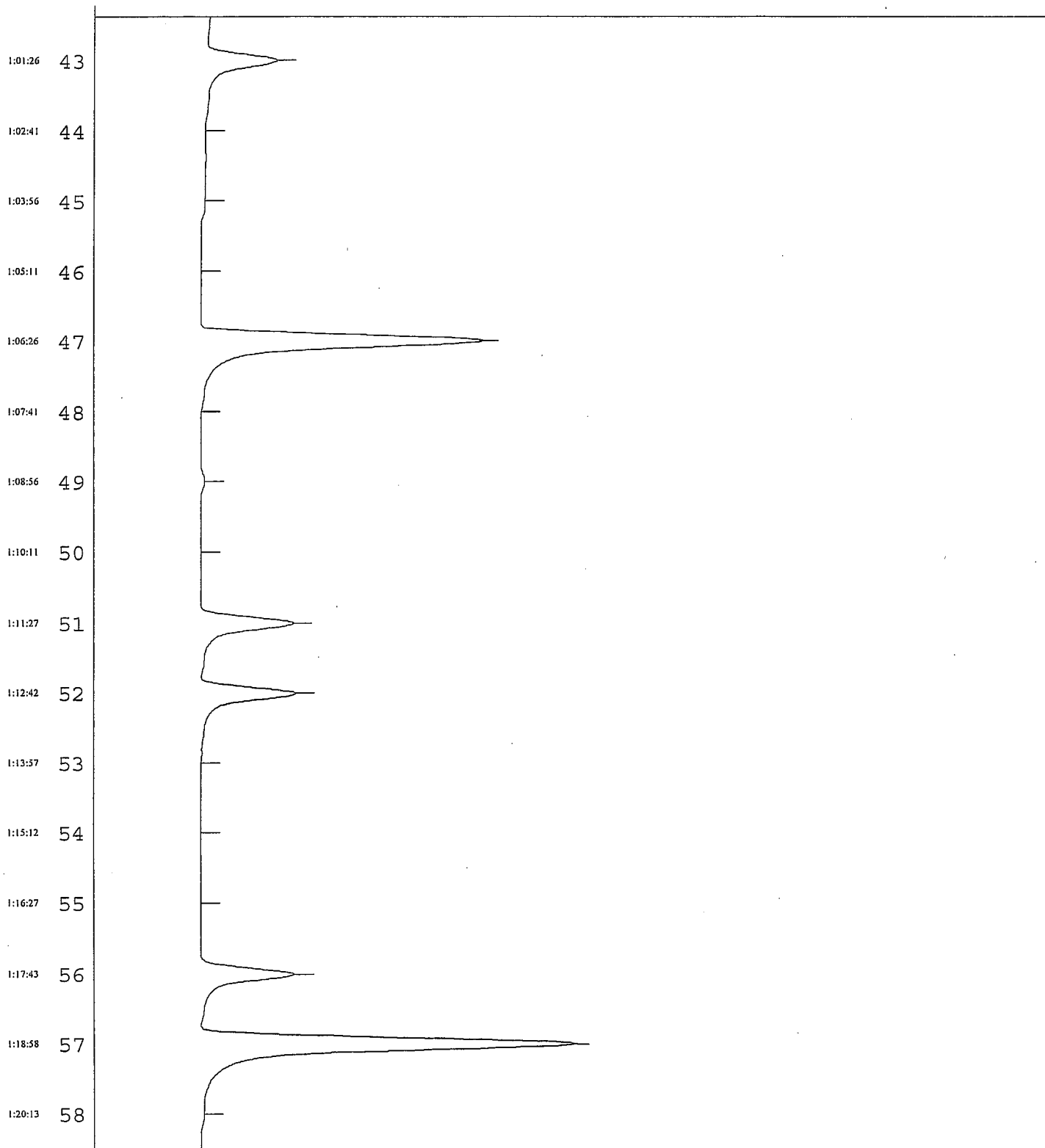
Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100





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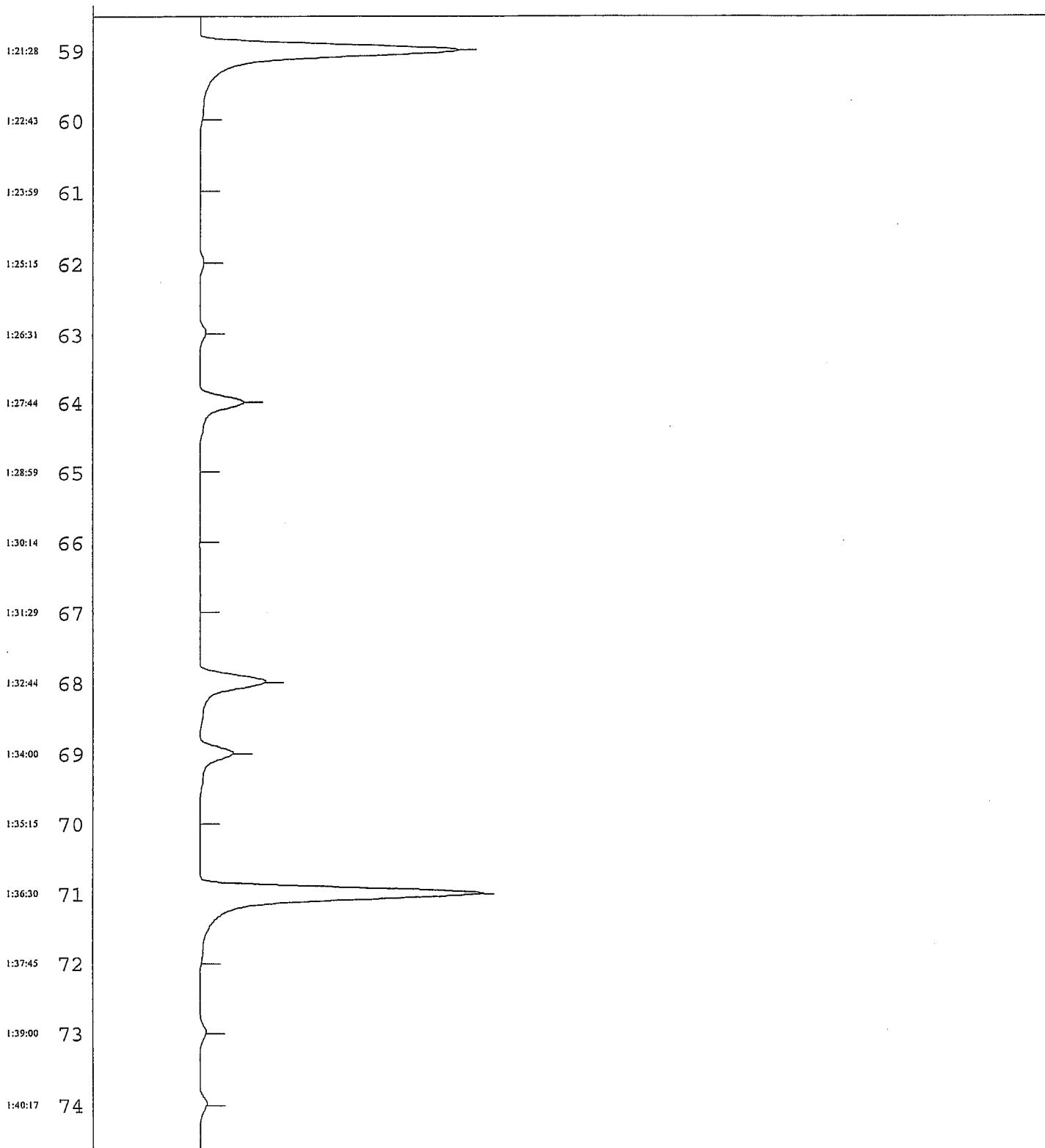
Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100



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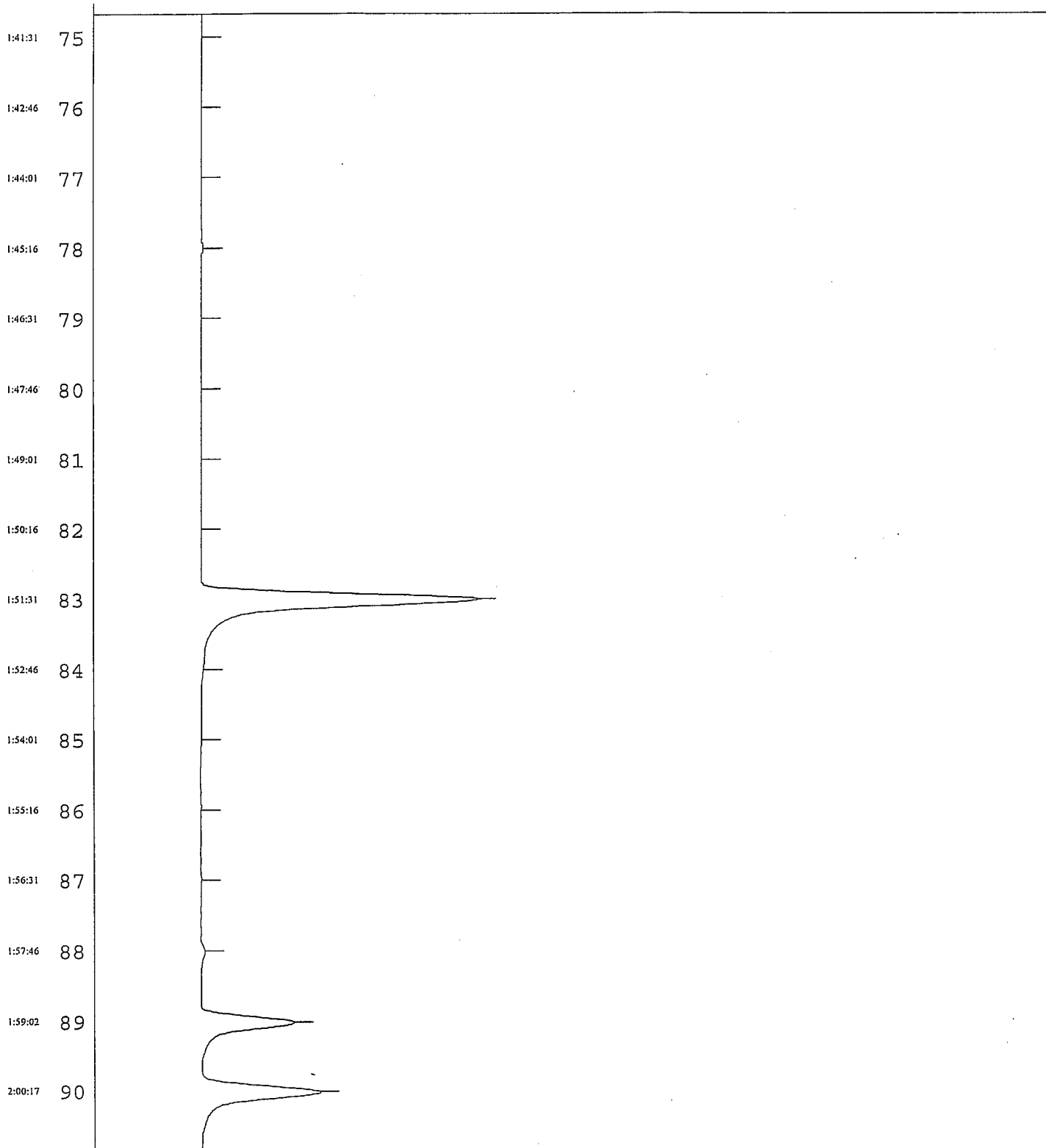
Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100

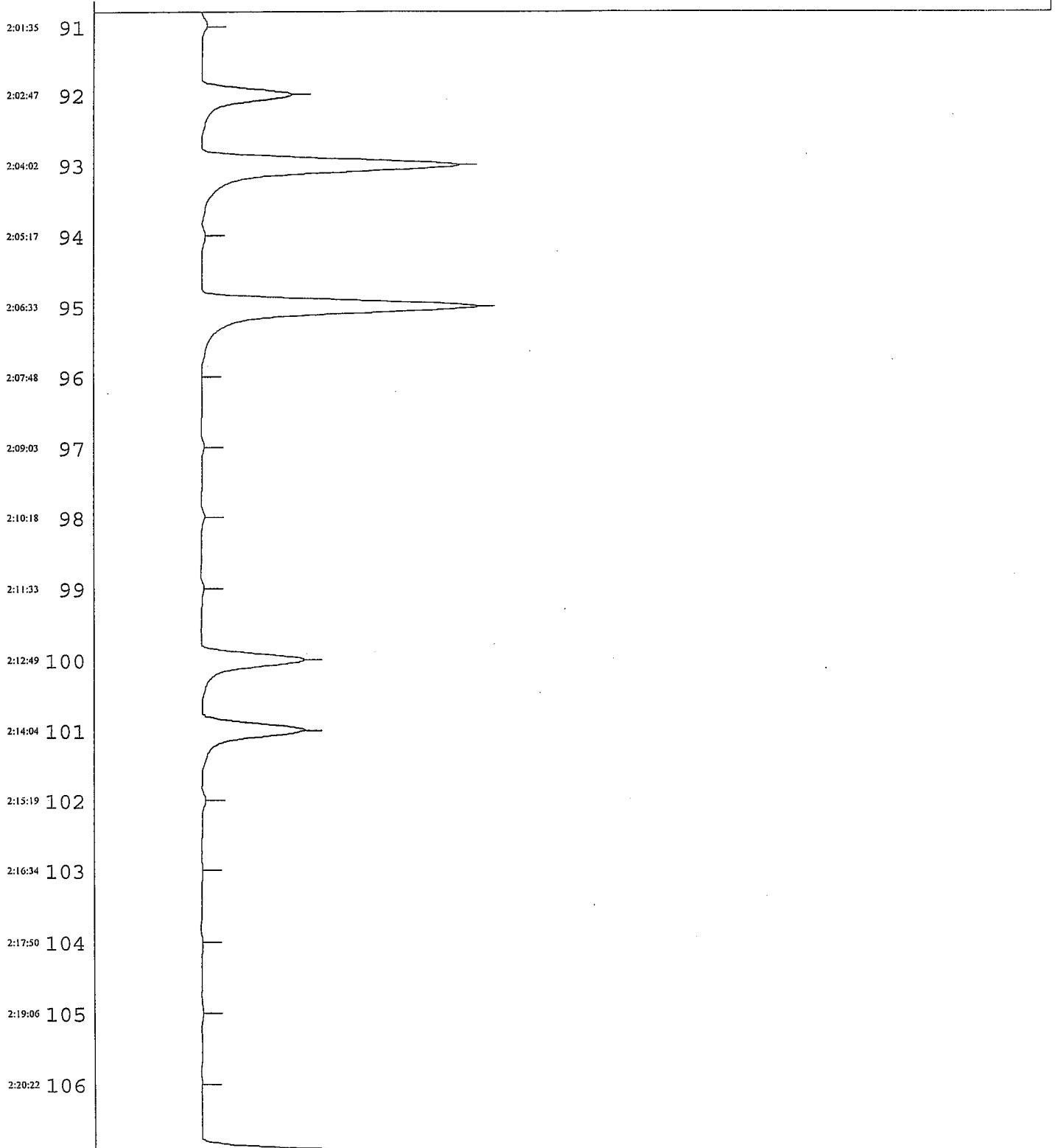


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Data: CN1220B  
Mthd: CYANIDE  
Samp: CN1220B  
0

100



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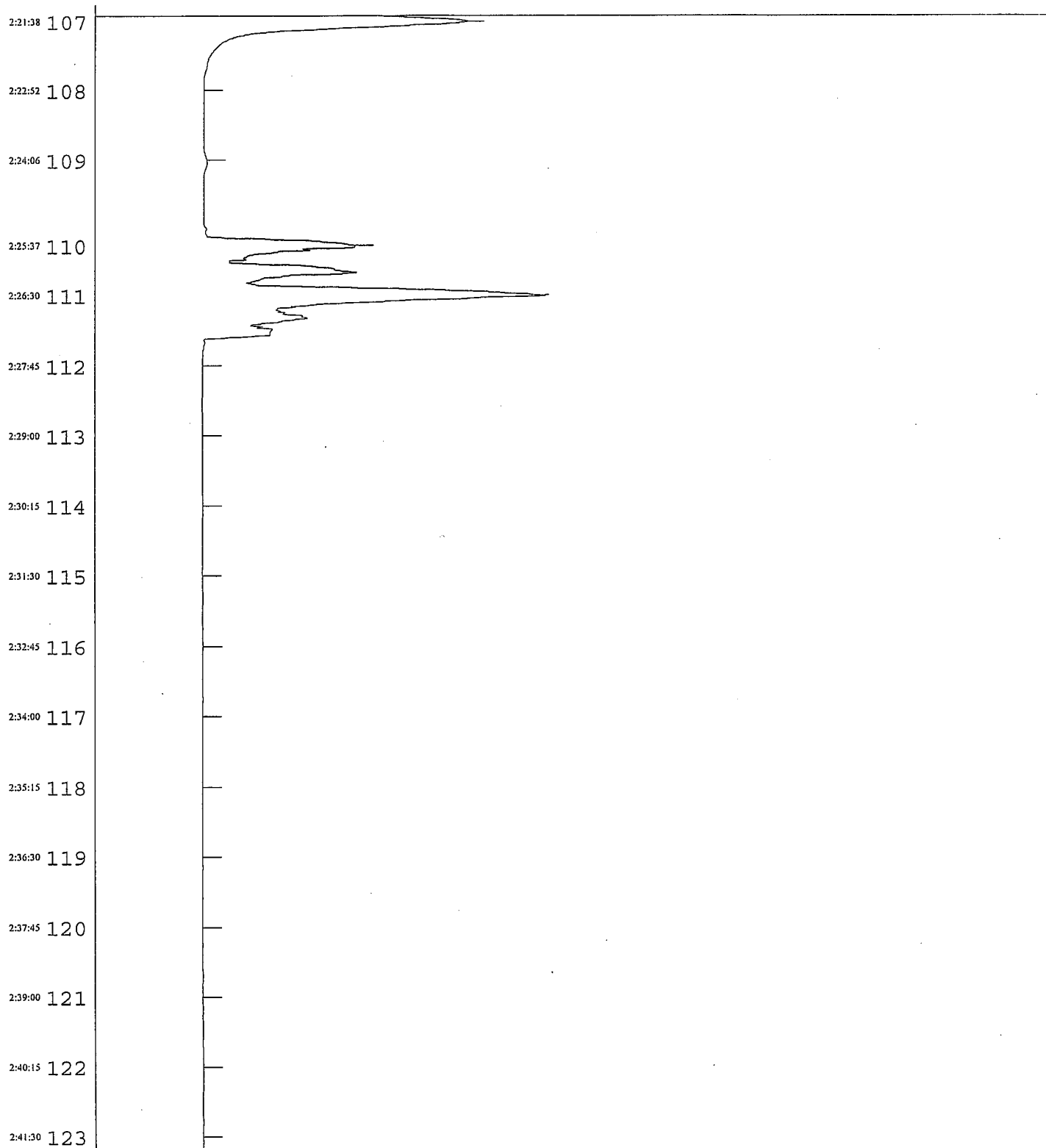
Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100



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Data: CN1220B

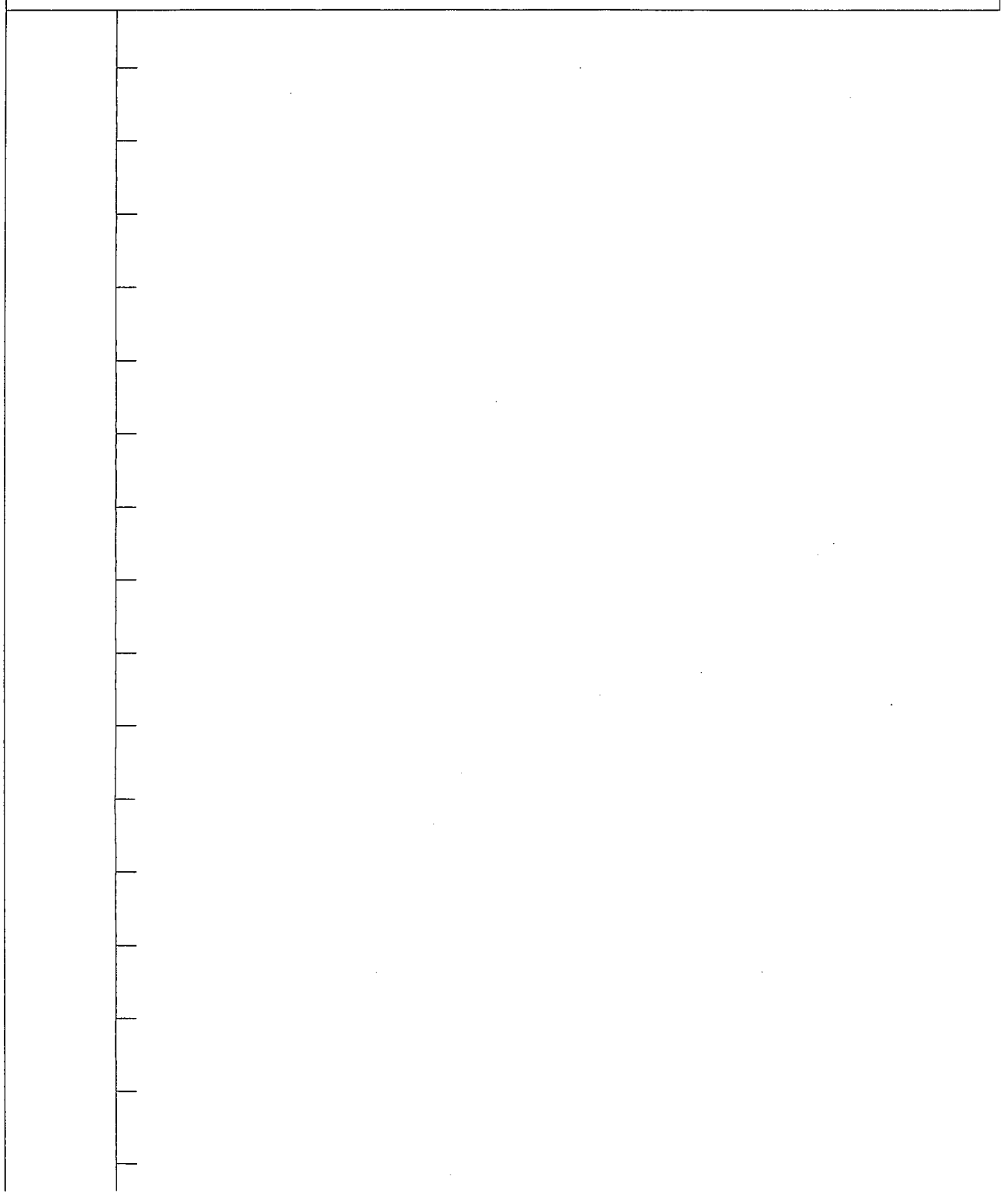
Mthd: CYANIDE

Samp: CN1220B

0

100

2:42:45 124  
2:44:00 125  
2:45:15 126  
2:46:30 127  
2:47:45 128  
2:49:00 129  
2:50:15 130  
2:51:30 131  
2:52:45 132  
2:54:00 133  
2:55:15 134  
2:56:30 135  
2:57:45 136  
2:59:00 137  
3:00:15 138  
3:01:30 139



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18:15

Page:10

Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100

3:02:45 140

3:04:00 141

3:05:15 142

3:06:30 143

3:07:45 144

3:09:00 145

3:10:15 146

3:11:30 147

3:12:45 148

3:14:00 149

3:15:15 150

3:16:30 151

3:17:45 152

3:19:00 153

3:20:15 154

3:21:30 155

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18:15

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Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100

3:22:30 FB

<b>Due Dates:</b> Earliest:	Latest:	<b>Run Date:</b> 12-20-07					
<b>Method Name/#:</b> CN 335.1, 335.2, 335.4, 9010B, 9012A, 4500							
<b>Batch #:</b> 6338185, 6338198, 6346474, 6333274, 6333327							
<b>Lot #s:</b> 6FK180200, F6K210226, F6L020205, F6K160199, F6K170247							
<b>NCM's:</b> NA							
<b>Review Item</b>				<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Review</b>
<b>Initial Calibration</b>							
Initial Calibration data in this package?				X			✓
If not, please specify initial calibration date:							
Initial Calibration meets method acceptance criteria:				X			✓
Corr. Coefficient = 0.995; Y-intercept < the absolute value of the RL							
Is the low level standard = the reporting limit?				X			✓
<b>Calibration Check (ICV)</b>							
ICV performed with initial calibration?				X			✓
ICV meets method acceptance criteria (max. 10% D)?				X			
<b>Continuing Calibration Verification (CCV)</b>							
CCV performed at the prescribed frequency?				X			✓
CCV meets method acceptance criteria (max. 10% D)?				X			
<b>Continuing Calibration Blank (CCB)</b>							
CCB performed after every CCV?				X			✓
CCB meets method acceptance criteria?				X			✓
Criteria: < the absolute value of the Reporting Limit (see client sheet for							
<b>Batch QC - Method Blanks</b>							
Is a Method Blank required for this analysis?				X			✓
Is the method blank below the Reporting Limit for targets of interest?				X			✓
<b>Batch QC - LCS</b>							
Is a LCS required for this analysis?				X			✓
Are the LCS (LCSD) recoveries within method acceptance?				X			✓
<b>Batch QC - MS/MSD</b>							
Is a MS/MSD or MS/Sample Duplicate required for this analysis?				X			✓
Are the MS(MSD) recoveries within method acceptance?				X			
<b>Batch QC - RPD</b>							
MS/MSD or Sample/Sample Duplicate RPD within acceptance criteria				X			
<b>Sample Results - Report</b>							
Are samples bracketed by acceptable CCV/CCB?				X			
Are results within the calibration range?				X			
Was analysis performed within Hold Time?				X			
Did samples require dilution due to: (check one if applicable)					X		
matrix interference							
high target analyte concentration							
If dilutions were performed, was it within Hold Time?						X	
If dilutions were performed, are the undiluted runs in this submission?						X	
If not, please indicate where found:							
<b>Sample Results - Misc. information</b>							
Are Batch sheets, Preparation Logs (if applicable) included?				X			✓
Are copies of run logs included, initialed and dated?				X			
Were manual calculations performed? reviewer must check calculations					X		
Were manual integrations performed, dated, and initialed?					X		
Client requirement sheets followed in data package?				X			
Reagents and Standards documented on prep/batch sheets?				X			✓
<b>Additional Comments:</b>							
<b>Analyst/Date:</b> DNT <i>(Signature)</i> 01-24-07				<b>Reviewer/Date:</b>			





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CYANIDE DISTILLATION

Due Dates: <small>Hold</small> Earliest: 12/1 Latest: 12/1	Analyst/Run Date: <u>DR 12-13-06</u> ①
Method #/Name: CN- / 9012, 9012A	Sample Type: <u>SOIL</u> WATER
Batch #: <u>6338185</u>	
Lot #s: <u>F6K180200</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g—soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	BLK	1g	50 ml	MA	MA	
2	LCS		50 ml			
3	HCS		50 ml			
4	JJ28J		50 ml			
5	JJ28J-D		50 ml			
6	JJ28J-S		50 ml			
7	JJ28P		50 ml			
8	JJ28V		50 ml			
9	JJ28W		50 ml			
10	JJ28X		50 ml			
11	JJ280		50 ml			
12	JJ282		50 ml			
13	JJ288		50 ml			
14	JJ29D		50 ml			
15	JJ29E		50 ml			
16						
17			50 ml			
18			50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS	YES	NO
Distilled Cyanide Samples	<u>X</u>	
Client Requirement Sheets	<u>X</u>	
Quantums Batch Sheets	<u>X</u>	
Distillation Prep STDlog	<u>X</u>	

Analyst/Date: DR 12-13-06

Reviewer/Date:



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CYANIDE DISTILLATION

**Due Dates:** Earliest: 12/1 Latest: 12/4 **Analyst/Run Date:** DA 12-13-06 (2)  
**Method #/Name:** CN- / 9012, 9012A **Sample Type:** SOIL WATER  
**Batch #:** 6338185, 6338198 148-15  
**Lot #s:** PK180200, PK210224

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJ29F	1g	50 ml	NA	NA	
2	JJ29F-D		50 ml			
3	JJ29F-S		50 ml			
4	BLK		50 ml			
5	LCS		50 ml			
6	HCS		50 ml			
7	JJ6mx		50 ml			
8	JJ6mx-D		50 ml			
9	JJ6mx-S		50 ml			
10	JJ6Q4		50 ml			
11	JJ6Q4-D		50 ml			
12	JJ6Q4-S		50 ml			
13	JJ6R1		50 ml			
14	JJ6R1		50 ml			
15	JJ6TC		50 ml			
16						
17	JJ8P5		50 ml			
18			50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS	YES	NO
Distilled Cyanide Samples	X	
Client Requirement Sheets	X	
Quantums Batch Sheets	X	
Distillation Prep STDlog	X	

**Analyst/Date:** DA 12-13-06  
**Reviewer/Date:**



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CYANIDE DISTILLATION

Due Dates: Earliest: 12/4 Latest: 12/18 Analyst/Run Date: WA 12-13-06 (3)

Method #/Name: CN- / 9012, 9012A Sample Type: SOIL WATER

Batch #: 6338198, 6346474

Lot #s: F6K20226, F6L020205

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS		
1	JJ80K	1g	50 ml	NA	NA			
2	JJ80K-D	↓	50 ml	↓	↓			
3	JJ80K-S		50 ml					
4	JJ8V6		50 ml					
5	JJ8WC		50 ml					
6	B/K		50 ml			Y	Y	
7	LCS		50 ml					
8	HCS		50 ml					
9	JKPNX		50 ml					
10	JKPN2		50 ml					
11	JKPN5		50 ml					
12	JKPN5-D		50 ml					
13	JKPN5-S		50 ml					
14	JKR62		50 ml					
15	JKR70		50 ml					
16								
17			50 ml					
18			50 ml					
19			50 ml					
20			50 ml					

Sent To TRAACS	YES	NO
Distilled Cyanide Samples	X	
Client Requirement Sheets	X	
Quantums Batch Sheets	X	
Distillation Prep STDlog	X	

Analyst/Date: WA 12-13-06

Reviewer/Date:



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CYANIDE DISTILLATION

Due Dates: Earliest: <u>4/29</u> Latest:	Analyst/Run Date: <u>12-13-06</u>
Method #/Name: <u>CN- / 9012, 9012A</u>	Sample Type: <u>SOIL</u> WATER
Batch #: <u>6333274</u>	
Lot #s: <u>66K160199</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g—soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	BAK	1g	50 ml	NA	NA	
2	LCS		50 ml			
3	HCS		50 ml			
4	JJ74R		50 ml			
5	JJ744		50 ml			
6	JJ747		50 ml			
7	JJ75L		50 ml			
8	JJ75K		50 ml			
9	JJ75Q		50 ml			
10	JJ755		50 ml			
11	JJ758		50 ml			
12	JJ764		50 ml			
13	JJ77K		50 ml			
14	JJ77Q		50 ml			
15	JJ78N		50 ml			
16						
17	JJ787		50 ml			
18	JJ79D		50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
Distilled Cyanide Samples		X	
Client Requirement Sheets		X	
Quantums Batch Sheets		X	
Distillation Prep STDlog		X	

Analyst/Date: 12-13-06  
 Reviewer/Date: \_\_\_\_\_



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CYANIDE DISTILLATION

Due Dates: <sup>HOLD</sup> Earliest: <u>11/29</u> Latest: <u>11/30</u>	Analyst/Run Date: <u>DA 12-14-06</u> (2)
Method #/Name: <u>CN- / 9012, 9012A</u>	Sample Type: <u>SOIL</u> WATER
Batch #: <u>6333274, 6333327</u>	
Lot #s: <u>FleK160199, FleK160247</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJ0QP	1g	50 ml	NA	NA	
2	JJ0QP-D		50 ml			
3	JJ0QP-S		50 ml			
4	BK		50 ml			6333327 ↓
5	LCS		50 ml			
6	HCS		50 ml			
7	JJ79F		50 ml			
8	JJ0TH		50 ml			
9	JJ0TN		50 ml			
10	JJ0TV		50 ml			
11	JJ0TV-D		50 ml			
12	JJ0TV-S		50 ml			
13	JJ0V5		50 ml			
14	JJ0W6		50 ml			
15	JJ0WP		50 ml			
16						
17	JJ0W8		50 ml			
18	JJ0W3		50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	X	
	Client Requirement Sheets	X	
	Quantums Batch Sheets	X	
	Distillation Prep STDlog	X	

Analyst/Date: <u>DA 12-14-06</u>
Reviewer/Date:

Page: 1

Order of Fit: First

Coefs: 1st: 0.000000 2nd: 8.965651

Report Date: 1/23/07  
 Analysis Date: 12/20/06  
 Data File: CN1220B  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.997629  
 Corr: 0.998814  
 Std. Dev.: 9.435125

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
1	P			509.48		15:34:31
2	W			2.63	I	15:35:47
3	S1			0.00	sI	15:37:03
4	S2			5.04	s	15:38:19
5	S3			19.71	s	15:39:33
6	S4			107.07	s	15:40:47
7	S5			240.63	s	15:42:02
8	S6			305.87	s	15:43:17
9	S7			382.72	s	15:44:33
10	S8			512.34	s	15:45:48
11	ICV			192.25		15:47:03
12	ICB			1.77	I	15:48:18
13	BLK			0.02	I	15:49:33
14	LCS			53.22		15:50:49
15	HCS			317.49		15:52:04
16	JJ28J			1.99	I	15:53:19
17	JJ28JD			89.57		15:54:34
18	JJ28JS			92.20		15:55:48
19	JJ28P			0.03	I	15:57:03
20	JJ28V			0.25	I	15:58:18
21	JJ28W			0.03	I	15:59:33
22	JJ28X			0.03	I	16:00:49
23	CCV			245.25		16:02:05
24	CCB			1.79	I	16:03:20
25	JJ280			0.03	I	16:04:35
26	JJ282			0.26	I	16:05:50
27	JJ288			0.04	I	16:07:05
28	JJ29D			0.04	I	16:08:20
29	JJ29E			0.04	I	16:09:35
30	JJ29F			1.36	I	16:10:50
31	JJ29FD			77.33		16:12:06
32	JJ29FS			93.53		16:13:21
33	BLK			6.83	I	16:14:36
34	LCS			85.87		16:15:51
35	CCV			261.47		16:17:06
36	CCB			6.62	I	16:18:21
37	HCS			278.11		16:19:36
38	JJ6MX			8.15	I	16:20:51
39	JJ6MXD			104.05		16:22:07
40	JJ6MXS			87.85		16:23:22
41	JJ6Q4			4.00	I	16:24:37
42	JJ6Q4D			67.71		16:25:52
43	JJ6Q4S			70.34		16:27:07
44	JJ6RJ			3.56	I	16:28:22
45	JJ6R1			3.35	I	16:29:37

Page: 2

Order of Fit: First

Coefs: 1st: 0.000000 2nd: 8.965651

Report Date: 1/23/07  
 Analysis Date: 12/20/06  
 Data File: CN1220B  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.997629  
 Corr: 0.998814  
 Std. Dev.: 9.435125

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
46	JJ6TC			0.28	I	16:30:52
47	CCV			259.73		16:32:07
48	CCB			0.29	I	16:33:22
49	JJ8P5			3.35	I	16:34:37
50	JJ8QK			0.29	I	16:35:52
51	JJ8QKD			86.33		16:37:08
52	JJ8QKS			88.74		16:38:23
53	JJ8V6			0.07	I	16:39:38
54	JJ8WC			0.08	I	16:40:53
55	BLK			0.08	I	16:42:08
56	LCS			88.31		16:43:24
57	HCS			346.66		16:44:39
58	JKPNX			2.71	I	16:45:54
59	CCV			239.82		16:47:09
60	CCB			1.62	I	16:48:24
61	JKPN2			0.00	-RI	16:49:40
62	JKPN5			3.37	I	16:50:56
63	JKPN5D			4.91		16:52:12
64	JKPN5S			40.59		16:53:25
65	JKR62			0.00	-RI	16:54:40
66	JKR7D			0.00	-RI	16:55:55
67	BLK			0.09	I	16:57:10
68	LCS			60.09		16:58:25
69	HCS			30.75		16:59:41
70	JJT4R			0.10	I	17:00:56
71	CCV			257.36		17:02:11
72	CCB			1.41	I	17:03:26
73	JJT44			5.36		17:04:41
74	JJT47			5.80		17:05:58
75	JJT5C			0.11	I	17:07:12
76	JJT5K			0.11	I	17:08:27
77	JJT5Q			0.11	I	17:09:42
78	JJT55			1.86	I	17:10:57
79	JJT58			0.11	I	17:12:12
80	JJT66			0.11	I	17:13:27
81	JJT7F			0.11	I	17:14:42
82	JJT7Q			0.12	I	17:15:57
83	CCV			257.59		17:17:12
84	CCB			1.87	I	17:18:27
85	JJT8N			0.00	-RI	17:19:42
86	JJT87			0.00	-RI	17:20:57
87	JJT9D			0.00	-RI	17:22:12
88	JJ0QP			2.53	I	17:23:27
89	JJ0QPD			85.95		17:24:43
90	JJ0QPS			110.04		17:25:58

6346474

6333274

Report Date: 1/23/07  
 Analysis Date: 12/20/06  
 Data File: CN1220B  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.997629  
 Corr: 0.998814  
 Std. Dev.: 9.435125

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
91	BLK			4.29		17:27:16
92	LCS			82.67		17:28:28
93	HCS			238.34		17:29:43
94	JJT9F			3.20	I	17:30:58
95	CCV			254.98		17:32:14
96	CCB			0.13	I	17:33:29
97	JJ0TH			1.89	I	17:34:44
98	JJ0TN			2.11	I	17:35:59
99	JJ0TV			1.67	I	17:37:14
100	JJ0TVD			93.19		17:38:30
101	JJ0TVS			92.97		17:39:45
102	JJ0V5			3.21	I	17:41:00
103	JJ0WG			0.14	I	17:42:15
104	JJ0WP			0.15	I	17:43:31
105	JJ0WQ			0.59	I	17:44:47
106	JJ0W3			0.00	-RI	17:46:03
107	CCV			244.93		17:47:19
108	CCB			0.15	I	17:48:33
109	JJ0XF			3.00	I	17:49:47
110	JJ0X2			141.15	M	17:51:18
111	JJ0X5			306.67	M	17:52:11
112	JJ0X5D			0.00	-RI	17:53:26
113	JJ0X5S			0.00	-RI	17:54:41
114	BLK			0.00	-RI	17:55:56
115	LCS			0.00	-RI	17:57:11
116	HCS			0.00	-RI	17:58:26
117	JKM64			0.00	-RI	17:59:41
118	JKM64X			0.00	-RI	18:00:56
119	CCV			0.00	-RI	18:02:11
120	CCB			0.00	-RI	18:03:26
121	JKM64S			0.00	-RI	18:04:41
122	JKPM1			0.00	-RI	18:05:56
123	JKPM1X			0.00	-RI	18:07:11
124	JKPM1S			0.00	-RI	18:08:26
125	BLK			0.00	-RI	18:09:41
126	LCS			0.00	-RI	18:10:56
127	HCS			0.00	-RI	18:12:11
128	JKR7F			0.00	-RI	18:13:26
129	JKR7G			0.00	-RI	18:14:41
130	JKR7GD			0.00	-RI	18:15:56
131	CCV			0.00	-RI	18:17:11
132	CCB			0.00	-RI	18:18:26
133	JKR7GS			0.00	-RI	18:19:41
134	JKR7T			0.00	-RI	18:20:56
135	JKWQM			0.00	-RI	18:22:11

6333327



7012218



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Order of Fit: First

Coefs: 1st: 0.000000 2nd: 8.965651

Report Date: 1/23/07  
Analysis Date: 12/20/06  
Data File: CN1220B  
Method Name: CYANIDE  
Units: ug/L  
Description: Cyanide

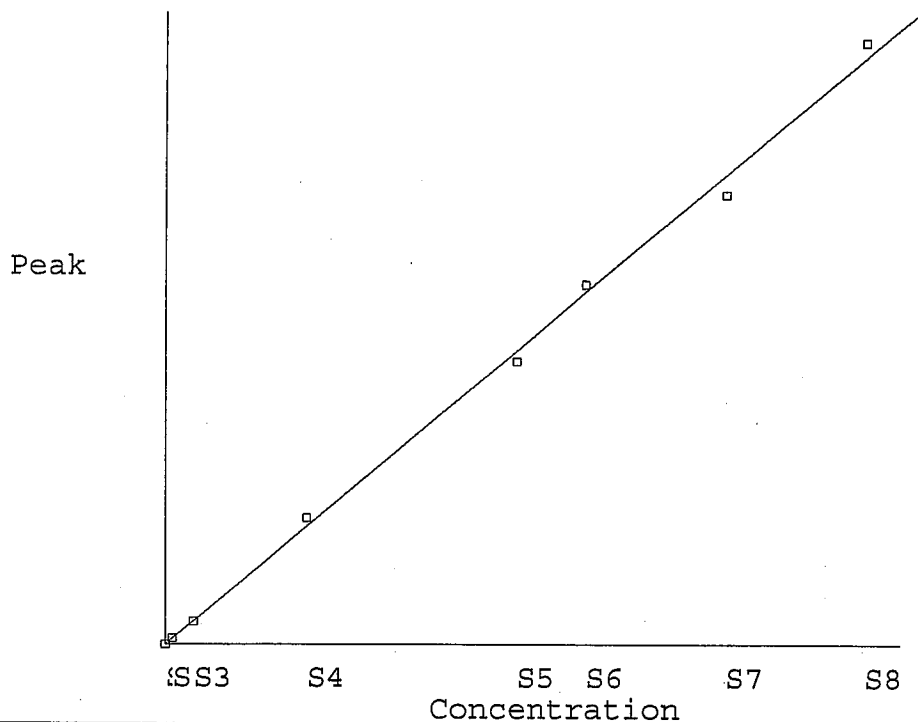
R<sup>2</sup>: 0.997629  
Corr: 0.998814  
Std. Dev.: 9.435125

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
136	JKWVW			0.00	-RI	18:23:26
137	JKWWK			0.00	-RI	18:24:41
138	JKWWQ			0.00	-RI	18:25:56
139	JK163			0.00	-RI	18:27:11
140	JK17W			0.00	-RI	18:28:26
141	JK173			0.00	-RI	18:29:41
142	JK176			0.00	-RI	18:30:56
143	CCV			0.00	-RI	18:32:11
144	CCB			0.00	-RI	18:33:26
145	JK177			0.00	-RI	18:34:41
146	JK178			0.00	-RI	18:35:56
147	JK4XW			0.00	-RI	18:37:11
148	JK40F			0.00	-RI	18:38:26
149	JK40P			0.00	-RI	18:39:41
150	JK40V			0.00	-RI	18:40:56
151	JKR78			0.00	-RI	18:42:11
152	CCV			0.00	-RI	18:43:26
153	CCB			0.00	-RI	18:44:41
154	HIGH			0.00	-RI	18:45:56
155	BLK			0.00	-RI	18:47:11

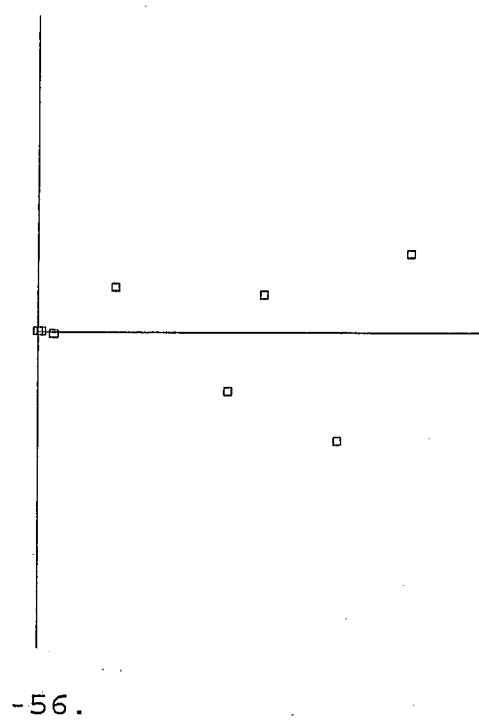
1/23/07 17:55

Standard Set #1.

Data File: CN1220B  
 Method File: CYANIDE  
 Sample Table File: CN1220B



56.



-56.

S#	Peak	Value	Calc	Residual
S1	0.00	0.00	0.00	0.00
S2	0.56	5.00	5.04	0.04
S3	2.20	20.00	19.71	-0.29
S4	11.94	100.00	107.07	7.07
S5	26.84	250.00	240.63	-9.37
S6	34.12	300.00	305.87	5.87
S7	42.69	400.00	382.72	-17.28
S8	57.14	500.00	512.34	12.34

Coefficients:

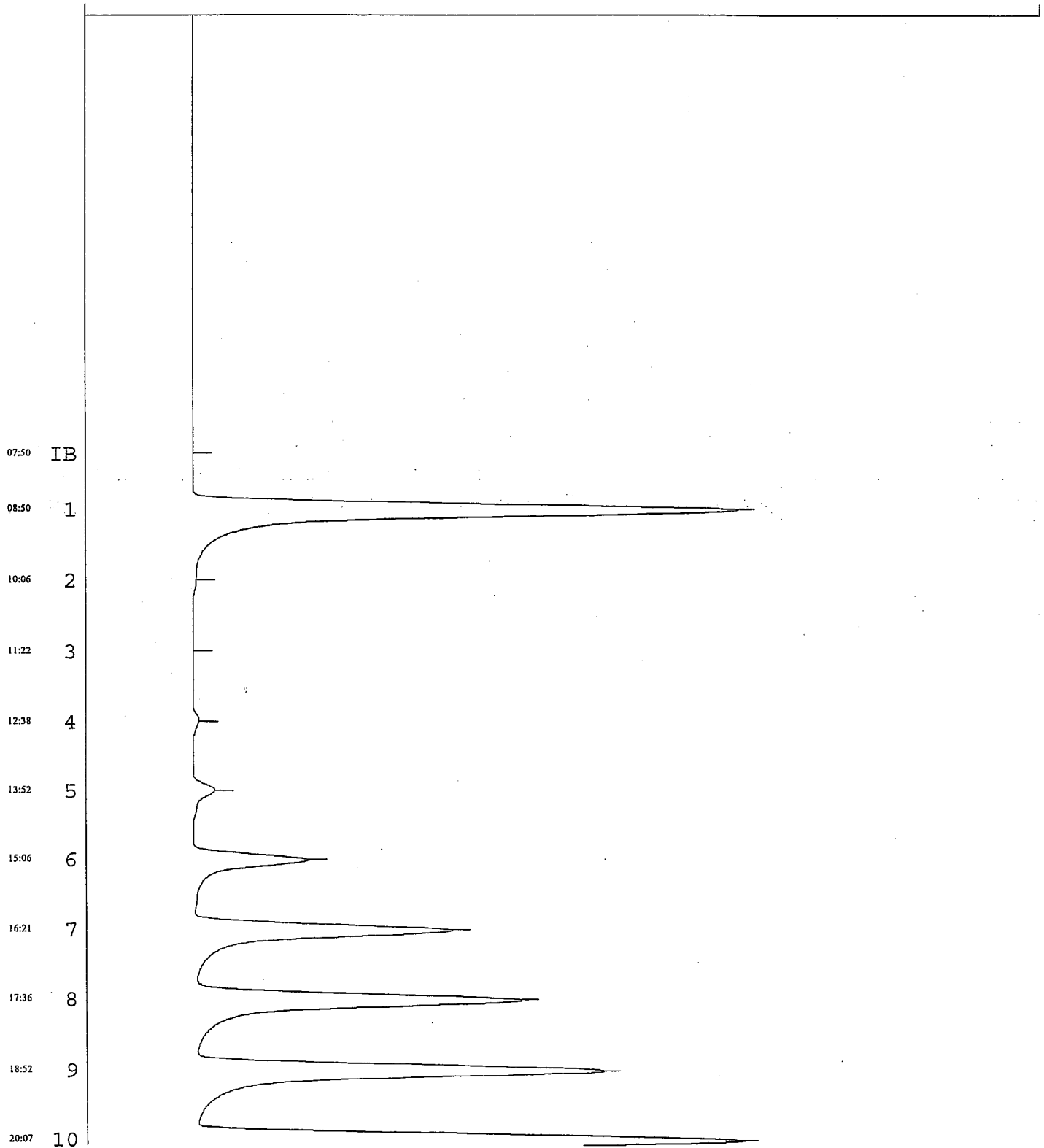
Intercept : 0  
 Slope : 8.96565  
 Std Dev : 9.43513  
 Corr Coef : 0.998814  
 R<sup>2</sup> : 0.997629

1/23/2007 17:55

Page:1

Data: CN1220B  
Mthd: CYANIDE  
Samp: CN1220B  
0

100



1/23/2007

17:55

Page:2

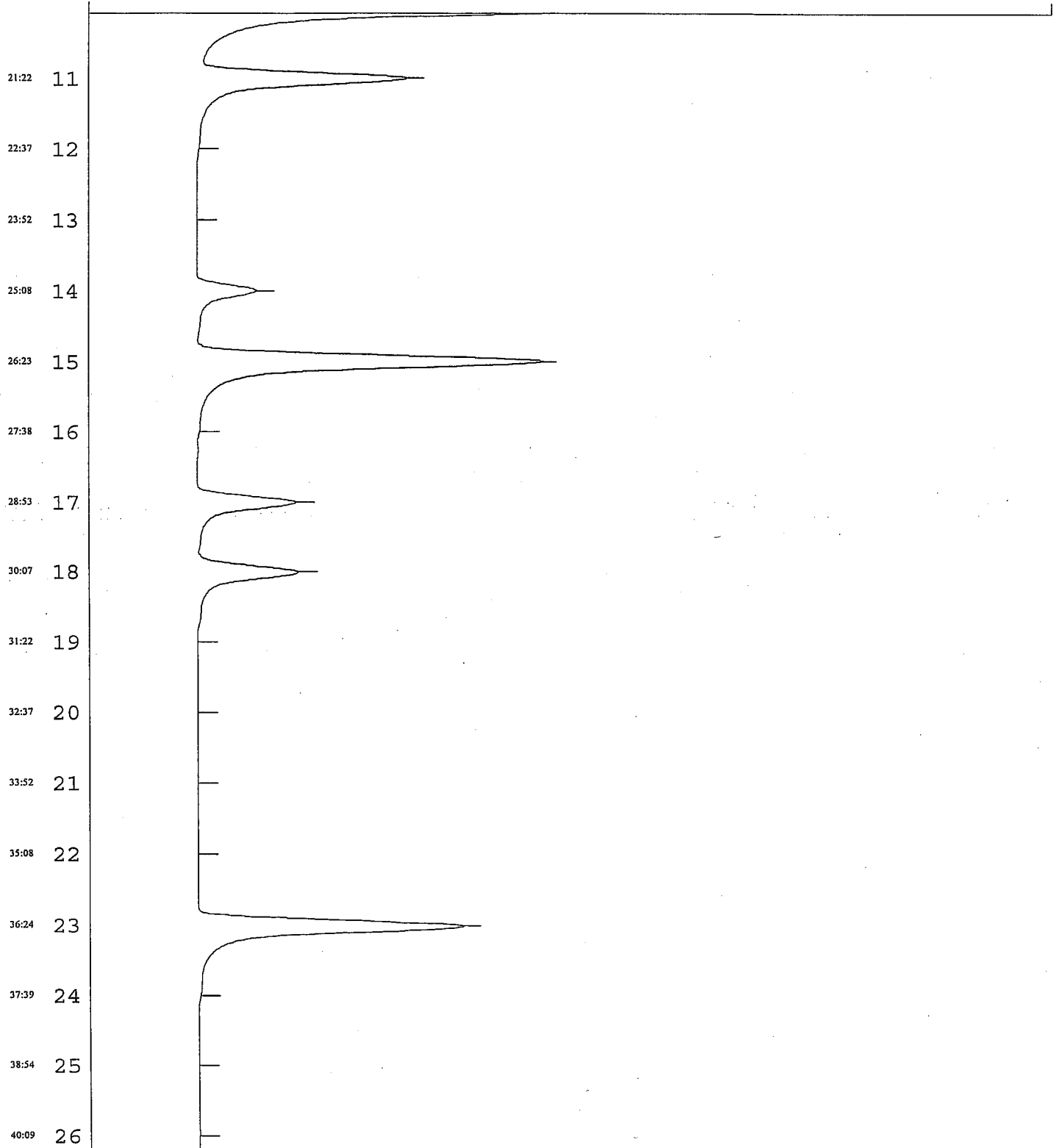
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Samp: CN1220B

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1/23/2007

17:55

Page:3

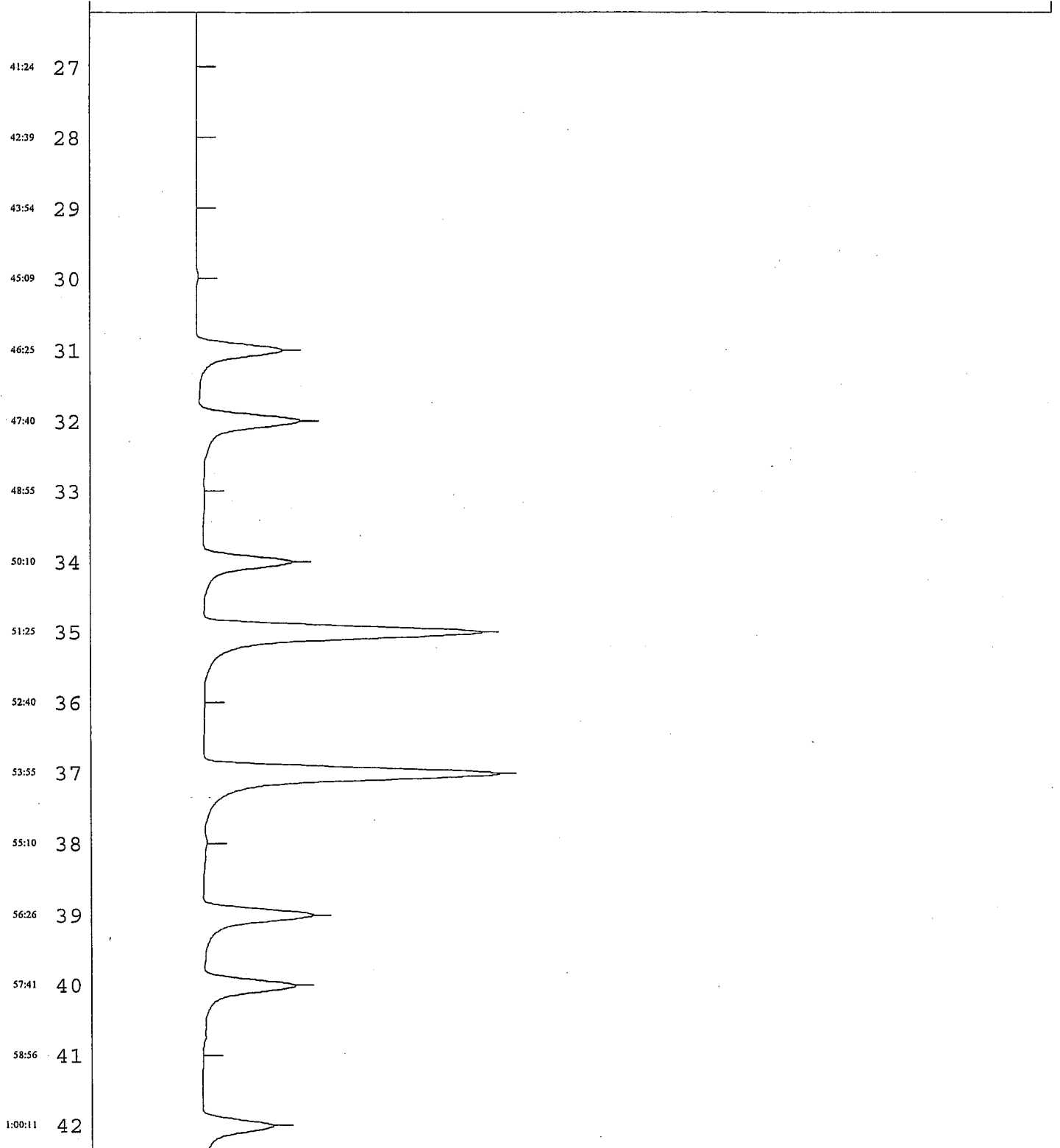
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Samp: CN1220B

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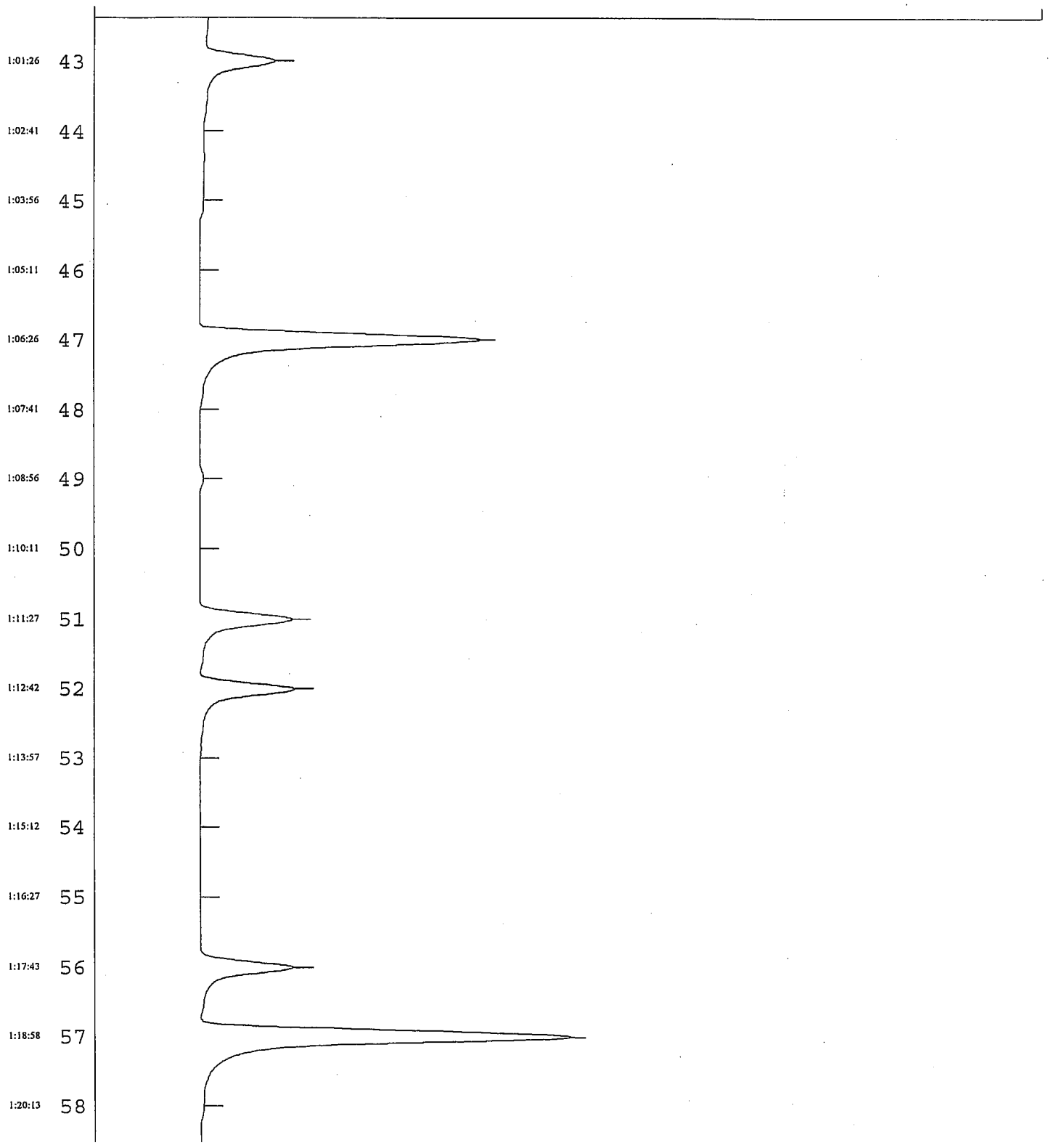


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Samp: CN1220B  
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100



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17:55

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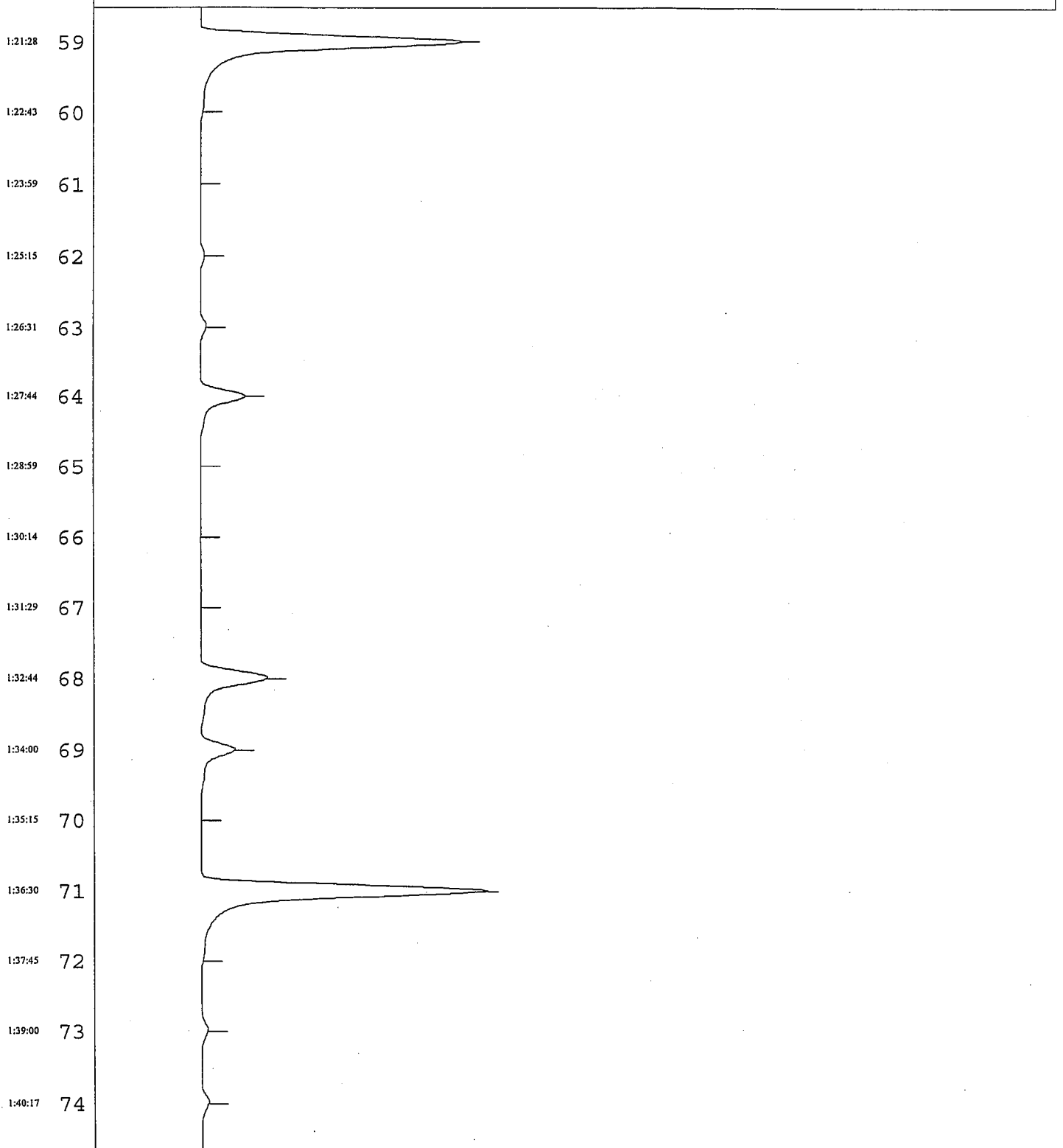
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Samp: CN1220B

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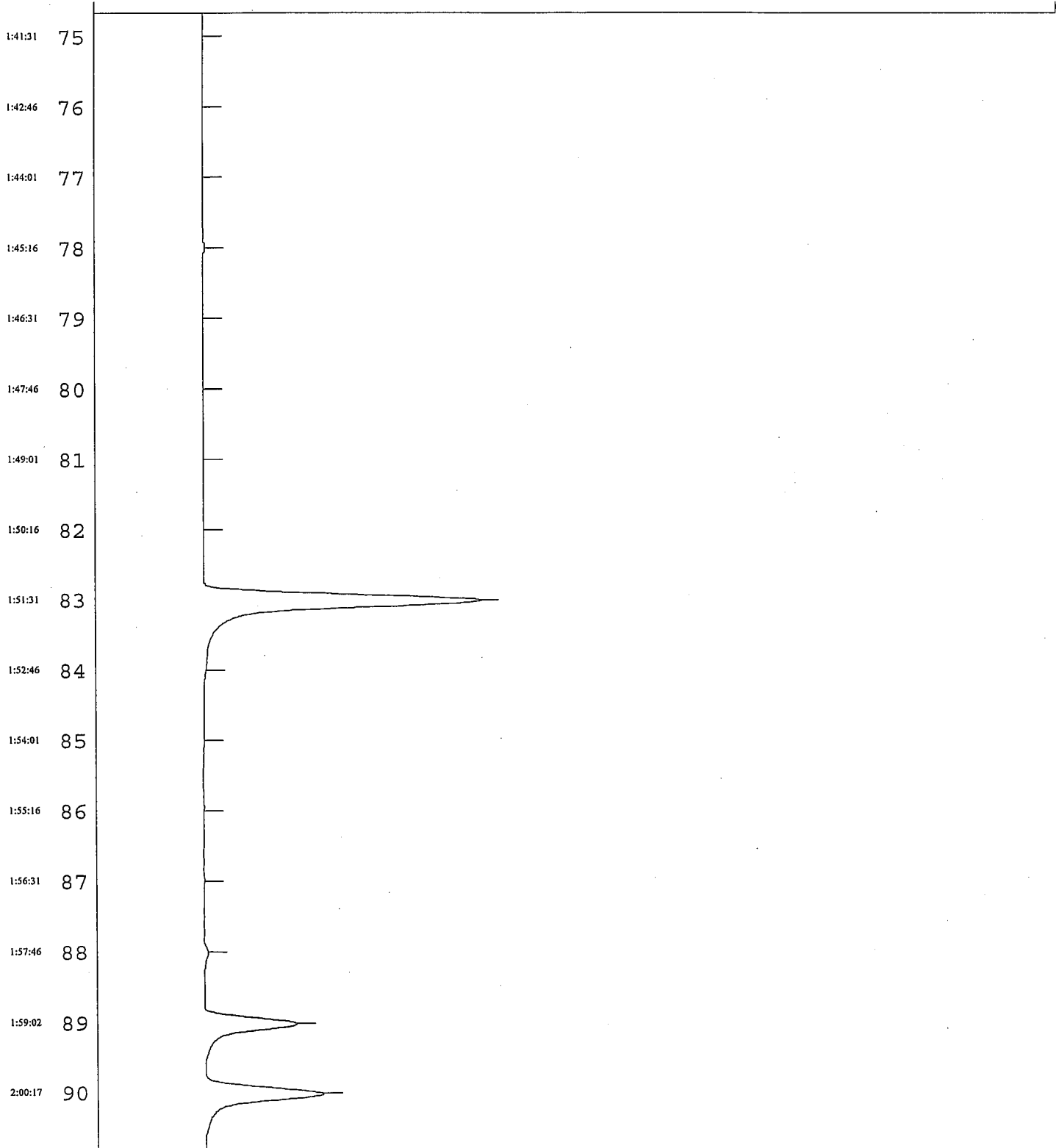


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Samp: CN1220B  
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100



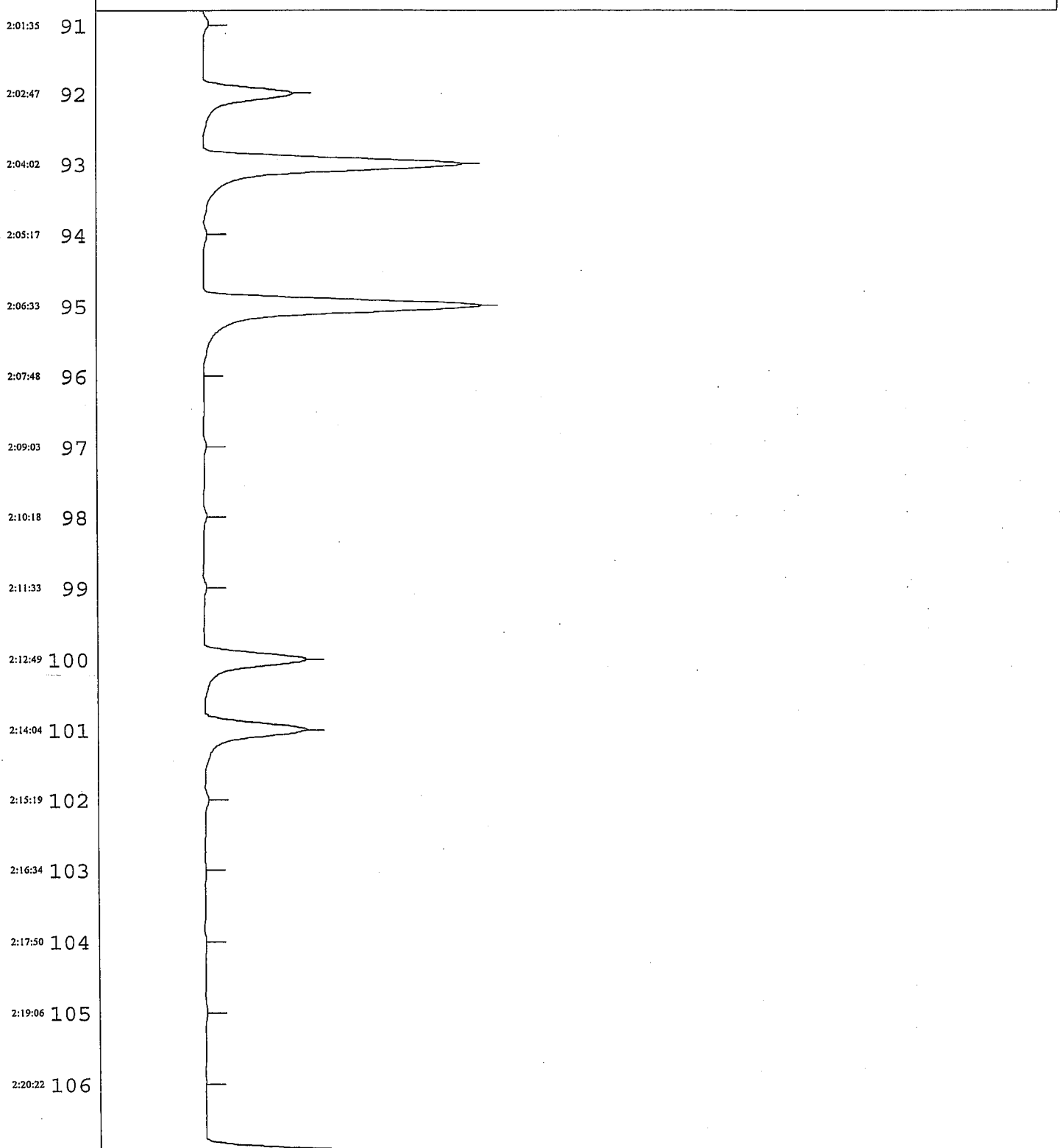


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Samp: CN1220B  
0

100



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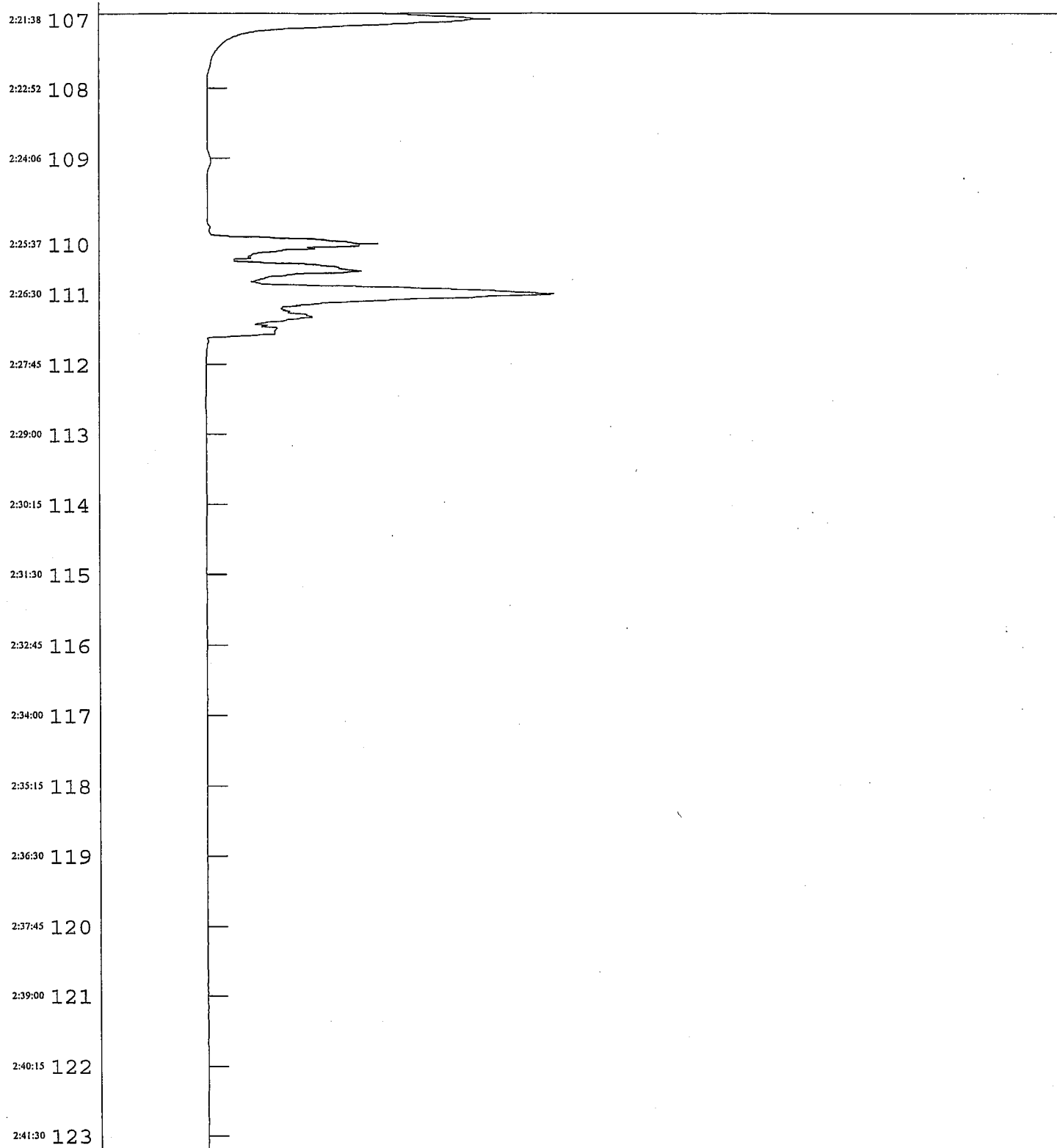
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Mthd: CYANIDE

Samp: CN1220B

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100



1/23/2007

17:55

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Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100

2:42:45 124

2:44:00 125

2:45:15 126

2:46:30 127

2:47:45 128

2:49:00 129

2:50:15 130

2:51:30 131

2:52:45 132

2:54:00 133

2:55:15 134

2:56:30 135

2:57:45 136

2:59:00 137

3:00:15 138

3:01:30 139

1/23/2007

17:55

Page:10

Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100

3:02:45 140

3:04:00 141

3:05:15 142

3:06:30 143

3:07:45 144

3:09:00 145

3:10:15 146

3:11:30 147

3:12:45 148

3:14:00 149

3:15:15 150

3:16:30 151

3:17:45 152

3:19:00 153

3:20:15 154

3:21:30 155

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Data: CN1220B

Mthd: CYANIDE

Samp: CN1220B

0

100

3:22:30 FB



**STL**

STL St. Louis  
Data Review Check List

**Wet Chemistry**

<b>Due Dates:</b> Earliest: _____ Latest: _____		<b>Run Date:</b> 12-21-06			
<b>Method Name/#:</b> CN / 9012, 9012A					
<b>Batch #:</b> 6346388, 6349287 <span style="margin-left: 100px;">7012186</span> <span style="margin-left: 50px;">7012197</span>					
<b>Lot #s:</b> F6L010268, F6L020199, F6L050180, F6L060222, F6L070281, F6L080240					
<b>NCM's:</b> 06-0086965 <span style="float: right; text-align: right;">RL 1/2/10</span>					
Review Item	Yes	No	N/A	Review	
<b>Initial Calibration</b>					
Initial Calibration data in this package?	X			/	
If not, please specify initial calibration date:					
Initial Calibration meets method acceptance criteria:	X			/	
Corr. Coefficient = 0.995; Y-intercept < the absolute value of the RL					
Is the low level standard = the reporting limit?	X			/	
<b>Calibration Check (ICV)</b>					
ICV performed with initial calibration?	X			/	
ICV meets method acceptance criteria (max. 10% D)?	X			/	
<b>Continuing Calibration Verification (CCV)</b>					
CCV performed at the prescribed frequency?	X			/	
CCV meets method acceptance criteria (max. 10% D)?	X			/	
<b>Continuing Calibration Blank (CCB)</b>					
CCB performed after every CCV?	X			/	
CCB meets method acceptance criteria?	X			/	
Criteria: < the absolute value of the Reporting Limit (see client sheet for					
<b>Batch QC - Method Blanks</b>					
Is a Method Blank required for this analysis?	X			/	
Is the method blank below the Reporting Limit for targets of interest?	X			/	
<b>Batch QC - LCS</b>					
Is a LCS required for this analysis?	X			/	
Are the LCS (LCSD) recoveries within method acceptance?	X			/	
<b>Batch QC - MS/MSD</b>					
Is a MS/MSD or MS/Sample Duplicate required for this analysis?	X			/	
Are the MS(MSD) recoveries within method acceptance?		X		/	
<b>Batch QC - RPD</b>					
MS/MSD or Sample/Sample Duplicate RPD within acceptance criteria	X			/	
<b>Sample Results - Report</b>					
Are samples bracketed by acceptable CCV/CCB?	X			/	
Are results within the calibration range?	X			/	
Was analysis performed within Hold Time?	X			/	
Did samples require dilution due to: (check one if applicable)			X		
matrix interference					
high target analyte concentration					
If dilutions were performed, was it within Hold Time?			X		
If dilutions were performed, are the undiluted runs in this submission?			X		
If not, please indicate where found:					
<b>Sample Results - Misc. information</b>					
Are Batch sheets, Preparation Logs (if applicable) included?	X			/	
Are copies of run logs included, initialed and dated?	X			/	
Were manual calculations performed? reviewer must check calculations		X		/	
Were manual integrations performed, dated, and initialed?		X		/	
Client requirement sheets followed in data package?	X			/	
Reagents and Standards documented on prep/batch sheets?	X			/	
<b>Additional Comments:</b>					
<b>Analyst/Date:</b> <i>DP</i> 12-22-06			<b>Reviewer/Date:</b> <i>Ben</i> 1/23/10		



STL

STL St. Louis

CYANIDE DISTILLATION

Due Dates: Earliest: <u>11/30</u> Latest: <u>12/15</u>	Analyst/Run Date: <u>DR 12-14-06</u> (3)
Method #/Name: <u>CN- / 9012, 9012A</u>	Sample Type: <u>SOIL</u> <u>WATER</u>
Batch #: <u>63333274</u> , <u>6346388</u> (1st) <u>6333327</u>	
Lot #s: <u>FLK170247</u> , <u>FLH010268</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJ0XF	1g	50 ml	NA	NA	
2	JJ0X2	↓	50 ml	↓	↓	
3	JJ0X5	↓	50 ml	↓	↓	
4	JJ0X5-D	↓	50 ml	↓	↓	
5	JJ0X5-S	↓	50 ml	↓	↓	
6	BLK	50ml	50 ml	Y	Y	6346388 ↓
7	LCS	↓	50 ml	↓	↓	
8	HCS	↓	50 ml	↓	↓	
9	JKm64	↓	50 ml	↓	↓	
10	JKm64-S	↓	50 ml	↓	↓	
11	JKm64-X	↓	50 ml	↓	↓	
12	JKmP1	↓	50 ml	↓	↓	
13	JKmP1-S	↓	50 ml	↓	↓	
14	JKmP1-X	↓	50 ml	↓	↓	
15			50 ml			
16						
17			50 ml			
18			50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
Distilled Cyanide Samples		X	
Client Requirement Sheets		X	
Quantums Batch Sheets		X	
Distillation Prep STDlog		X	

Analyst/Date: <u>DR 12-14-06</u>
Reviewer/Date:

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/12/07  
Time: 10:01:08

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
--------------	---------------	----	---------------	--------------	-------------	-------------	----------------------

METHOD: VQ Cyanide, Total (9012, Automated)

QC BATCH #: 7012186

INITIALS:

DATA ENTRY:

PREP DATE: 12/14/06

PREP \_\_\_\_\_

INITIALS \_\_\_\_\_

COMP DATE: 12/14/06

ANAL \_\_\_\_\_

DATE \_\_\_\_\_

USER: HOUGHG

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JKM64-2-AH	F-6L010268-001	XX I 06 VQ 5I	B	_____	B1L3T5
JKM64-1-AP	F-6L010268-001-D	XX I 06 VQ 5I	B	_____	B1L3T5
JKM64-1-AN	F-6L010268-001-S	XX I 06 VQ 5I	B	_____	B1L3T5
JKPM1-2-AH	F-6L020199-006	XX I 06 VQ 5I	B	_____	B1KR24
JKPM1-1-AP	F-6L020199-006-D	XX I 06 VQ 5I	B	_____	B1KR24
JKPM1-1-AN	F-6L020199-006-S	XX I 06 VQ 5I	B	_____	B1KR24
JMQ2R-1-AA	F-7A120000-186-B	XX I 06 VQ 5I		_____	INTRA-LAB BLANK
JMQ2R-1-AC	F-7A120000-186-C	XX I 06 VQ 5I		_____	INTRA-LAB CHECK
JMQ2R-1-AD	F-7A120000-186-C	XX I 06 VQ 5I		_____	INTRA-LAB CHECK

Control Limits

(90-110)

*Goes with batch 6346388*

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)



Severn Trent Laboratories, Inc.  
 Inorganics Batch Review  
 QC Batch 7012186

Date 1/12/2007  
 Time 11:07:59

Method Code: V0 Cyanide, Total (9012, Automated)  
 Analyst: Chris Hough

Work Order	Result	Units	IDL/Dil	Prep. - Anal:	Total Solids	PSRL	R/R	Rounded Result	Output	Dil.
JKW64-2-AH	7.79	ug/L	5	12/14-12/21/06	.00	N		7.8 C	5.0	1.00
JKPM1-2-AH	17.64	ug/L	5	12/14-12/21/06	.00	N		17.6 C	5.0	1.00
JMQ2R-1-AA	9.8	ug/L	5	12/14-12/21/06	.00			9.8	5.0	1.00

Notes: C Analyte detected in method blank above the MDL/IDL.

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal:	Control Limits	Dil.
JMQ2R-1-AC		100	102.32	102.32	12/14-12/21/06	(90-110)	1.00
JMQ2R-1-AD		400	348.5 N	87.12	12/14-12/21/06	(90-110)	1.00

Notes: N Spiked analyte recovery is outside stated control limits.

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	Pct. Recovered	RPD	Prep. - Anal:	Dil.
JKW64-1-AN		7.79	100	44.3 N	53.26	8.96	18.36	12/14-12/21/06	1.00
JKPM1-1-AN		17.64	100	126.96	115.09	97.45	9.80	12/14-12/21/06	1.00

Notes: N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	PRODUCTION QC #	TOTALS MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0

From 12/29

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/11/07  
Time: 9:52:38

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
-----------------	------------------	----	------------------	-----------------	----------------	----------------	-------------------------

METHOD: VQ Cyanide, Total (9012, Automated)  
 QC BATCH #: 6346388 INITIALS: DATA ENTRY:  
 PREP DATE: 12/14/06 PREP \_\_\_\_\_ INITIALS \_\_\_\_\_  
 COMP DATE: 12/14/06 ANAL \_\_\_\_\_ DATE \_\_\_\_\_  
 USER: HOUGHGHC

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JKM64-1-AH	F-6L010268-001	XX I 06 VQ 5I	B	_____	B1L3T5
JKM64-1-AM	F-6L010268-001-D	XX I 06 VQ 5I	B	_____	B1L3T5
JKM64-1-AL	F-6L010268-001-S	XX I 06 VQ 5I	B	_____	B1L3T5
JKPM1-1-AH	F-6L020199-006	XX I 06 VQ 5I	B	_____	B1KR24
JKPM1-1-AM	F-6L020199-006-D	XX I 06 VQ 5I	B	_____	B1KR24
JKPM1-1-AL	F-6L020199-006-S	XX I 06 VQ 5I	B	_____	B1KR24
JLAMK-1-AA	F-6L120000-388-B	XX I 06 VQ 5I		_____	INTRA-LAB BLANK
JLAMK-1-AD	F-6L120000-388-C	XX I 06 VQ 5I		_____	INTRA-LAB CHECK
JLAMK-1-AC	F-6L120000-388-C	XX I 06 VQ 5I		_____	INTRA-LAB CHECK

Control Limits

(90-110)  
 (90-110)  
 (90-110)  
 (90-110)  
 (90-110)  
 (90-110)

2'S created batch 7012186  
Report from 12/21

PDE115  
Date 1/11/2007  
Time 11:01:23

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6346388

Method Code: VQ Cyanide, Total (9012, Automated)  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JKM64-1-AH	ND	ug/L	5	12/14-12/29/06	.00	N		5.0		1.00
JKPM1-1-AH	11.54	ug/L	5	12/14-12/29/06	.00	N		11.5	5.0	1.00
JLAMK-1-AA	ND	ug/L	5	12/14-12/29/06	.00			ND	5.0	1.00

Notes:

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JLAMK-1-AD		400	375.32	93.83	12/14-12/29/06	(90-110)	1.00
JLAMK-1-AC		100	103.31	103.31	12/14-12/29/06	(90-110)	1.00

Notes:

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	SPIKE	Pct.	Recovered DUP	RPD	Prep. - Anal.	Dil.
JKM64-1-AL		ND	100	42.07	45.66	42.07		45.66	8.18	12/14-12/29/06	1.00
JKPM1-1-AL		11.54	100	126.07	111.38	114.53	114.53	99.84	12.37	12/14-12/21/06	1.00

Notes:

N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0



6349287



STL

STL St. Louis

CYANIDE DISTILLATION

Due Dates: Earliest: 12/19 Latest: 12/21	Analyst/Run Date: DA 12-15-06
Method #/Name: CN- / 9012, 9012A	Sample Type: SOIL <u>WATER</u>
Batch #: <del>6346477</del> 6349287	
Lot #s: F6L050180, F6L060222, F6L070281, F6L080240	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	BLK	50 ml	50 ml	Y	Y	
2	LCS		50 ml	Y	Y	
3	HCS		50 ml	Y	Y	
4	JKWQm		50 ml	Y	Y	
5	JKWVW		50 ml	Y	Y	
6	JKWWK		50 ml	Y	Y	
7	JKWWQ		50 ml	Y	Y	
8	JK163		50 ml	Y	Y	
9	JK17W		50 ml	Y	Y	
10	JK173		50 ml	Y	Y	
11	JK174		50 ml	Y	Y	
12	JK177		50 ml	Y	Y	
13	JK178		50 ml	Y	Y	
14	JK4XW		50 ml	Y	Y	
15	JK40F		50 ml	Y	Y	
16						
17	JK40P		50 ml	Y	Y	
18	JK40V		50 ml	Y	Y	
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	X	
	Client Requirement Sheets	X	
	Quantums Batch Sheets	X	
	Distillation Prep STDlog	X	

Analyst/Date: DA 12-15-06
Reviewer/Date:



STL St. Louis

CYANIDE DISTILLATION

Due Dates: Earliest: <u>12/19</u> Latest: <u>12/20</u>	Analyst/Run Date: <u>DA 12-15-06</u> (2)
Method #/Name: <u>CN- / 9012, 9012A</u>	Sample Type: <u>SOIL</u> <u>WATER</u>
Batch #: <u>6346477 6349287</u>	
Lot #s: <u>F66050180</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JKR7F	50 ml	50 ml	✓	✓	
2	JKR7G	↓	50 ml	↓	↓	
3	JKR7G-D		50 ml			
4	JKR7G-S		50 ml			
5	JKR7T		50 ml			
6	JKR78		50 ml			
7	<del>JKR78</del>		50 ml			
8		50 ml				
9		50 ml				
10		50 ml				
11		50 ml				
12		50 ml				
13		50 ml				
14		50 ml				
15		50 ml				
16						
17		50 ml				
18		50 ml				
19		50 ml				
20		50 ml				

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	✓	
	Client Requirement Sheets	✓	
	Quantums Batch Sheets	✓	
	Distillation Prep STDlog	✓	

Analyst/Date: <u>DA 12-15-06</u>
Reviewer/Date:

From 12/29

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/11/07  
Time: 11:13:06

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6349287	INITIALS:	DATA ENTRY:
PREP DATE:	12/15/06	PREP _____	INITIALS _____
COMP DATE:	12/15/06	ANAL _____	DATE _____
USER:	HOUGHCH		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
✓ JKR7F-1-CT	F-6L050180-003	XX I 06 QP 01	Y-D	_____	M100D
✓ JKR7G-1-CN	F-6L050180-004	XX I 06 QP 01	Y-D	_____	M2A
✓ JKR7G-1-F7	F-6L050180-004-D	XX I 06 QP 01	Y-D	_____	M2A
✓ JKR7G-1-F6	F-6L050180-004-S	XX I 06 QP 01	Y-D	_____	M2A
✓ JKR7T-1-CN	F-6L050180-005	XX I 06 QP 01	Y-D	_____	EB120406
✓ JKR78-1-CN	F-6L050180-006	XX I 06 QP 01	Y-D	_____	M95
✓ JKWQM-1-CM	F-6L060222-001	XX I 06 QP 01	Y-D	_____	M12A
✓ JKWVW-1-CX	F-6L060222-002	XX I 06 QP 01	Y-D	_____	M39
✓ JKWWK-1-C6	F-6L060222-003	XX I 06 QP 01	Y-D	_____	M89
✓ JKWWQ-1-C6	F-6L060222-004	XX I 06 QP 01	Y-D	_____	EB120506
✓ JK163-1-CN	F-6L070281-001	XX I 06 QP 01	Y-D	_____	M48
✓ JK17W-1-CU	F-6L070281-002	XX I 06 QP 01	Y-D	_____	MC45
✓ JK173-1-CU	F-6L070281-003	XX I 06 QP 01	Y-D	_____	M31A
✓ JK176-1-CU	F-6L070281-004	XX I 06 QP 01	Y-D	_____	M11
✓ JK177-1-CU	F-6L070281-005	XX I 06 QP 01	Y-D	_____	M11D
✓ JK178-1-CU	F-6L070281-006	XX I 06 QP 01	Y-D	_____	EB120606
✓ JK4XW-1-CK	F-6L080240-001	XX I 06 QP 01	Y-D	_____	M5A
✓ JK40F-1-CQ	F-6L080240-002	XX I 06 QP 01	Y-D	_____	M55

2's Created for batch 7012197  
from run 12/21/06

3's created for batch 7012218  
from run 1/5/07

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/11/07  
Time: 11:13:06

STL St. Louis

QC BATCH #: 6349287                      INITIALS:                      DATA ENTRY:  
 PREP DATE: 12/15/06                      PREP \_\_\_\_\_                      INITIALS \_\_\_\_\_  
 COMP DATE: 12/15/06                      ANAL \_\_\_\_\_                      DATE \_\_\_\_\_  
 USER: HOUGHG

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JK40P-1-CQ	F-6L080240-003	XX I 06 QP 01	Y-D	_____	M55D
JK40V-1-CQ	F-6L080240-004	XX I 06 QP 01	Y-D	_____	EB120706
JLKDG-1-AA	F-6L150000-287-B	XX I 06 QP 01		_____	INTRA-LAB BLANK
JLKDG-1-AD	F-6L150000-287-C	XX I 06 QP 01		_____	INTRA-LAB CHECK
JLKDG-1-AC	F-6L150000-287-C	XX I 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

(90-110)

(90-110)



Date 1/11/2007  
Time 12:13:47

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6349287

PDE115

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JKR7F-1-CF	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JKR7G-1-CN	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JKR7T-1-CN	10.23	ug/L	5	12/15-12/29/06	.00	N		10.2	5.0	1.00
JKR78-1-CN	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JKWQM-1-CM	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JKWVW-1-CX	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JKWVK-1-C6	6.09	ug/L	5	12/15-12/29/06	.00	N		6.1	5.0	1.00
JKWVQ-1-C6	7.28	ug/L	5	12/15-12/29/06	.00	N		7.3	5.0	1.00
JK163-1-CN	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JK17W-1-CU	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JK173-1-CU	25.02	ug/L	5	12/15-12/29/06	.00	N		25.0	5.0	1.00
JK176-1-CU	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JK177-1-CU	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JK178-1-CU	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JK4XW-1-CK	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JK40F-1-CQ	5.5	ug/L	5	12/15-12/29/06	.00	N		5.5	5.0	1.00
JK40P-1-CQ	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JK40V-1-CQ	ND	ug/L	5	12/15-12/29/06	.00	N		ND	5.0	1.00
JLKDG-1-AA	ND	ug/L	5	12/15-12/29/06	.00			ND	5.0	1.00

Notes:

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JLKDG-1-AD		400	410.26	102.56	12/15-12/29/06	(90-110)	1.00
JLKDG-1-AC		100	106.32	106.32	12/15-12/29/06	(90-110)	1.00

Notes:

Date 1/11/2007  
Time 12:13:47

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6349287

PDE115

Method Code: Cyanide, Total  
Analyst: Debbie Thomas  
MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	SPIKE	Pct.	Recovered DUP	RPD	Prep. - Anal.	Dil.
JKR7G-1-F6		ND	100	6.89 N	5.86	6.89		5.86	16.15	12/15-12/29/06	1.00

Notes:  
N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	PRODUCTION TOTALS	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	0	.0

STL St. Louis Laboratory  
Cyanide Method 335.4/9012B

Page: 1 of: 1

Analyst: HOUGHCH

Prep Date: 12/15/2006

Batch No.: 6349287

Analysis Filename: CN12296B

Analysis Date: 12/29/2007

Laboratory ID	Standard Conc. ug/L	Raw Value ug/L	Dilution	Sample Volume		Scrubber Volume, L (Nom. 0.05L)	Combined Prep Factor	Final Concentration as CN		Percent Recovery	RPD
				Liter (Nom. 0.050L)	Gram (Nom. 1 g)			ug/L	mg/Kg *		
JKR7F		1.86	1	0.05		0.05	1.00	1.86			
JKR7G		3.06	1	0.05		0.05	1.00	3.06			
JKR7GD		6.89	1	0.05		0.05	1.00	6.89			
JKR7GS		5.68	1	0.05		0.05	1.00	5.68			
JKR7T		10.23	1	0.05		0.05	1.00	10.23			
JKWQM		4.43	1	0.05		0.05	1.00	4.43			
JKWVW		2.98	1	0.05		0.05	1.00	2.98			
JKWWK		6.09	1	0.05		0.05	1.00	6.09			
JKWWQ		7.28	1	0.05		0.05	1.00	7.28			
JK163		1.27	1	0.05		0.05	1.00	1.27			
JK17W		2.7	1	0.05		0.05	1.00	2.7			
JK173		25.02	1	0.05		0.05	1.00	25.02			
JK176		0.76	1	0.05		0.05	1.00	0.76			
JK177		2.19	1	0.05		0.05	1.00	2.19			
JK178		0	1	0.05		0.05	1.00	0			
JK4XW		0.95	1	0.05		0.05	1.00	0.95			
JK40F		5.5	1	0.05		0.05	1.00	5.5			
JK40P		3.81	1	0.05		0.05	1.00	3.81			
JK40V		2.83	1	0.05		0.05	1.00	2.83			
BLK		3.34	1	0.05		0.05	1.00	3.34			
LCS		106.32	1	0.05		0.05	1.00	106.32			
HCS		410.26	1	0.05		0.05	1.00	410.26			
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				

Control Limits (Water/Soil): LCS = 90 - 110; RPD 20%

Control Limits (Water/Soil): MS = 90 - 110; RPD (water) 20%, (soil) 30%

Cyanide, total ug/L (mg/Kg) =  $\frac{\text{Raw Value} \times \text{Dilution} \times \text{Scrubber Volume (L)}}{\text{Sample Volume (L,G)}}$

SOP: STL-WC-0002  
Rev: 5  
Date: 2/28/06

# Results are raw calculation and do not reflect rounding, requested significant figures, or client reporting limits.  
\* Results on spreadsheet are "wet weight".

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/12/07  
Time: 10:43:10

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	RE-RUN QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #: 7012197 INITIALS: DATA ENTRY:  
PREP DATE: 12/15/06 PREP \_\_\_\_\_ INITIALS \_\_\_\_\_  
COMP DATE: 12/15/06 ANAL \_\_\_\_\_ DATE \_\_\_\_\_  
USER: HOUGHHC

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JKR7F-2-CT	F-6L050180-003	XX I 06 QP 01	Y-D	_____	M100D
JKR7G-2-CN	F-6L050180-004	XX I 06 QP 01	Y-D	_____	M2A
JKR7G-1-HH	F-6L050180-004-D	XX I 06 QP 01	Y-D	_____	M2A
JKR7G-1-HG	F-6L050180-004-S	XX I 06 QP 01	Y-D	_____	M2A
JKR7T-2-CN	F-6L050180-005	XX I 06 QP 01	Y-D	_____	EB120406
JKR78-2-CN	F-6L050180-006	XX I 06 QP 01	Y-D	_____	M95
JKWQM-2-CM	F-6L060222-001	XX I 06 QP 01	Y-D	_____	M12A
JKWVW-2-CX	F-6L060222-002	XX I 06 QP 01	Y-D	_____	M39
JKWWK-2-C6	F-6L060222-003	XX I 06 QP 01	Y-D	_____	M89
JKWWQ-2-C6	F-6L060222-004	XX I 06 QP 01	Y-D	_____	EB120506
JK163-2-CN	F-6L070281-001	XX I 06 QP 01	Y-D	_____	M48
JK17W-2-CU	F-6L070281-002	XX I 06 QP 01	Y-D	_____	MC45
JK173-2-CU	F-6L070281-003	XX I 06 QP 01	Y-D	_____	M31A
JK176-2-CU	F-6L070281-004	XX I 06 QP 01	Y-D	_____	M11
JK177-2-CU	F-6L070281-005	XX I 06 QP 01	Y-D	_____	M11D
JK178-2-CU	F-6L070281-006	XX I 06 QP 01	Y-D	_____	EB120606
JK4XW-2-CK	F-6L080240-001	XX I 06 QP 01	Y-D	_____	M5A
JK40F-2-CQ	F-6L080240-002	XX I 06 QP 01	Y-D	_____	M55

*Goes with batch 6349287*

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/12/07  
Time: 10:43:10

STL St. Louis

QC BATCH #: 7012197  
PREP DATE: 12/15/06  
COMP DATE: 12/15/06  
USER: HOUGHG

INITIALS:                   DATA ENTRY:  
PREP \_\_\_\_\_           INITIALS \_\_\_\_\_  
ANAL \_\_\_\_\_           DATE \_\_\_\_\_

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JK40P-2-CQ	F-6L080240-003	XX I 06 QP 01	Y-D	_____	M55D
JK40V-2-CQ	F-6L080240-004	XX I 06 QP 01	Y-D	_____	EB120706
JMRAE-1-AA	F-7A120000-197-B	XX I 06 QP 01		_____	INTRA-LAB BLANK
JMRAE-1-AC	F-7A120000-197-C	XX I 06 QP 01		_____	INTRA-LAB CHECK
JMRAE-1-AD	F-7A120000-197-C	XX I 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

(90-110)  
(90-110)  
(90-110)  
(90-110)

Work Order	Result	Units	IDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output IDL	Dil.
JKR7F-2-CT	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JKR7G-2-CN	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JKR7T-2-CN	12.49	ug/L	5	12/15-12/21/06	.00	N		12.5 J	5.0	1.00
JKR78-2-CN	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JKWQM-2-CM	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JKWVW-2-CX	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JKWVK-2-C6	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JKWVQ-2-C6	7.34	ug/L	5	12/15-12/21/06	.00	N		7.3 J	5.0	1.00
JK163-2-CN	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK17W-2-CU	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK173-2-CU	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK176-2-CU	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK177-2-CU	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK178-2-CU	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK4XM-2-CK	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK40F-2-CQ	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK40P-2-CQ	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JK40V-2-CQ	ND	ug/L	5	12/15-12/21/06	.00	N		ND	5.0	1.00
JMRAE-1-AA	8.91	ug/L	5	12/15-12/21/06	.00	N		8.9	5.0	1.00

Notes: J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JMRAE-1-AC	100	100	102.54	102.54	12/15-12/21/06	(90-110)	1.00
JMRAE-1-AD	400	400	401.81	100.45	12/15-12/21/06	(90-110)	1.00

PDF115  
Method Code: Cyanide, Total  
Analyst: Chris Hough  
Notes:  
MS - MSD  
Work Order JKX7G-1-HG  
Exception Code  
Measured Sample ND  
True Spike T00  
Measured SPIKE ND  
Measured Dup. ND  
Pct. Recovered  
SPIKE .00  
DUP .00  
RPD .00  
Prep. - Anal 12/15-12/21/06  
Dil. 1.00  
Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 7012197  
Date 1/12/2007  
Time 11:51:21

TEST TOTAL # 0  
SAMPLE # 0  
PRODUCTION TOTALS  
QC # 0  
MATRIX # 0  
OTHER # 0  
MISC # 0  
HOURS .0

# Clouseau Nonconformance Memo

**SEVERN  
TRENT**
**STL**
NCM #: **06-0088004**

NCM Initiated By: Chris Hough

Date Opened: 01/12/2007

Date Closed:

Classification: **Anomaly**Status: **QAREVIEW**

Production Area: Classical Chemistry

Tests: 9012A

 Lot #'s (Sample #'s): F6L050180 (3,4,5,6),  
 F6L060222 (1,2,3,4),  
 F6L070281 (1,2,3,4,5,6),  
 F6L080240 (1,2,3,4),  
 F7A120000 (197),

QC Batches: 7012197,

Nonconformance: Method Blank Contamination

Subcategory: Re-prep/re-analyze samples (required)

## Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
Chris Hough	01/12/2007	7012197 CN The method blank exhibited concentration(s) above the reporting limit, indicating a potential positive bias for the analyte(s). Samples were reanalyzed. The reanalysis, with an acceptable method blank, yielded comparable results. Both results are reported for your review.

## Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
Chris Hough	01/12/2007	NA

## Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>

## Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
		This section not yet completed by QA.	

## Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
01/12/2007	Chris Hough	Chemist



Report Date: 12/21/06  
 Analysis Date: 12/21/06  
 Data File: CN1221  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.998939  
 Corr: 0.999469  
 Std. Dev.: 6.817173

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
1	P			515.83		13:38:47
2	W			5.10	I	13:40:02
3	S1			2.86	sI	13:41:17
4	S2			6.22	sI	13:42:32
5	S3			21.68	s	13:43:48
6	S4			102.09	s	13:45:04
7	S5			244.56	s	13:46:18
8	S6			293.62	s	13:47:33
9	S7			392.40	s	13:48:48
10	S8			511.57	s	13:50:02
11	ICV			198.42/200	99%	13:51:17
12	ICB			2.86/50	I	13:52:32
13	<del>JJ0XF</del>			10.70		13:53:47
14	<del>JJ0X2</del>			8.46		13:55:02
15	<del>JJ0X5</del>			9.13		13:56:18
16	<del>JJ0X5D</del>			75.44/100	75%	13:57:32
17	<del>JJ0X5S</del>			99.63/100	100%	13:58:47
18	BLK			9.80		14:00:03
19	LCS			102.32/100	102%	14:01:17
20	HCS			348.50/400	87%	14:02:33
21	JKM64 S			44.30		14:03:48
22	JKM64 P			53.26		14:05:03
23	CCV			246.58/250	99%	14:06:19
24	CCB			2.86/5	I	14:07:34
25	JKM64			7.79		14:08:50
26	JKPM1 S			126.96		14:10:03
27	JKPM1 P			115.09		14:11:19
28	JKPM1			17.64		14:12:34
29	BLK			8.91		14:13:49
30	LCS			102.54/100	102%	14:15:04
31	HCS			401.81/400	100%	14:16:19
32	JKR7F			2.64	-RI	14:17:34
33	JKR7G			1.52	-RI	14:18:49
34	JKR7GD			3.31/100	3% I	14:20:04
35	CCV			233.36/250	93%	14:21:20
36	CCB			2.86/5	I	14:22:35
37	JKR7GS			3.08/100	3% I	14:23:50
38	JKR7T			12.49		14:25:05
39	JKWQM			2.86	I	14:26:20
40	JKWVW			2.41	-RI	14:27:35
41	JKWWK			3.31	I	14:28:51
42	JKWWQ			7.34		14:30:07
43	JK163			1.74	-RI	14:31:21
44	JK17W			2.64	-RI	14:32:36
45	JK173			2.41	-RI	14:33:51

END of 633327 Reprcp

6346388

CH 1/1/07  
 analyst Error

6349287 EAW 1-18-07  
 7012197

Page: 2

Order of Fit: First

Coefs: 1st: 2.859620 2nd: 9.172961

Report Date: 12/21/06

Analysis Date: 12/21/06

Data File: CN1221

Method Name: CYANIDE

Units: ug/L

Description: Cyanide

R^2: 0.998939

Corr: 0.999469

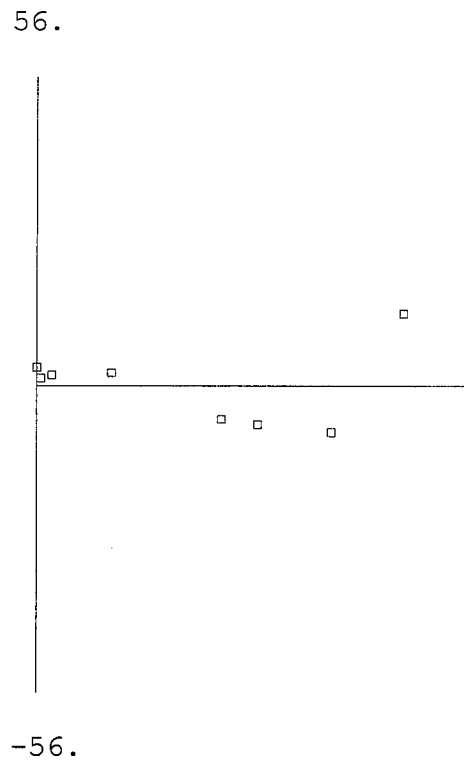
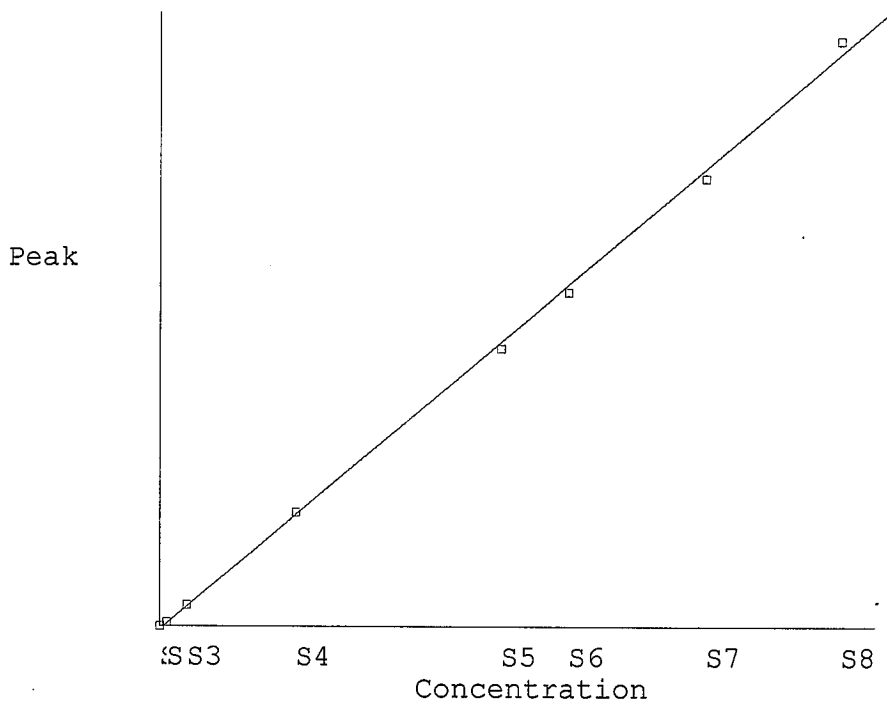
Std. Dev.: 6.817173

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
46	JK176			0.84	-RI	14:35:06
47	CCV			243.22/250	97%	14:36:21
48	CCB			2.19 <5	-RI	14:37:36
49	JK177			2.19	-RI	14:38:51
50	JK178			0.00	-zRI	14:40:06
51	JK4XW			0.62	-RI	14:41:21
52	JK40F			1.29	-RI	14:42:36
53	JK40P			2.19	-RI	14:43:51
54	JK40V			1.07	-RI	14:45:07
55	JKR78			1.74	-RI	14:46:23
56	CCV			236.27/250	94%	14:47:39
57	CCB			1.74 <5	-RI	14:48:54
58	HIGH			514.48		14:50:09
59	BLK			249.94		14:51:23

Data File: CN1221

Method File: CYANIDE

Sample Table File: CN1221



S#	Peak	Value	Calc	Residual
S1	0.00	0.00	2.86	2.86
S2	0.37	5.00	6.22	1.22
S3	2.05	20.00	21.68	1.68
S4	10.82	100.00	102.09	2.09
S5	26.35	250.00	244.56	-5.44
S6	31.70	300.00	293.62	-6.38
S7	42.47	400.00	392.40	-7.60
S8	55.46	500.00	511.57	11.57

Coefficients:

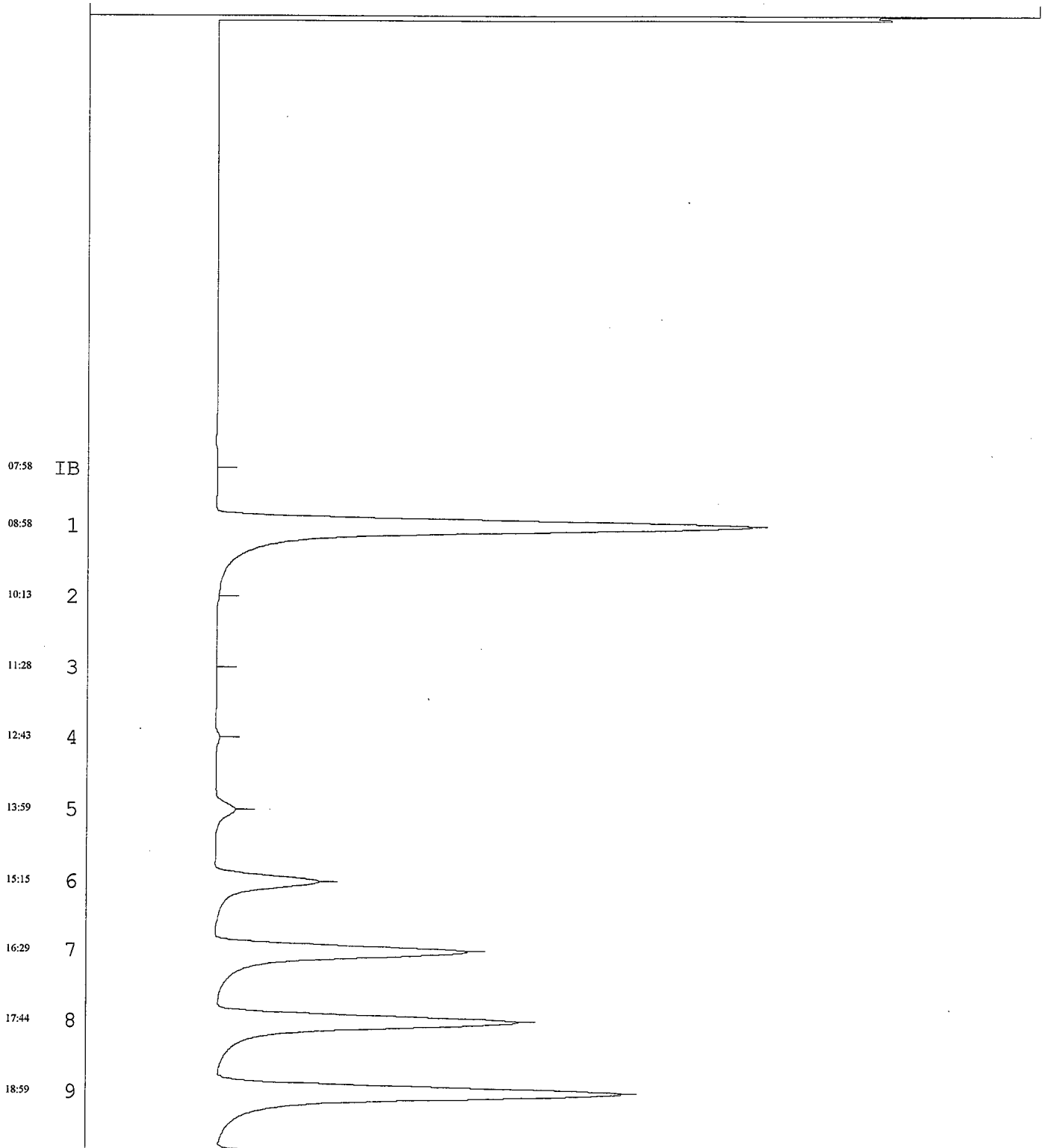
Intercept : 2.85962  
 Slope : 9.17296  
 Std Dev : 6.81717  
 Corr Coef : 0.999469  
 R^2 : 0.998939

12/21/2006 15:00

Page:1

Data: CN1221  
Mthd: CYANIDE  
Samp: CN1221  
0

100

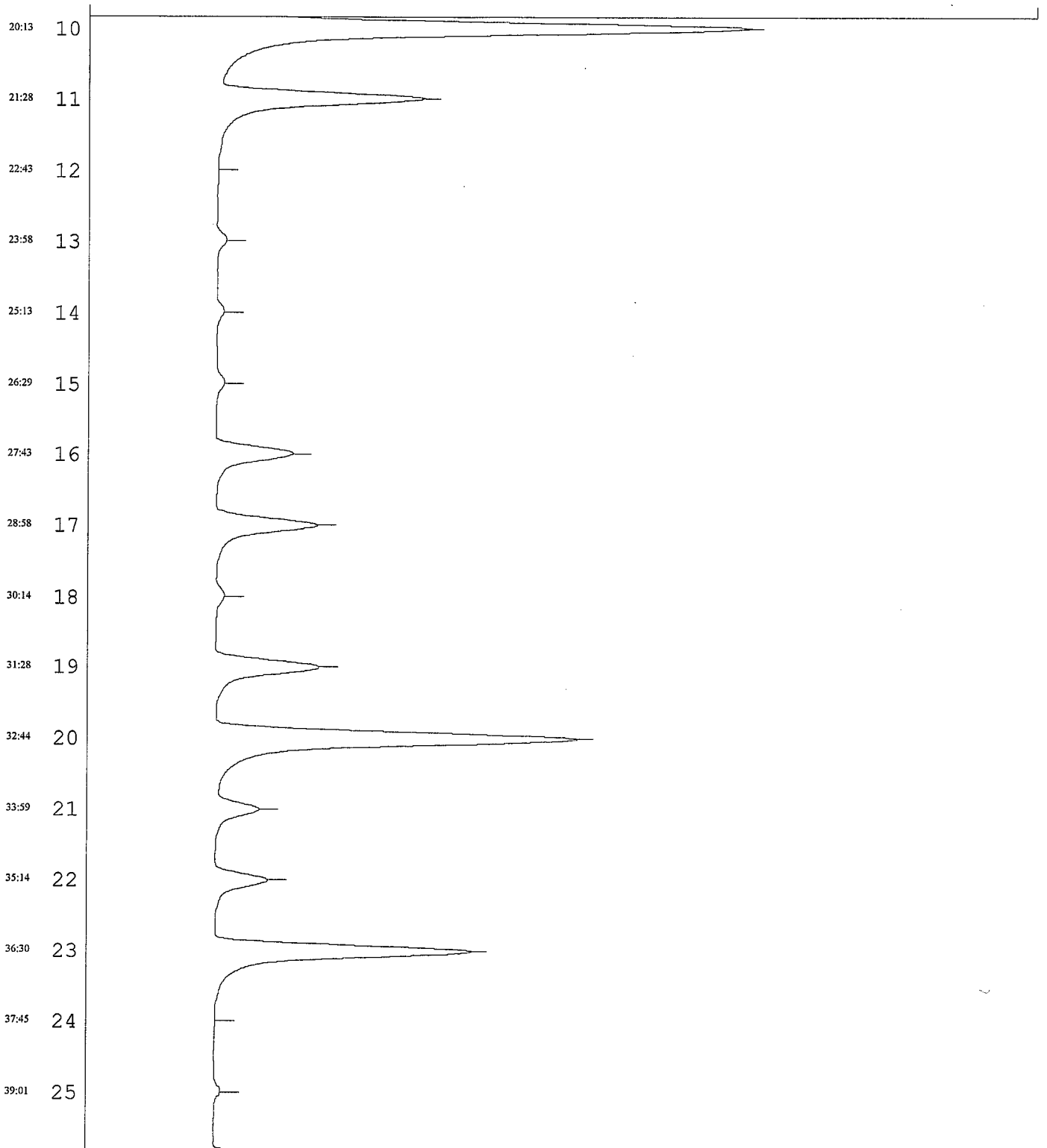


12/21/2006 15:00

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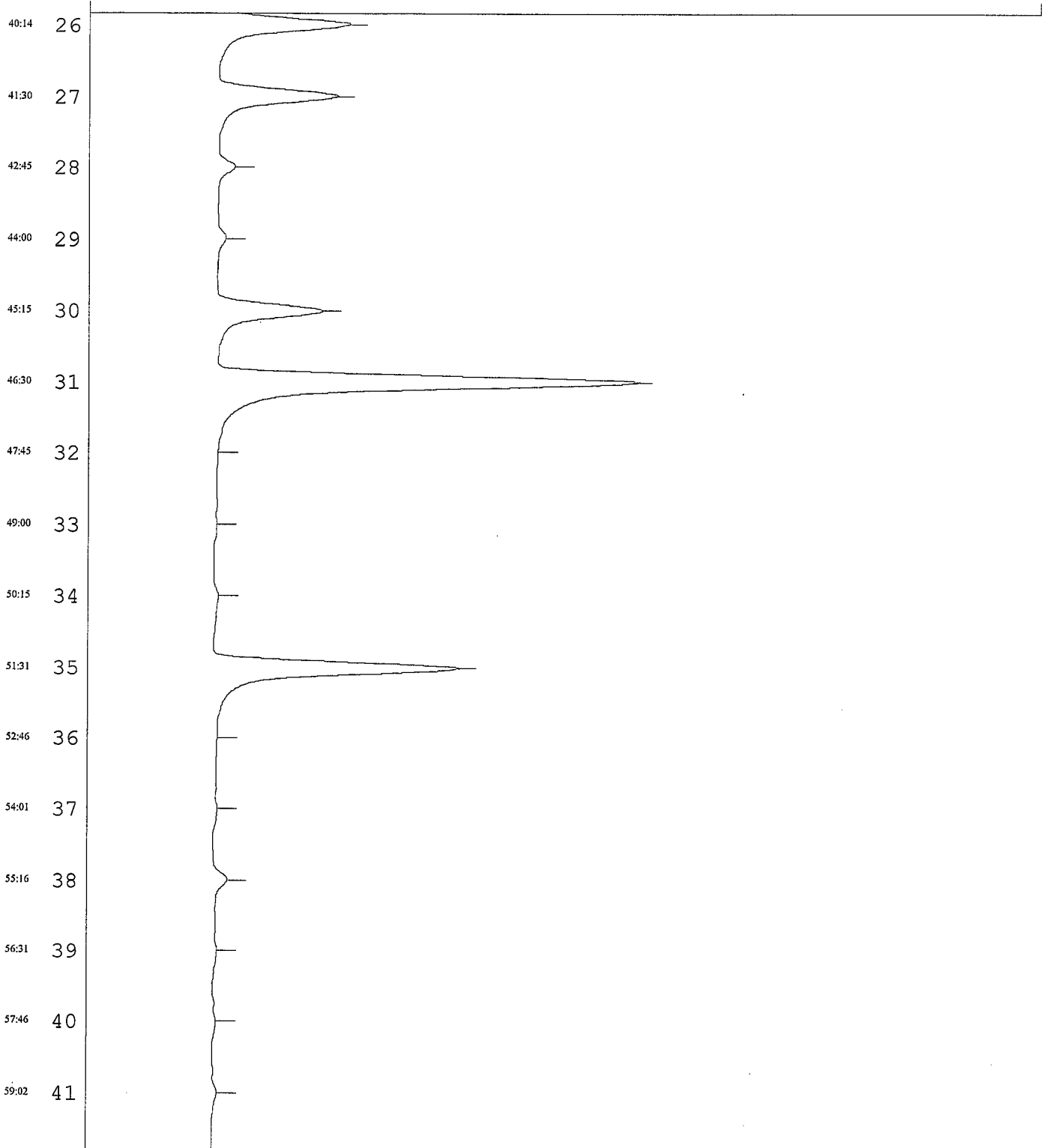


12/21/2006 15:00

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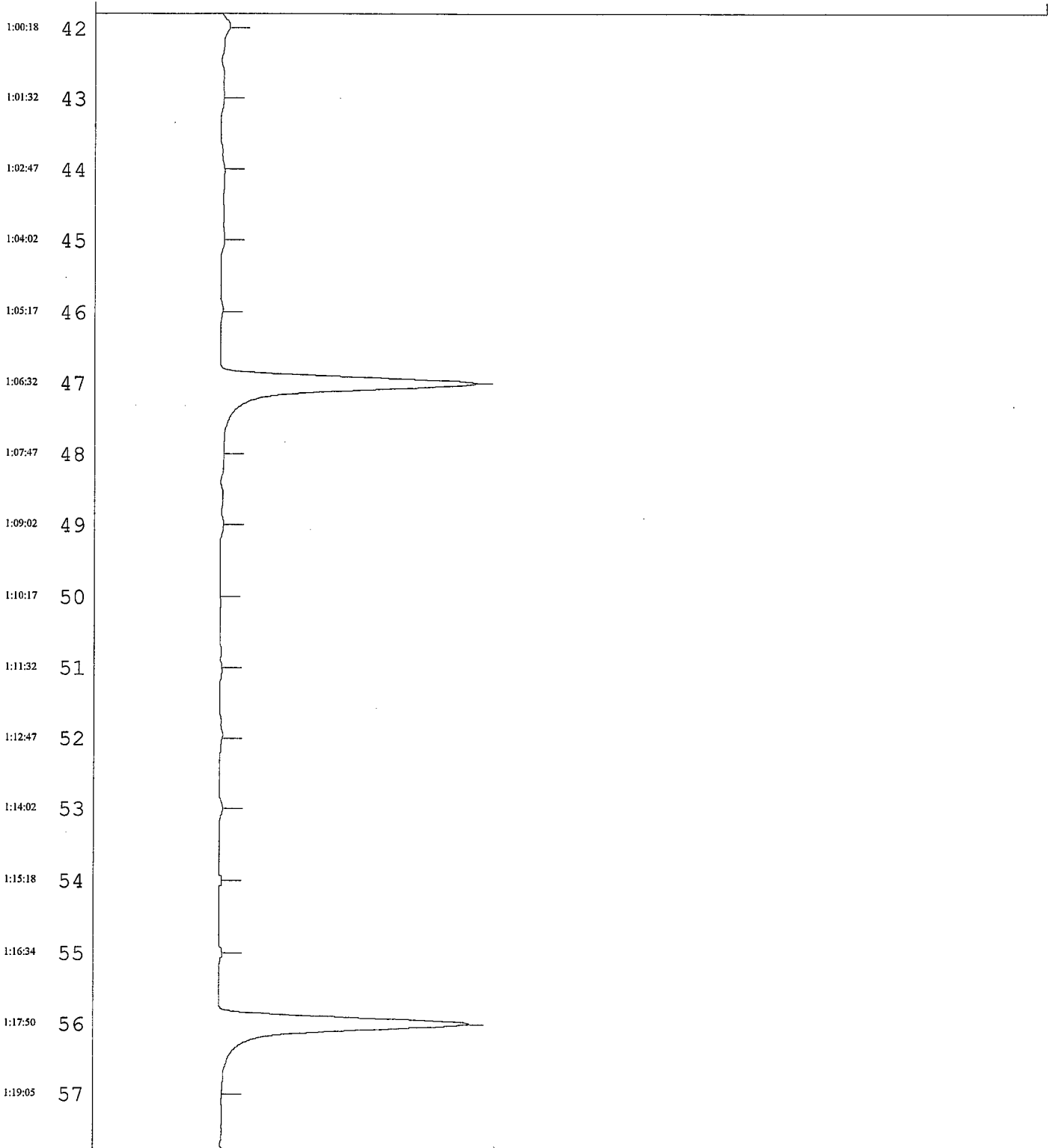


12/21/2006 15:00

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Mthd: CYANIDE  
Samp: CN1221  
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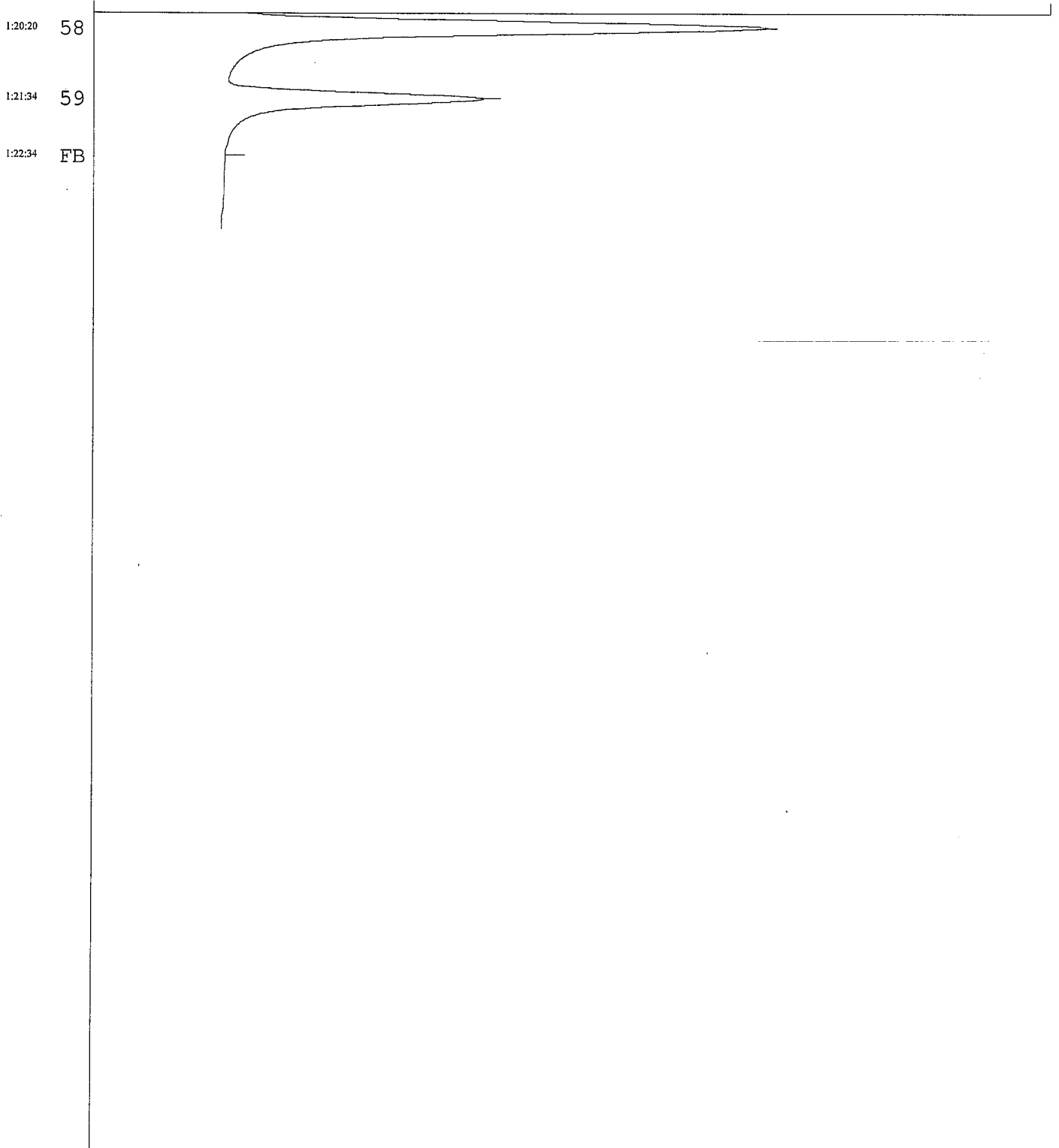


12/21/2006 15:00

Page:5

Data: CN1221  
Mthd: CYANIDE  
Samp: CN1221  
0

100







STL

STL St. Louis  
Data Review Check List

Wet Chemistry

<b>Due Dates:</b> Earliest:	Latest:	<b>Run Date:</b> 01-10-07			
<b>Method Name/#:</b> CN 335.1, 335.2, 335.4, 9010B, 9012A, 4500					
<b>Batch #:</b> 6333327, 633274, 6338185, 6338198					
<b>Lot #s:</b> F6K160199, F6K170247, F6K180200, F6K210226					
<b>NCM's:</b> 06-0088111, 06-0088117					
<b>Review Item</b>					
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Review</b>	
<b>Initial Calibration</b>					
Initial Calibration data in this package?	X			/	
If not, please specify initial calibration date:				/	
Initial Calibration meets method acceptance criteria:	X			/	
Corr. Coefficient = 0.995; Y-intercept < the absolute value of the RL				/	
Is the low level standard = the reporting limit?	X			/	
<b>Calibration Check (ICV)</b>					
ICV performed with initial calibration?	X			/	
ICV meets method acceptance criteria (max. 10% D)?	X			/	
<b>Continuing Calibration Verification (CCV)</b>					
CCV performed at the prescribed frequency?	X			/	
CCV meets method acceptance criteria (max. 10% D)?	X			/	
<b>Continuing Calibration Blank (CCB)</b>					
CCB performed after every CCV?	X			/	
CCB meets method acceptance criteria?	X			/	
Criteria: < the absolute value of the Reporting Limit (see client sheet for				/	
<b>Batch QC - Method Blanks</b>					
Is a Method Blank required for this analysis?	X			/	
Is the method blank below the Reporting Limit for targets of interest?	X			/	
<b>Batch QC - LCS</b>					
Is a LCS required for this analysis?	X			/	
Are the LCS (LCS/D) recoveries within method acceptance?		X		/	
<b>Batch QC - MS/MSD</b>					
Is a MS/MSD or MS/Sample Duplicate required for this analysis?	X			/	
Are the MS(MSD) recoveries within method acceptance?		X		/	
<b>Batch QC - RPD</b>					
MS/MSD or Sample/Sample Duplicate RPD within acceptance criteria	X			/	
<b>Sample Results - Report</b>					
Are samples bracketed by acceptable CCV/CCB?	X			/	
Are results within the calibration range?	X			/	
Was analysis performed within Hold Time?	X			/	
Did samples require dilution due to: (check one if applicable)		X		/	
matrix interference				/	
high target analyte concentration				/	
If dilutions were performed, was it within Hold Time?			X	/	
If dilutions were performed, are the undiluted runs in this submission?			X	/	
If not, please indicate where found:				/	
<b>Sample Results - Misc. information</b>					
Are Batch sheets, Preparation Logs (if applicable) included?	X			/	
Are copies of run logs included, initialed and dated?	X			/	
Were manual calculations performed? reviewer must check calculations		X		/	
Were manual integrations performed, dated, and initialed?		X		/	
Client requirement sheets followed in data package?	X			/	
Reagents and Standards documented on prep/batch sheets?	X			/	
<b>Additional Comments:</b>					
<b>Analyst/Date:</b> <i>DA</i> 01-22-07			<b>Reviewer/Date:</b> <i>Ben M</i> 1/22/07		

RR  
B/A  
1/23/07

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/16/07  
Time: 15:32:52

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6333327	INITIALS:	DATA ENTRY:
PREP DATE:	1/11/07	PREP _____	INITIALS _____
COMP DATE:	1/11/07	ANAL _____	DATE _____
USER:	THOMASD		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJT9F-1-CL	F-6K160199-016	XX A 06 QP 01	Y-D	_____	SA21-30
JJ0TH-1-CE	F-6K170247-002	XX A 06 QP 01	Y-D	_____	SA22-10
JJ0TN-1-CK	F-6K170247-003	XX A 06 QP 01	Y-D	_____	SA22-20
JJ0TV-1-CE	F-6K170247-004	XX A 06 QP 01	Y-D	_____	SA20-0.5
JJ0TV-1-FN	F-6K170247-004-D	XX A 06 QP 01	Y-D	_____	SA20-0.5
JJ0TV-1-FM	F-6K170247-004-S	XX A 06 QP 01	Y-D	_____	SA20-0.5
JJ0V5-1-CK	F-6K170247-005	XX A 06 QP 01	Y-D	_____	SA20-0.5D
JJ0WG-1-CN	F-6K170247-006	XX A 06 QP 01	Y-D	_____	SA20-10
JJ0WP-1-CP	F-6K170247-007	XX A 06 QP 01	Y-D	_____	SA20-20
JJ0WQ-1-CQ	F-6K170247-008	XX A 06 QP 01	Y-D	_____	SA20-25
JJ0W3-1-CK	F-6K170247-009	XX A 06 QP 01	Y-D	_____	SA19-0.5
JJ0XF-1-CN	F-6K170247-010	XX A 06 QP 01	Y-D	_____	SA19-10
JJ0X2-1-CP	F-6K170247-011	XX A 06 QP 01	Y-D	_____	SA19-20
JJ0X5-1-CQ	F-6K170247-012	XX A 06 QP 01	Y-D	_____	SA19-25
JJ0X5-1-FW	F-6K170247-012-D	XX A 06 QP 01	Y-D	_____	SA19-25
JJ0X5-1-FV	F-6K170247-012-S	XX A 06 QP 01	Y-D	_____	SA19-25
JKG3J-1-AA	F-6K290000-327-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKG3J-1-AD	F-6K290000-327-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/16/07  
Time: 15:32:52

STL St. Louis

QC BATCH #:	6333327	INITIALS:	DATA ENTRY:
PREP DATE:	1/11/07	PREP _____	INITIALS _____
COMP DATE:	1/11/07	ANAL _____	DATE _____
USER:	THOMASD		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JKG3J-1-AC	F-6K290000-327-C	XX A 06 QP 01	_____		INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

Date 1/16/2007  
Time 16:37:47

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6333327

PDE115

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output	Dil.
JJ09F-1-CL	ND	mg/kg	0.5	01/11-01/15/07	89.45	N		ND	0.56	1.00
JJ0TH-1-CE	ND	mg/kg	0.5	01/11-01/15/07	90.27	N		ND	0.55	1.00
JJ0TN-1-CK	ND	mg/kg	0.5	01/11-01/15/07	85.73	N		ND	0.58	1.00
JJ0TV-1-CE	ND	mg/kg	0.5	01/11-01/15/07	89.86	N		ND	0.56	1.00
JJ0V5-1-CK	ND	mg/kg	0.5	01/11-01/15/07	80.50	N		ND	0.62	1.00
JJ0WG-1-CN	ND	mg/kg	0.5	01/11-01/15/07	84.21	N		ND	0.59	1.00
JJ0WP-1-CP	1.2275	mg/kg	0.5	01/11-01/15/07	94.77	N		1.3	0.53	1.00
JJ0WQ-1-CQ	ND	mg/kg	0.5	01/11-01/15/07	84.53	N		ND	0.59	1.00
JJ0W3-1-CK	ND	mg/kg	0.5	01/11-01/15/07	90.59	N		ND	0.55	1.00
JJ0XF-1-CN	ND	mg/kg	0.5	01/11-01/15/07	91.48	N		ND	0.55	1.00
JJ0X2-1-CP	ND	mg/kg	0.5	01/11-01/15/07	91.22	N		ND	0.55	1.00
JJ0X5-1-CQ	ND	mg/kg	0.5	01/11-01/15/07	86.06	N		ND	0.58	1.00
JKG3J-1-AA	ND	mg/kg	0.5	01/11-01/15/07	.00			ND	0.50	1.00

Notes:

Results and reporting limits have been adjusted for dry weight.

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JKG3J-1-AD		20.0	17.856 N	89.28	01/11-01/15/07	(90-110)	1.00
JKG3J-1-AC		5.0	5.081	101.62	01/11-01/15/07	(90-110)	1.00

Notes:

N Spiked analyte recovery is outside stated control limits.

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	SPIKE	Pct. Recovered	Recovered DUP	RPD	Prep. - Anal.	Dil.
JJ0TV-1-FW		ND	5	4.812	4.9285	96.24	54.07	98.57	2.39	01/11-01/15/07	1.00
JJ0X5-1-FV		ND	5	2.7035 N	3.367	54.07	67.34	21.86		01/11-01/15/07	1.00

Notes:

Results and reporting limits have been adjusted for dry weight.

N Spiked analyte recovery is outside stated control limits.

STL St. Louis Laboratory  
Cyanide Method 335.4/9012B

Analyst: CH, JB, DNT

Page: 1 of 1

Prep Date: 1/11/2007

Batch No.: 6333327

Analysis Filename: CN01157

Analysis Date: 1/15/2007

Laboratory ID	Standard Conc. ug/L	Raw Value ug/L	Dilution	Sample Volume		Scrubber Volume, L (Nom. 0.05L)	Combined Prep Factor	Final Concentration as CN		Percent Recovery	RPD
				Liter (Nom. 0.050L)	Gram (Nom. 1 g)			ug/L	mg/Kg *		
BLK		1.57	1		1	0.05	0.05		0.0785		
LCS	100	101.62	1		1	0.05	0.05		5.081		
HCS	400	357.12	1		1	0.05	0.05		17.856		
JJ09F		2.95	1		1	0.05	0.05		0.1475		
JJ0TH		0.39	1		1	0.05	0.05		0.0195		
JJ0TN		0.62	1		1	0.05	0.05		0.031		
JJ0TV		3.64	1		1	0.05	0.05		0.182		
JJ0TV D		98.57	1		1	0.05	0.05		4.9285		
JJ0TV S		96.24	1		1	0.05	0.05		4.812		
JJ0V5		3.16	1		1	0.05	0.05		0.158		
JJ0WG		3.84	1		1	0.05	0.05		0.192		
JJ0WP		24.55	1		1	0.05	0.05		1.2275		
JJ0WQ		2.67	1		1	0.05	0.05		0.1335		
JJ0W3		2.67	1		1	0.05	0.05		0.1335		
JJ0XF		0	1		1	0.05	0.05		0		
JJ0X2		0.33	1		1	0.05	0.05		0.0165		
JJ0X5		2.89	1		1	0.05	0.05		0.1445		
JJ0X5 D		67.34	1		1	0.05	0.05		3.367		
JJ0X5 S		54.07	1		1	0.05	0.05		2.7035		
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				

Control Limits (Water/Soil): LCS = 90 - 110; RPD 20%

Control Limits (Water/Soil): MS = 90 - 110; RPD (water) 20%, (soil) 30%

Cyanide, total ug/L (mg/Kg) =  $\frac{\text{Raw Value} \times \text{Dilution} \times \text{Scrubber Volume (L)}}{\text{Sample Volume (L,G)}}$

SOP STL-WC-0002  
Rev 5  
Date 2/28/06

# Results are raw calculation and do not reflect rounding, requested significant figures, or client reporting limits.  
\* Results on spreadsheet are "wet weight".

Lot #y: F6K160199

Batch #: 633327

Distillation Time: 60

STL St. Louis Laboratory  
Cyanide Distillation Log  
Method 335.4/9012B

LC5/LC50/MS = 0.5 ml  
HCS = 2.0 ml CN Intermediate  
AC Std

- Distilled Samples
- Client Requirements Sheets
- Bar Code Sheets
- Quarantums Batch Sheets
- Distillation Prep Std bag

Soil  
 Water

Analyst: CH JB  
Preparation Date: 01-11-07

Sequence Number	Laboratory ID	Soil = 1g Water = 50ml Sample Weight (m) (Nominally 50 m)	NaOH Scrubber Volume (Nominally 50ml)	<sup>PH</sup> check Spike volume added (ml)	Sulfide Interference (Lead Acetate) checked	Nitrate or Nitrite Interference (Sulfamic acid) checked	Comments (Note any interference treatment)
#1	BLK	1g	50ml	NA	NA	NA	
#2	LC5						
#3	HCS						
#4	JJ09F						
#5	JJ07N						
#6	JJ07N						
#7	JJ07V						
#8	JJ07V-S						
#9	JJ07V-D						
#10	JJ0V5						
#11	JJ0W7G						
#12	JJ0WP						
#13	JJ0WQ						
#14	JJ0W3						
#15	JJ0XF						
#16	JJ0XZ						
#17	JJ0X5						
#18	JJ0X5-S						
#19	JJ0X5-D						
#20							
#21							
#22							
#23							

Flow Rate = approx. 2 bubbles/second  
Distillation time criteria: 60 min. minimum  
SOP  
Rev  
Date  
1/18/2006

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/16/07  
Time: 15:31:20

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
-----------------	------------------	----	------------------	-----------------	----------------	----------------	-------------------------

METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6333274	INITIALS:	DATA ENTRY:
PREP DATE:	1/10/07	PREP _____	INITIALS _____
COMP DATE:	1/10/07	ANAL _____	DATE _____
USER:	THOMASD		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJT4R-1-CW	F-6K160199-002	XX A 06 QP 01	Y-D	_____	SA17-0.5
JJT44-1-C2	F-6K160199-003	XX A 06 QP 01	Y-D	_____	SA17-0.5D
JJT47-1-CD	F-6K160199-004	XX A 06 QP 01	Y-D	_____	SA17-10
JJT5C-1-CG	F-6K160199-005	XX A 06 QP 01	Y-D	_____	SA17-20
JJT5K-1-CH	F-6K160199-006	XX A 06 QP 01	Y-D	_____	SA17-25
JJT5Q-1-CJ	F-6K160199-007	XX A 06 QP 01	Y-D	_____	SA18-0.5
JJT55-1-CM	F-6K160199-008	XX A 06 QP 01	Y-D	_____	SA18-0.5D
JJT58-1-CQ	F-6K160199-009	XX A 06 QP 01	Y-D	_____	SA18-10
JJT66-1-CR	F-6K160199-010	XX A 06 QP 01	Y-D	_____	SA18-20
JJT7F-1-CT	F-6K160199-011	XX A 06 QP 01	Y-D	_____	SA18-30
JJT7Q-1-C2	F-6K160199-012	XX A 06 QP 01	Y-D	_____	SA21-0.5
JJT8N-1-CD	F-6K160199-013	XX A 06 QP 01	Y-D	_____	SA21-10
JJT87-1-CJ	F-6K160199-014	XX A 06 QP 01	Y-D	_____	SA21-20
JJT9D-1-CK	F-6K160199-015	XX A 06 QP 01	Y-D	_____	SA21-20D
JJ0QP-1-C3	F-6K170247-001	XX A 06 QP 01	Y-D	_____	SA22-0.5
JJ0QP-1-E9	F-6K170247-001-D	XX A 06 QP 01	Y-D	_____	SA22-0.5
JJ0QP-1-E8	F-6K170247-001-S	XX A 06 QP 01	Y-D	_____	SA22-0.5
JKGRK-1-AA	F-6K290000-274-B	XX A 06 QP 01		_____	INTRA-LAB BLANK

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/16/07  
Time: 15:31:20

STL St. Louis

QC BATCH #: 6333274  
PREP DATE: 1/10/07  
COMP DATE: 1/10/07  
USER: THOMASD

INITIALS:                   DATA ENTRY:  
PREP \_\_\_\_\_           INITIALS \_\_\_\_\_  
ANAL \_\_\_\_\_           DATE \_\_\_\_\_

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JKGRK-1-AD	F-6K290000-274-C	XX A 06 QP 01	_____	_____	INTRA-LAB CHECK
JKGRK-1-AC	F-6K290000-274-C	XX A 06 QP 01	_____	_____	INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

(90-110)

(90-110)



Date 1/16/2007  
Time 16:34:47

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6333274

PDE115

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	IDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output IDL	Dil.
JJT4R-1-CW	ND	mg/kg	0.5	01/10-01/15/07	85.33	N		ND	0.59	1.00
JJT44-1-C2	ND	mg/kg	0.5	01/10-01/15/07	86.55	N		ND	0.58	1.00
JJT47-1-CD	ND	mg/kg	0.5	01/10-01/15/07	87.91	N		ND	0.57	1.00
JJT5C-1-CG	ND	mg/kg	0.5	01/10-01/15/07	94.25	N		ND	0.53	1.00
JJT5K-1-CH	ND	mg/kg	0.5	01/10-01/15/07	80.97	N		ND	0.62	1.00
JJT5Q-1-CJ	ND	mg/kg	0.5	01/10-01/15/07	91.71	N		ND	0.55	1.00
JJT55-1-CM	ND	mg/kg	0.5	01/10-01/15/07	95.14	N		ND	0.53	1.00
JJT58-1-CQ	ND	mg/kg	0.5	01/10-01/15/07	92.16	N		ND	0.54	1.00
JJT66-1-CR	ND	mg/kg	0.5	01/10-01/15/07	93.04	N		ND	0.54	1.00
JJT7F-1-CT	ND	mg/kg	0.5	01/10-01/15/07	90.88	N		ND	0.55	1.00
JJT7Q-1-C2	ND	mg/kg	0.5	01/10-01/15/07	95.68	N		ND	0.52	1.00
JJT8N-1-CD	ND	mg/kg	0.5	01/10-01/15/07	90.86	N		ND	0.55	1.00
JJT87-1-CJ	ND	mg/kg	0.5	01/10-01/15/07	90.46	N		ND	0.55	1.00
JJT9D-1-CK	ND	mg/kg	0.5	01/10-01/15/07	95.80	N		ND	0.52	1.00
JJ0QP-1-C3	ND	mg/kg	0.5	01/10-01/15/07	78.87	N		ND	0.63	1.00
JKGRK-1-AA	ND	mg/kg	0.5	01/10-01/15/07	.00			ND	0.50	1.00

Notes:

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits
JKGRK-1-AD		20.0	17.967	89.83	01/10-01/15/07	(90-110)
JKGRK-1-AC		5.0	4.2735	85.47	01/10-01/15/07	(90-110)

Notes:

N Spiked analyte recovery is outside stated control limits.

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Dup.	SPIKE	Pct.	Recovered DUP	RPD	Prep. - Anal.	Dil.
JJUQP-1-E8		ND	5	5.06	3.99	101.20	✓	79.80	23.64	01/10-01/15/07	1.00

Notes:

*Handwritten signature/initials*

Date 1/16/2007  
Time 16:34:47

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6333274

PDE115

Method Code: Cyanide, Total  
Analyst: Debbie Thomas  
Notes:  
Results and reporting limits have been adjusted for dry weight.

TEST	TOTAL #	SAMPLE #	PRODUCTION TOTALS			HOURS
			QC #	MATRIX #	OTHER #	
	0	0	0	0	0	.0

STL St. Louis Laboratory  
Cyanide Method 335.4/9012B

1677-1000  
1/15/2007

Analyst: CH, JB, DNT

Page: 1 of 1

Prep Date: 1/15/2007

Batch No.: 6333274

Analysis Filename: CN01157

Analysis Date: 1/15/2007

Laboratory ID	Standard Conc. ug/L	Raw Value ug/L	Dilution	Sample Volume		Scrubber Volume, L (Nom. 0.05L)	Combined Prep Factor	Final Concentration as CN		Percent Recovery	RPD
				Liter (Nom. 0.050L)	Gram (Nom. 1 g)			ug/L	mg/Kg *		
BLK		1.93	1		1	0.05	0.05		0.0965		
LCS	100	85.47	1		1	0.05	0.05		4.2735		
HCS	400	359.34	1		1	0.05	0.05		17.967		
JJT4R		3.08	1		1	0.05	0.05		0.154		
JJT44		1.68	1		1	0.05	0.05		0.084		
JJT47		1.91	1		1	0.05	0.05		0.0955		
JJT5C		0.74	1		1	0.05	0.05		0.037		
JJT5K		2.6	1		1	0.05	0.05		0.13		
JJT5Q		2.36	1		1	0.05	0.05		0.118		
JJT55		6.31	1		1	0.05	0.05		0.3155		
JJT58		1.41	1		1	0.05	0.05		0.0705		
JJT66		1.41	1		1	0.05	0.05		0.0705		
JJT7F		0.94	1		1	0.05	0.05		0.047		
JJT7Q		3.49	1		1	0.05	0.05		0.1745		
JJT8N		1.63	1		1	0.05	0.05		0.0815		
JJT87		2.56	1		1	0.05	0.05		0.128		
JJT9D		2.09	1		1	0.05	0.05		0.1045		
JJ0QP		4.64	1		1	0.05	0.05		0.232		
JJ0QP D		79.8	1		1	0.05	0.05		3.99		
JJ0QP S		101.2	1		1	0.05	0.05		5.06		
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				
							#DIV/0!				

Control Limits (Water/Soil): LCS = 90 - 110; RPD 20%

Control Limits (Water/Soil): MS = 90 - 110; RPD (water) 20%, (soil) 30%

Cyanide, total ug/L (mg/Kg) =  $\frac{\text{Raw Value} \times \text{Dilution} \times \text{Scrubber Volume (L)}}{\text{Sample Volume (L,G)}}$

# Results are raw calculation and do not reflect rounding, requested significant figures, or client reporting limits.  
\* Results on spreadsheet are "wet weight".

SOP STL-WC-0002  
Rev 5  
Date 2/28/06

Lot #s: Flk 160199,  
Flk 170247

STL St. Louis Laboratory  
Cyanide Distillation Log  
Method 335.4/9012B  
LC5/LCSO/MS = 0.5 ml  
HCS = 2.0 ml CN Intermediate  
AC Std

Analyst: JB, CH, R  
Preparation Date: 01-18-07  
 Soil  
 Water

SD # ENSR111706

Batch #: 6333274  
Distillation Time: 60

Sequence Number	Laboratory ID	Sample Weight (mfl) (Nominally 50 mfl)	NaOH Scrubber Volume (Nominally 50ml)	<del>pH check</del> Spike volume added (ml)	Sulfide Interference (Lead Acetate) checked	Nitrate or Nitrite Interference (Sulfamic acid) checked	Comments (Note any interference treatment)
#1	JJ74R	1g	50ml	NA	NA	NA	
#2	JJ744						
#3	JJ747						
#4	JJ75C						
#5	JJ75K						
#6	JJ75Q						
#7	JJ755						
#8	JJ758						
#9	JJ766						
#10	JJ77F						
#11	JJ77Q						
#12	JJ78N						
#13	JJ787						
#14	JJ79D						
#15	JJ0QP						
#16	JJ0QP-S						
#17	JJ0QP-D						
#18	B/K						
<del>#19</del>	LCS						
<del>#20</del>	HCS						
#22							
#23							

Flow Rate = approx. 2 bubbles/second  
Distillation time criteria: 60 min. minimum

SOP: STL-IP-0005 Rev 7 Date: 1/18/2006

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/16/07  
Time: 15:32:07

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #: 6338198                      INITIALS:                      DATA ENTRY:  
PREP DATE: 1/12/07                      PREP \_\_\_\_\_                      INITIALS \_\_\_\_\_  
COMP DATE: 1/12/07                      ANAL \_\_\_\_\_                      DATE \_\_\_\_\_  
USER: THOMASD

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJ6MX-1-C0	F-6K210226-001	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6MX-1-E5	F-6K210226-001-D	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6MX-1-E4	F-6K210226-001-S	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6Q4-1-CA	F-6K210226-002	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6Q4-1-FJ	F-6K210226-002-D	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6Q4-1-FH	F-6K210226-002-S	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6RJ-1-CH	F-6K210226-003	XX A 06 QP 01	Y-D	_____	SA7-10D
JJ6R1-1-CL	F-6K210226-004	XX A 06 QP 01	Y-D	_____	SA7-20
JJ6TC-1-CP	F-6K210226-005	XX A 06 QP 01	Y-D	_____	SA7-30
JJ8P5-1-CT	F-6K210226-006	XX A 06 QP 01	Y-D	_____	SA7-34
JJ8QK-1-CA	F-6K210226-007	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8QK-1-FT	F-6K210226-007-D	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8QK-1-FR	F-6K210226-007-S	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8V6-1-CH	F-6K210226-008	XX A 06 QP 01	Y-D	_____	SA26-0.5D
JJ8WC-1-CP	F-6K210226-009	XX A 06 QP 01	Y-D	_____	SA26-10
JKP91-1-AA	F-6L040000-198-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKP91-1-AD	F-6L040000-198-C	XX A 06 QP 01		_____	INTRA-LAB CHECK
JKP91-1-AC	F-6L040000-198-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/16/07  
Time: 15:32:07

STL St. Louis

QC BATCH #: 6338199  
PREP DATE: 12/04/06  
COMP DATE: 1/12/07  
USER: THOMASD

INITIALS:  
PREP \_\_\_\_\_  
ANAL \_\_\_\_\_

DATA ENTRY:  
INITIALS \_\_\_\_\_  
DATE \_\_\_\_\_

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Control Limits

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(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

**SEVERN  
TRENT****STL**Sample Comments for Batch: **6338198**STL St. Louis  
13715 Rider Trail North  
Earth City, MO 63045

Lot ID: F6K210226 PM: MLH  
 Client: 456833 ENSR International  
 QuoteNo: 73018  
 ReptDate: 20061121  
 AnalDueDate: 20061206  
 RptDueDate: 20061211  
 Report Type: D2 Exp Deliv - CD & Hardcopy

Batching rules above apply: MS/MSDs should be logged in and  
 run as standard QC for all applicable wet chemistry TESTS  
 when client specified QC is requested.

TICFlag: N  
 QualFlag: Y

RAD QC:  
 Standard rad QC is acceptable - Duplicates should be logged  
 in for RAD tests when client specified QC is requested.  
 Sample volume issues/ QC failures - Client wishes to be  
 notified of major QC issues resulting in qualified data.  
 Client may wish to re-sample rather than report out of  
 hold data or other major QC failures that could be corrected  
 with additional sample volume. Please notified PM  
 immediately if this situation occurs.

**F6K210226001**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ6MX1C0	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**F6K210226002**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ6Q41CA	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**F6K210226003**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ6RJ1CH	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**F6K210226004**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ6R11CL	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**F6K210226005**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ6TC1CP	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**F6K210226006**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ8P51CT	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**F6K210226007**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ8QK1CA	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**F6K210226008**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ8V61CH	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**F6K210226009**

Extraction: 06 DISTILLATION, MICRO/MIDI - Acid  

WRKNO	Analyte	RL	Method	MDL
JJ8WC1CP	Total Cyanide	0.5 mg/kg	QP 9012A	0.12

**Comments**

Sample Receipt Notification Required - Robert Kennedy  
 Client will ship sub-contracted samples direct to labs  
 STL St. Louis will log in all the samples in St. Louis from  
 COC's provided in the coolers. (Duplicate chains should be  
 pink) RAW DATA PACKAGES REQUIRED PLEASE REPORT BY SDG  
 STL LA - Hexavalent Chromium  
 STL Denver - O-P Pest - RAW DATA PACKAGE REQUIRED  
 STL Sacramento - TOC & Perchlorate  
 STL Richland - RAD

**QC Requirements: ALL TESTS**

Client will specify QC on COC. Do not report other client  
 batch QC with ENSR results. If a batch does not have  
 client specified QC pick a sample for QC, if insufficient  
 sample volume run LCS/LCSD.

RAW DATA PACKAGES REQUIRED - PLEASE REPORT BY SDG  
 Please try to maximize ENSR batches when possible.

WET CHEM QC:

Date 1/16/2007  
Time 16:35:36

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6338198

PDE115

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JJ6WX-1-CU	ND	mg/kg	0.5	01/12-01/15/07	94.69	N		ND	0.53	1.00
JJ6Q4-1-CA	ND	mg/kg	0.5	01/12-01/15/07	94.35	N		ND	0.53	1.00
JJ6RJ-1-CH	ND	mg/kg	0.5	01/12-01/15/07	92.92	N		ND	0.54	1.00
JJ6R1-1-CL	ND	mg/kg	0.5	01/12-01/15/07	92.37	N		ND	0.54	1.00
JJ6TC-1-CP	ND	mg/kg	0.5	01/12-01/15/07	93.72	N		ND	0.53	1.00
JJ8P5-1-CT	ND	mg/kg	0.5	01/12-01/15/07	76.66	N		ND	0.65	1.00
JJ8QK-1-CA	ND	mg/kg	0.5	01/12-01/15/07	92.95	N		ND	0.54	1.00
JJ8V6-1-CH	ND	mg/kg	0.5	01/12-01/15/07	91.26	N		ND	0.55	1.00
JJ8WC-1-CP	ND	mg/kg	0.5	01/12-01/15/07	89.12	N		ND	0.56	1.00
JJKP91-1-AA	ND	mg/kg	0.5	01/12-01/15/07	.00			ND	0.50	1.00

Notes:

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JJKP91-1-AD		20.0	20.6955	103.47	01/12-01/15/07	(90-110)	1.00
JJKP91-1-AC		5.0	4.617	92.34	01/12-01/15/07	(90-110)	1.00

Notes:

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Measured Dup.	SPIKE	Pct.	Recovered DUP	RPD	Prep. - Anal.	Dil.
JJ6WX-1-E4		ND	5	4.8605		97.21	✓	.00	.00	01/12-01/15/07	1.00
JJ6Q4-1-FH		ND	5	3.801	3.5105	76.02	✓	70.21	7.94	01/12-01/15/07	1.00
JJ8QK-1-FR		ND	5	3.299	5.242	65.98	✓	104.84	45.49	01/12-01/15/07	1.00

Notes:

Results and reporting limits have been adjusted for dry weight.  
N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0





Lot #: FLK 210226  
 Batch #: 6338198  
 Distillation Time: 60

STL St. Louis Laboratory  
 Cyanide Distillation Log  
 Method 335.4/9012B  
LC5/LCS/MS = 0.5 ml  
HCS = 2.0 ml CN Intermediate  
8C Std

Analyst: CH 01-12-07  
 Preparation Date: CH 01-12-07  
 Distilled Samples  
 Client Requirements Sheets  
 Bar Code Sheets  
 Quantums Batch Sheets  
 Distillation Prep Std Log  
 Soil  
 Water

Sequence Number	Laboratory ID	Sample Weight (mft) (Nominally 50 mft)	NaOH Scrubber Volume (Nominally 50ml)	<sup>pH</sup> Spike volume added (ml)	Sulfide Interference (Lead Acetate) checked	Nitrate or Nitrite Interference (Sulfamic acid) checked	Comments (Note any interference treatment)
#1	BLK	1g	50ml	NA	NA	NA	
#2	LCS						
#3	HCS						
#4	JJ6MX						
#5	JJ6MX-5						
#6	JJ6MX-D						
#7	JJ6Q4						
#8	JJ6Q4-3						
#9	JJ6Q4-D						
#10	JJ6RJ						
#11	JJ6RI						
#12	JJ6TC						
#13	JJ8P5						
#14	JJ8AK						
#15	JJ8AK-5						
#16	JJ8AK-D						
#17	JJ8V6						
#18	JJ8V6						
#19	JJ8WC						
#20							
#21							
#22							
#23							

Flow Rate = approx. 2 bubbles/second  
 Distillation time criteria: 60 min. minimum

SOP \_\_\_\_\_ Rev \_\_\_\_\_ Date 1/18/2006

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/16/07  
Time: 15:32:31

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
--------------	---------------	----	---------------	--------------	-------------	-------------	----------------------

METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6338185	INITIALS:	DATA ENTRY:
PREP DATE:	1/12/07	PREP _____	INITIALS _____
COMP DATE:	1/12/07	ANAL _____	DATE _____
USER:	THOMASD		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJ28J-1-C0	F-6K180200-004	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28J-1-E5	F-6K180200-004-D	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28J-1-E4	F-6K180200-004-S	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28P-1-CA	F-6K180200-005	XX A 06 QP 01	Y-D	_____	SA8-10
JJ28V-1-CH	F-6K180200-006	XX A 06 QP 01	Y-D	_____	SA8-20
JJ28W-1-CL	F-6K180200-007	XX A 06 QP 01	Y-D	_____	SA8-30
JJ28X-1-CP	F-6K180200-008	XX A 06 QP 01	Y-D	_____	SA8-37
JJ280-1-CW	F-6K180200-009	XX A 06 QP 01	Y-D	_____	SA13-0.5
JJ282-1-C2	F-6K180200-010	XX A 06 QP 01	Y-D	_____	SA13-0.5D
JJ288-1-CD	F-6K180200-011	XX A 06 QP 01	Y-D	_____	SA13-10
JJ29D-1-CH	F-6K180200-012	XX A 06 QP 01	Y-D	_____	SA13-20
JJ29E-1-CJ	F-6K180200-013	XX A 06 QP 01	Y-D	_____	SA13-30
JJ29F-1-CK	F-6K180200-014	XX A 06 QP 01	Y-D	_____	SA13-40
JJ29F-1-FK	F-6K180200-014-D	XX A 06 QP 01	Y-D	_____	SA13-40
JJ29F-1-FJ	F-6K180200-014-S	XX A 06 QP 01	Y-D	_____	SA13-40
JKP79-1-AA	F-6L040000-185-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKP79-1-AD	F-6L040000-185-C	XX A 06 QP 01		_____	INTRA-LAB CHECK
JKP79-1-AC	F-6L040000-185-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

RQC050

Severn Trent Laboratories, Inc.

Run Date: 1/16/07

WET CHEM BATCHSHEET

Time: 15:32:31

STL St. Louis

QC BATCH #: 6338186

INITIALS:

DATA ENTRY:

PREP DATE: 11/30/06

PREP \_\_\_\_\_

INITIALS \_\_\_\_\_

COMP DATE: 1/12/07

ANAL \_\_\_\_\_

DATE \_\_\_\_\_

USER: THOMASD

Control Limits

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(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

PDE115  
Date 1/16/2007  
Time 16:36:31

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6338185

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JJ28U-1-CU	ND	mg/kg	0.5	01/12-01/15/07	95.21	N		ND	0.53	1.00
JJ28P-1-CA	ND	mg/kg	0.5	01/12-01/15/07	93.72	N		ND	0.53	1.00
JJ28V-1-CH	ND	mg/kg	0.5	01/12-01/15/07	95.33	N		ND	0.52	1.00
JJ28W-1-CL	ND	mg/kg	0.5	01/12-01/15/07	91.57	N		ND	0.55	1.00
JJ28X-1-CP	ND	mg/kg	0.5	01/12-01/15/07	73.44	N		ND	0.68	1.00
JJ280-1-CW	ND	mg/kg	0.5	01/12-01/15/07	85.91	N		ND	0.58	1.00
JJ282-1-C2	ND	mg/kg	0.5	01/12-01/15/07	90.37	N		ND	0.55	1.00
JJ288-1-CD	ND	mg/kg	0.5	01/12-01/15/07	95.68	N		ND	0.52	1.00
JJ29D-1-CH	ND	mg/kg	0.5	01/12-01/15/07	93.91	N		ND	0.53	1.00
JJ29E-1-CJ	ND	mg/kg	0.5	01/12-01/15/07	94.89	N		ND	0.53	1.00
JJ29F-1-CK	ND	mg/kg	0.5	01/12-01/15/07	79.29	N		ND	0.63	1.00
JKP79-1-AA	ND	mg/kg	0.5	01/12-01/15/07	.00			ND	0.50	1.00

Notes:

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JKP79-1-AD		20.0	21.133	105.66	01/12-01/15/07	(90-110)	1.00
JKP79-1-AC		5.0	4.938	98.76	01/12-01/15/07	(90-110)	1.00

Notes:

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Percent Recovered	SPIKE	Pct.	Recovered DUP	RPD	Prep. - Anal.	Dil.
JJ28U-1-E4		ND	5	5.2165	104.33	104.33	74.01	105.03	.66	01/12-01/15/07	1.00
JJ29F-1-FJ		ND	5	3.7005	74.01	74.01	74.01	96.12	25.99	01/12-01/15/07	1.00

Notes:  
Results and reporting limits have been adjusted for dry weight.  
N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0



Lot #s: Fl6K180300  
 Batch #: 6338185  
 Distillation Time: 60

STL St. Louis Laboratory  
 Cyanide Distillation Log  
 Method 335.4/9012B  
 LC5/LC50/MS = 0.5 ml  
 ACS = 2.0 ml CN Intermediate  
 AC Std

Analyst: \_\_\_\_\_  
 Preparation Date: 04 01-12-07  
 Distilled Sample  
 Client Requirements Sheets  
 Bar Code Sheets  
 Quantums Batch Sheets  
 Distillation Prep Std log  
 Soil  
 Water

Sequence Number	Laboratory ID	Sample Weight (m) (Nominally 50 m)	NaOH Scrubber Volume (Nominally 50ml)	pH check Spike volume added (ml)	Sulfide Interference (Lead Acetate) checked	Nitrate or Nitrite Interference (Sulfamic acid) checked	Comments (Note any interference treatment)
#1	BLK	lg	50ml	NA	NA	NA	
#2	LC5						
#3	ACS						
#4	JJ28J						
#5	JJ28J-S						
#6	JJ28J-D						
#7	JJ28P						
#8	JJ28V						
#9	JJ28W						
#10	JJ28X						
#11	JJ280						
#12	JJ282						
#13	JJ288						
#14	JJ29D						
#15	JJ29E						
#17	JJ29F						
#18	JJ29F-S						
#19	JJ29F-D						
#20	JJ29G						
#21	JJ29H						
#22	JJ29I						
#23	JJ29J						

Flow Rate = approx. 2 bubbles/second  
 Distillation time criteria: 60 min. minimum  
 Date: 1/18/2006

Report Date: 1/15/07  
 Analysis Date: 1/15/07  
 Data File: CN01157  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.999010  
 Corr: 0.999505  
 Std. Dev.: 6.096300

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
1	P			502.38		16:29:52
2	W			2.09	I	16:31:08
3	S1			0.45	SI	16:32:24
4	S2			5.33 <sup>5</sup>	S	16:33:40
5	S3			19.52 <sup>20</sup>	S	16:34:53
6	S4			102.36 <sup>100</sup>	S	16:36:08
7	S5			256.86 <sup>250</sup>	S	16:37:23
8	S6			295.48 <sup>300</sup>	S	16:38:38
9	S7			388.56 <sup>400</sup>	S	16:39:53
10	S8			507.46 <sup>500</sup>	S	16:41:08
11	ICV			200.76 <sup>100</sup>	<sup>100%</sup> <sup>200%</sup>	16:42:24
12	ICB			1.58	I	16:43:39
13	BLK			1.57	I	16:44:54
14	LCS	6333327		101.62 <sup>100</sup>	<sup>102%</sup>	16:46:09
15	HCS		low	357.12 <sup>400</sup>	<sup>89%</sup>	16:47:23
16	JJT9F			2.95	I	16:48:38
17	JJ0TH			0.39	RI	16:49:53
18	JJ0TN			0.62	I	16:51:08
19	JJ0TV			3.64	I	16:52:23
20	JJ0TVD			98.57		16:53:39
21	JJ0TVS			96.24		16:54:55
22	JJ0V5			3.16	I	16:56:10
23	ccv			250.04 <sup>250</sup>	<sup>100%</sup>	16:57:25
24	ccb			0.82	I	16:58:40
25	JJ0WG			3.84	I	16:59:55
26	JJ0WP			24.55		17:01:11
27	JJ0WQ			2.67	I	17:02:26
28	JJ0W3			2.67	I	17:03:41
29	JJ0XF			0.00	-RI	17:04:56
30	JJ0X2			0.33	RI	17:06:11
31	JJ0X5			2.89	I	17:07:26
32	JJ0X5D			67.34		17:08:41
33	JJ0X5S			54.07		17:09:56
34	ccv			238.59 <sup>250</sup>	<sup>95%</sup>	17:11:11
35	ccb			1.01	I	17:12:26
36	BLK			1.93	I	17:13:41
37	LCS	6333274	low	85.47 <sup>100</sup>	<sup>85%</sup>	17:14:57
38	HCS			359.34 <sup>400</sup>	<sup>90%</sup>	17:16:12
39	JJT4R			3.08	I	17:17:27
40	JJT44			1.68	I	17:18:42
41	JJT47			1.91	I	17:19:57
42	JJT5C			0.74	I	17:21:12
43	JJT5K			2.60	I	17:22:27
44	JJT5Q			2.36	I	17:23:42
45	JJT55			6.31		17:24:58



Report Date: 1/15/07  
 Analysis Date: 1/15/07  
 Data File: CN01157  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.999010  
 Corr: 0.999505  
 Std. Dev.: 6.096300

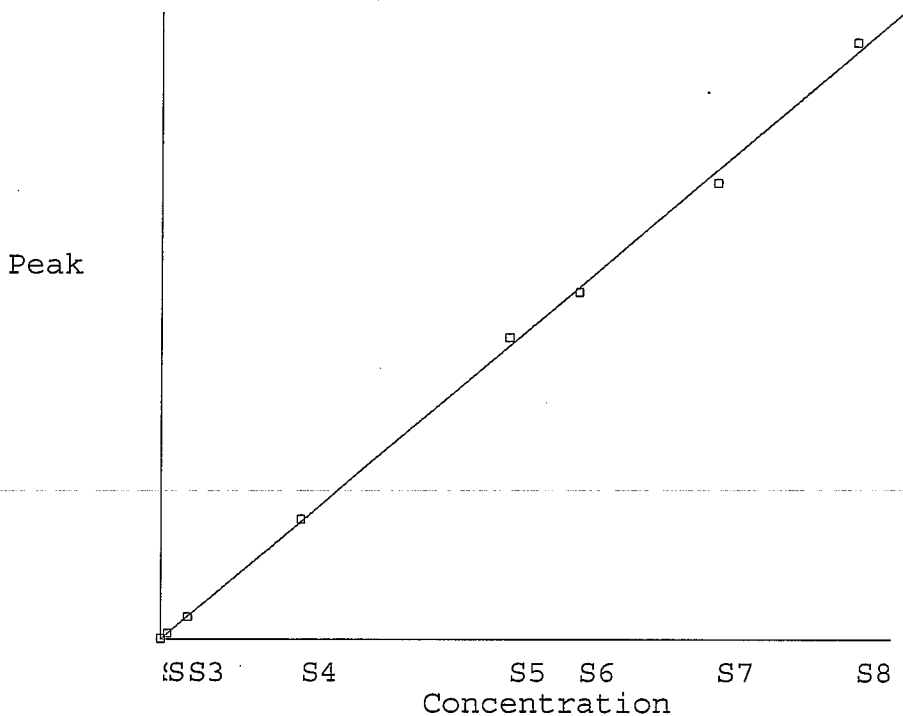
Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
46	ccv			235.28/250	94%	17:26:13
47	ccb			1.65	I	17:27:28
48	JJT58			1.41	I	17:28:43
49	JJT66			1.41	I	17:29:58
50	JJT7F			0.94	I	17:31:13
51	JJT7Q			3.49	I	17:32:28
52	JJT8N			1.63	I	17:33:43
53	JJT87			2.56	I	17:34:58
54	JJT9D			2.09	I	17:36:13
55	JJ0QP			4.64	I	17:37:28
56	JJ0QPD			79.80		17:38:44
57	JJ0QPS			101.20		17:39:59
58	ccv			252.68/250	101%	17:41:14
59	ccb			2.06	I	17:42:29
60	blk			1.83	I	17:43:44
61	lcs		6338198	92.34/100	92%	17:44:59
62	hcs			413.91/400	103%	17:46:14
63	JJ6MX			4.14	I	17:47:29
64	JJ6MXD			97.21		17:48:45
65	JJ6Q4			6.22	I	17:50:00
66	JJ6Q4D			70.21		17:51:15
67	JJ6Q4S			76.02		17:52:29
68	JJ6RJ			5.28	I	17:53:44
69	JJ6R1			1.55	I	17:54:59
70	ccv			247.97/250	99%	17:56:15
71	ccb			2.71	I	17:57:30
72	JJ6TC			2.00	I	17:58:45
73	JJ8P5			2.00	I	18:00:00
74	JJ8QK			2.00	I	18:01:15
75	JJ8QKD			104.84		18:02:30
76	JJ8QKS			65.98		18:03:46
77	JJ8V6			2.21	I	18:05:01
78	JJ8WC			3.14	I	18:06:16
79	ccv			234.20/250	94%	18:07:32
80	ccb			3.13	I	18:08:47
81	blk			3.36	I	18:10:02
82	lcs		6338185	98.76/100	99%	18:11:17
83	hcs			422.66/400	106%	18:12:31
84	JJ28J			4.98	I	18:13:46
85	JJ28JD			105.03		18:15:02
86	JJ28JS			104.33		18:16:17
87	JJ28P			3.80	I	18:17:32
88	JJ28V			1.93	I	18:18:47
89	JJ28W			3.09	I	18:20:02
90	JJ28X			3.32	I	18:21:17

Report Date: 1/15/07  
 Analysis Date: 1/15/07  
 Data File: CN01157  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

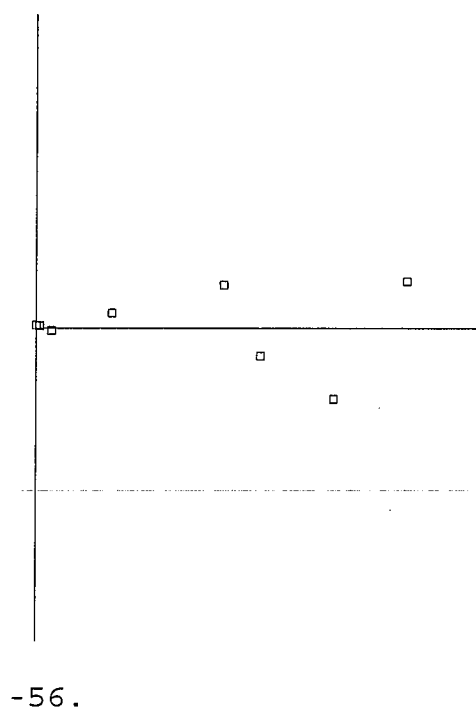
R<sup>2</sup>: 0.999010  
 Corr: 0.999505  
 Std. Dev.: 6.096300

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
91	ccv			240.89/250	96%	18:22:33
92	ccb			2.61	I	18:23:48
93	JJ280			2.38	I	18:25:03
94	JJ282			3.53	I	18:26:18
95	JJ288			3.30	I	18:27:33
96	JJ29D			3.99	I	18:28:48
97	JJ29E			3.52	I	18:30:03
98	JJ29F			3.75	I	18:31:18
99	JJ29FD			96.12		18:32:34
100	JJ29FS			74.01		18:33:49
101	ccv			237.13/250	95%	18:35:05
102	ccb			2.57	I	18:36:20
103	end			0.00	RI	18:37:35

Data File: CN01157  
 Method File: CYANIDE  
 Sample Table File: CN01157



56.



-56.

S#	Peak	Value	Calc	Residual
S1	0.05	0.00	0.45	0.45
S2	0.56	5.00	5.33	0.33
S3	2.05	20.00	19.52	-0.48
S4	10.74	100.00	102.36	2.36
S5	26.96	250.00	256.86	6.86
S6	31.01	300.00	295.48	-4.52
S7	40.78	400.00	388.56	-11.44
S8	53.26	500.00	507.46	7.46

Coefficients:

Intercept : 0  
 Slope : 9.52874  
 Std Dev : 6.0963  
 Corr Coef : 0.999505  
 R<sup>2</sup> : 0.99901 ✓

*01-16-07*

1/15/2007

19:45

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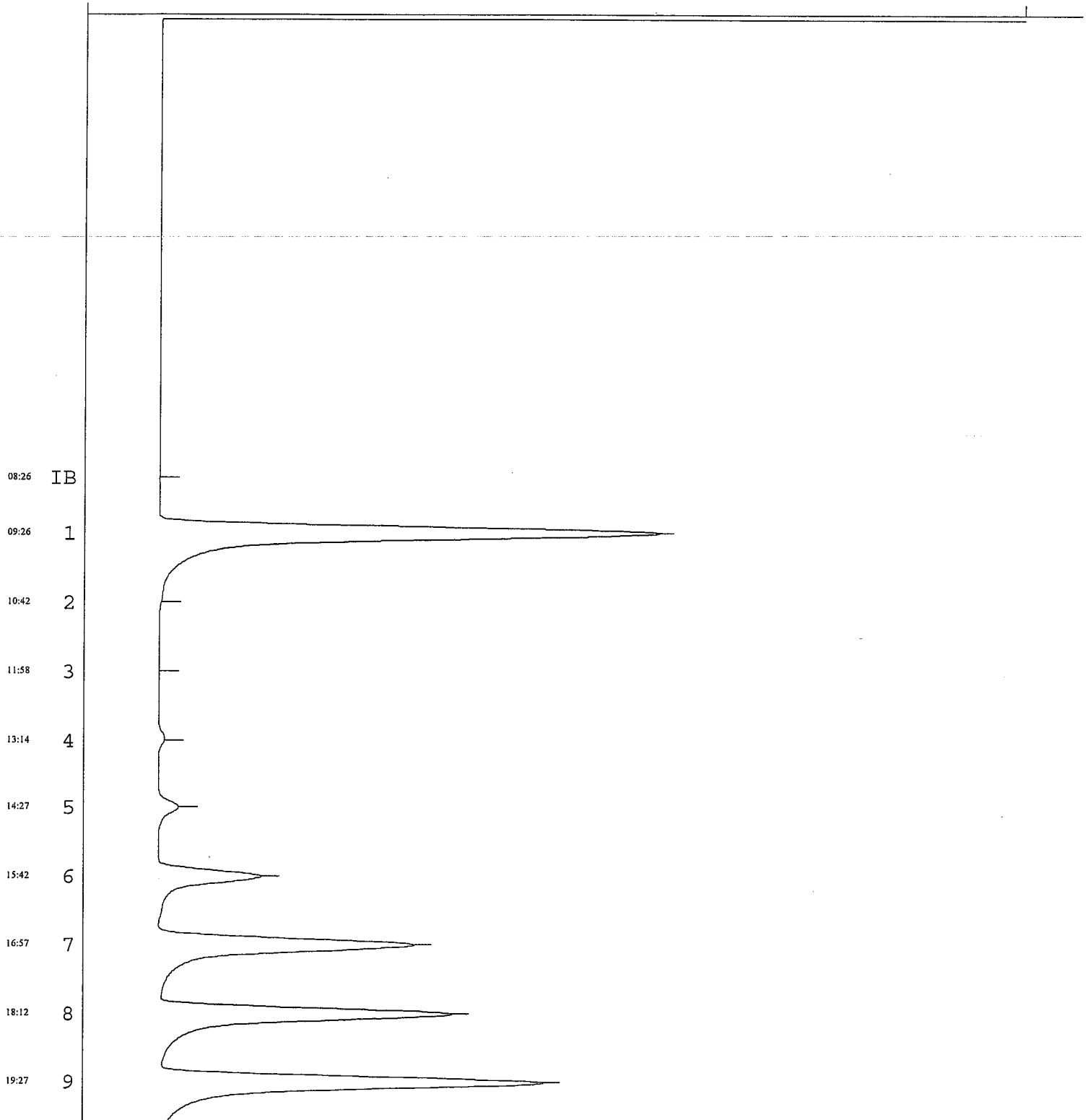
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1/15/2007 19:45

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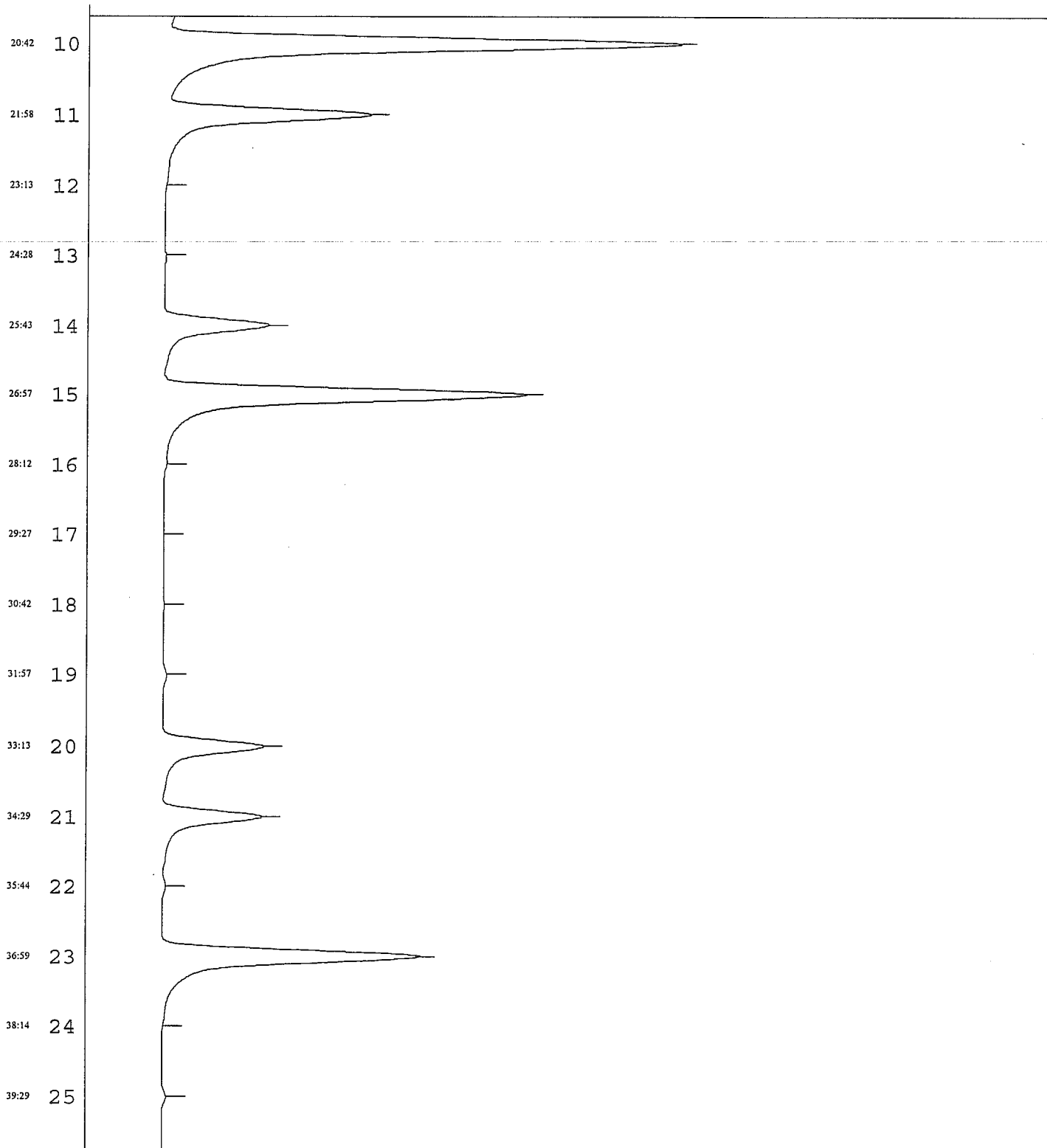
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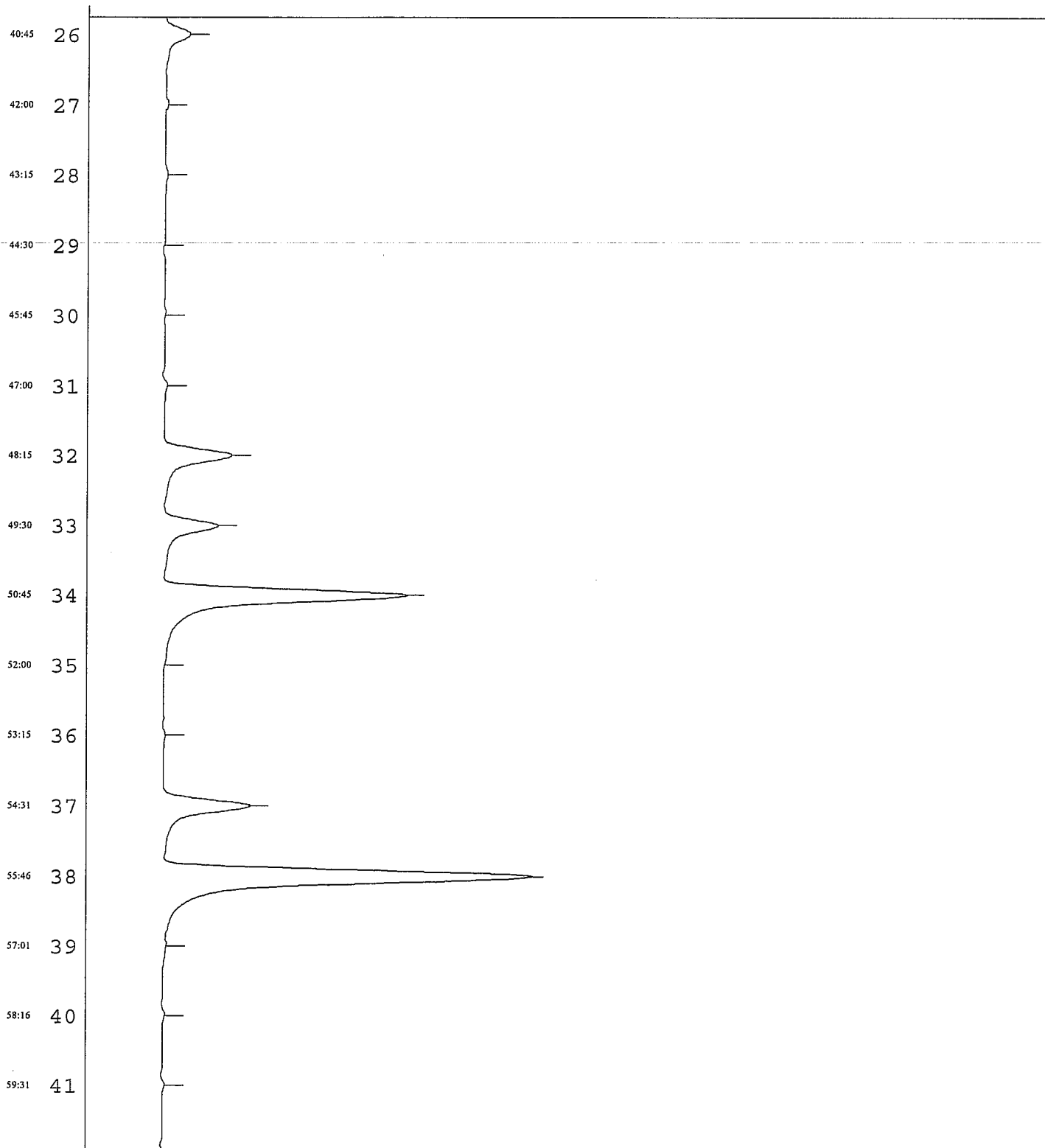
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19:45

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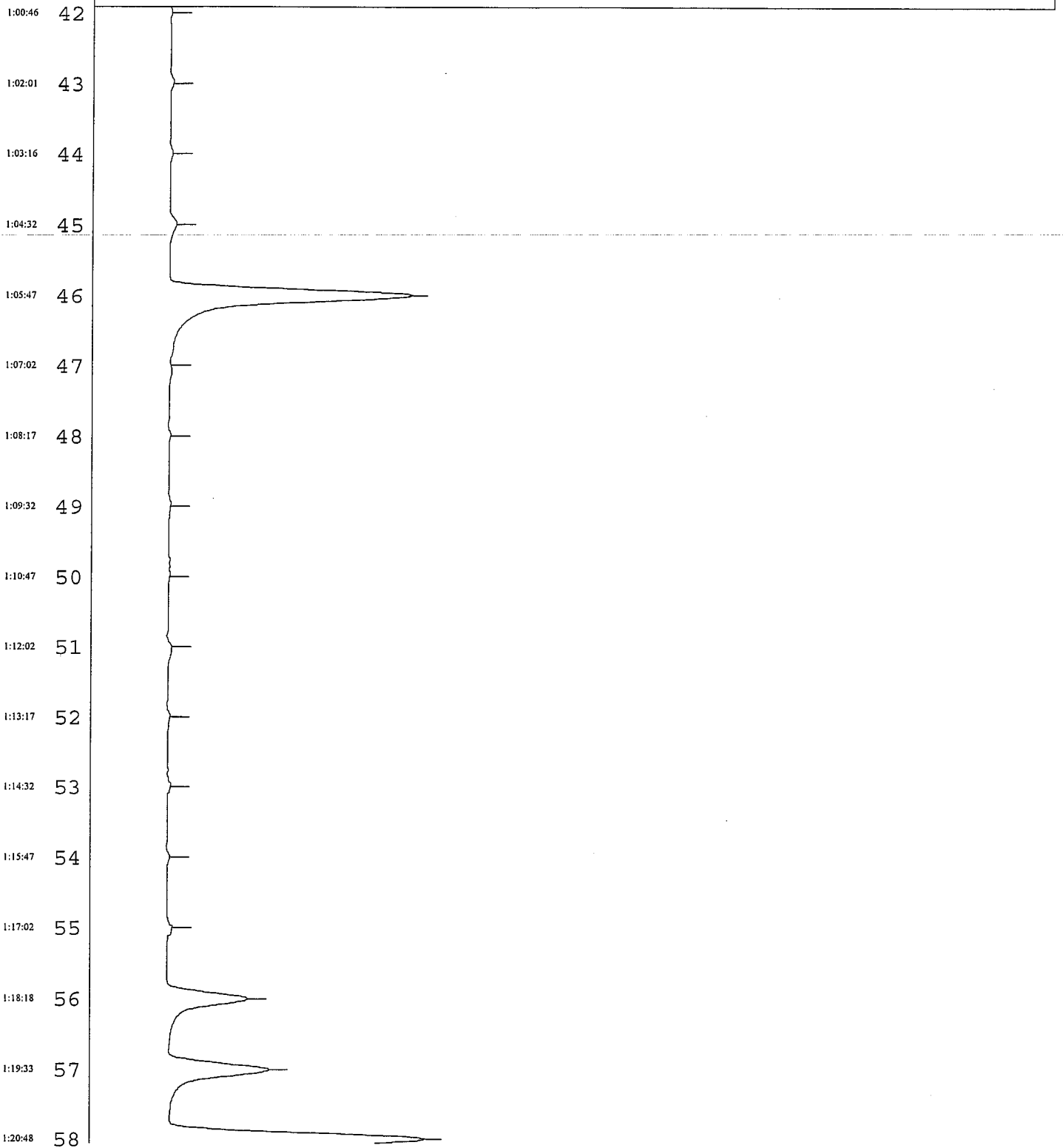
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1/15/2007

19:45

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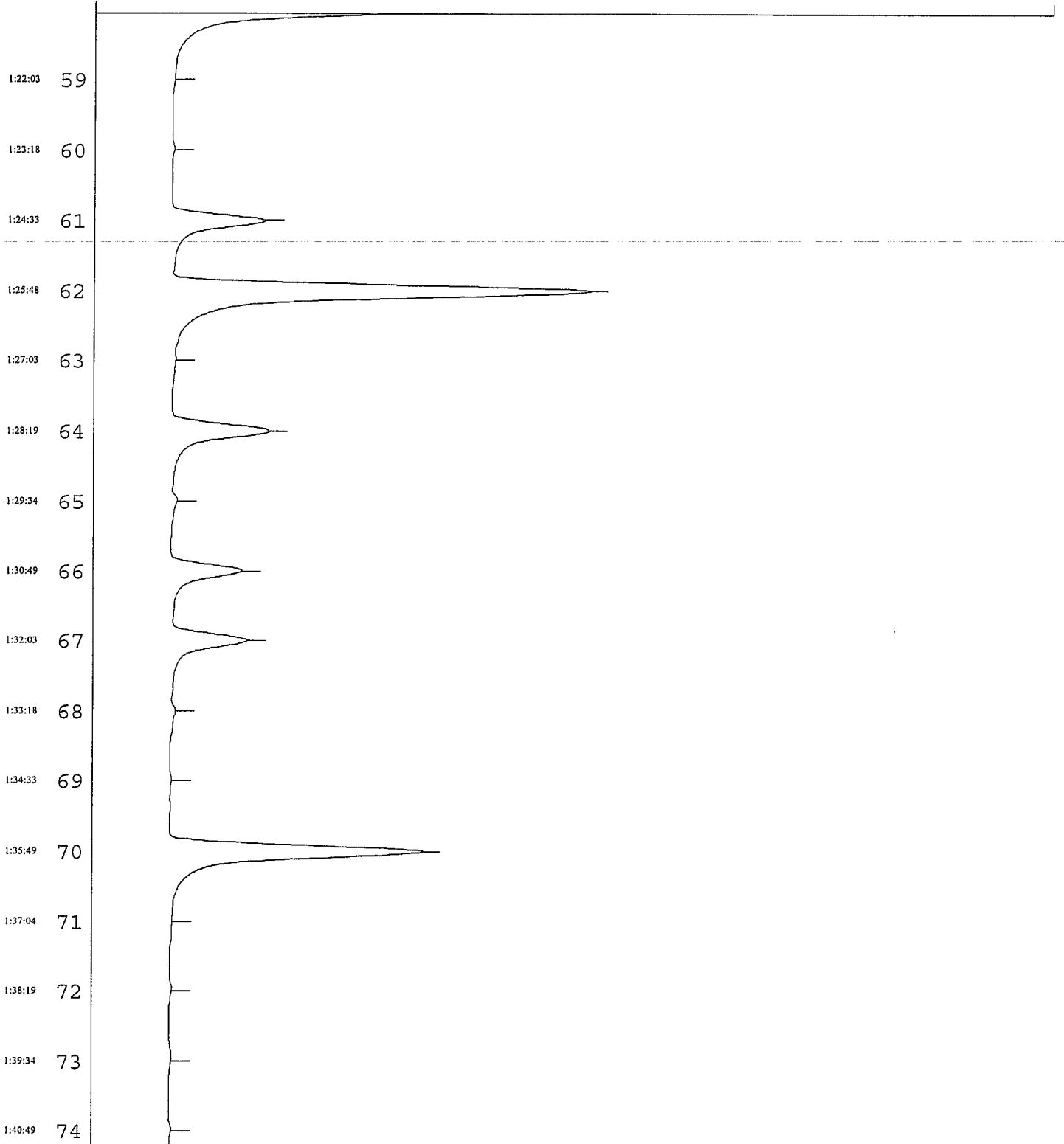
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1/15/2007 19:45

Page:6

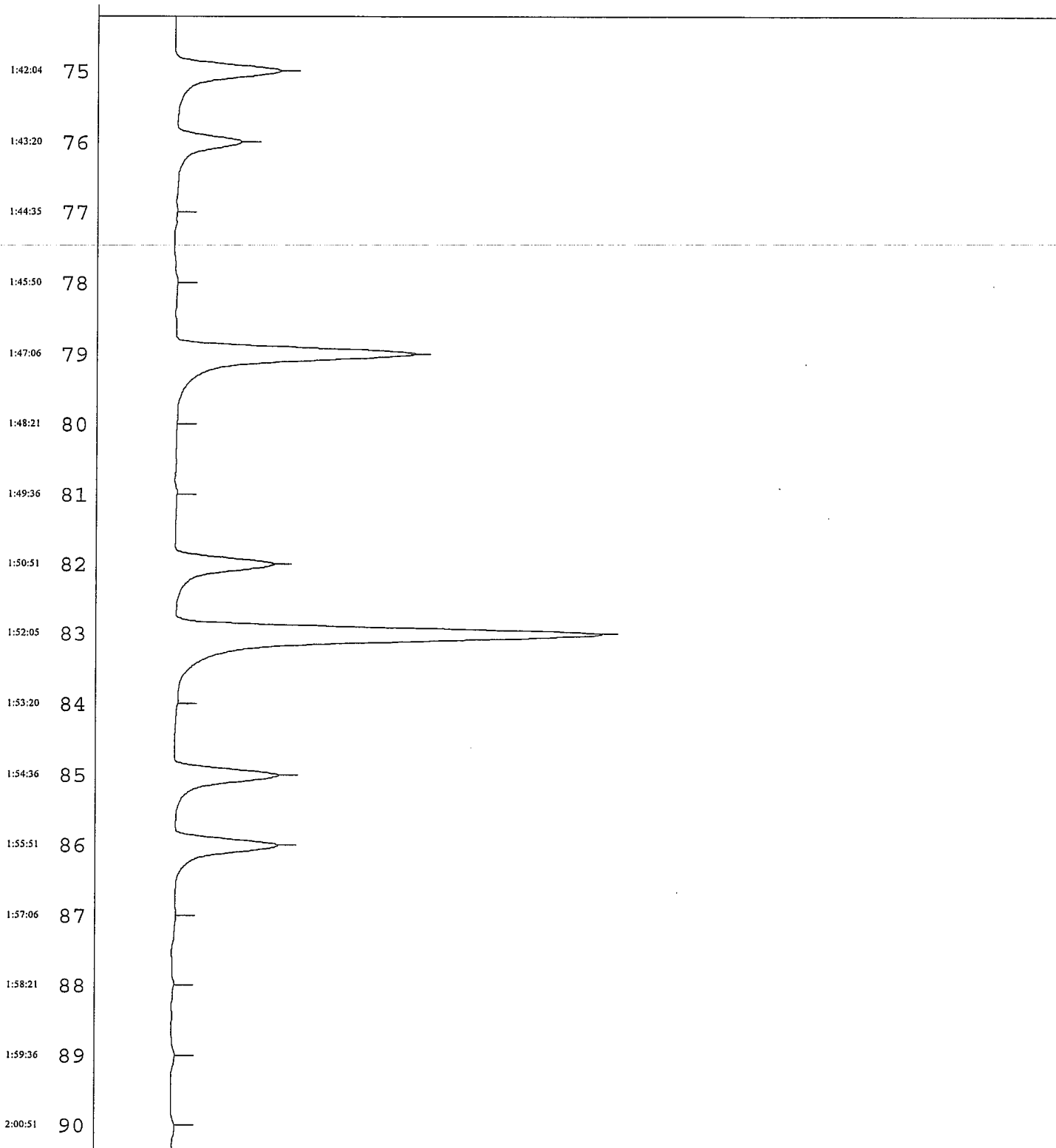
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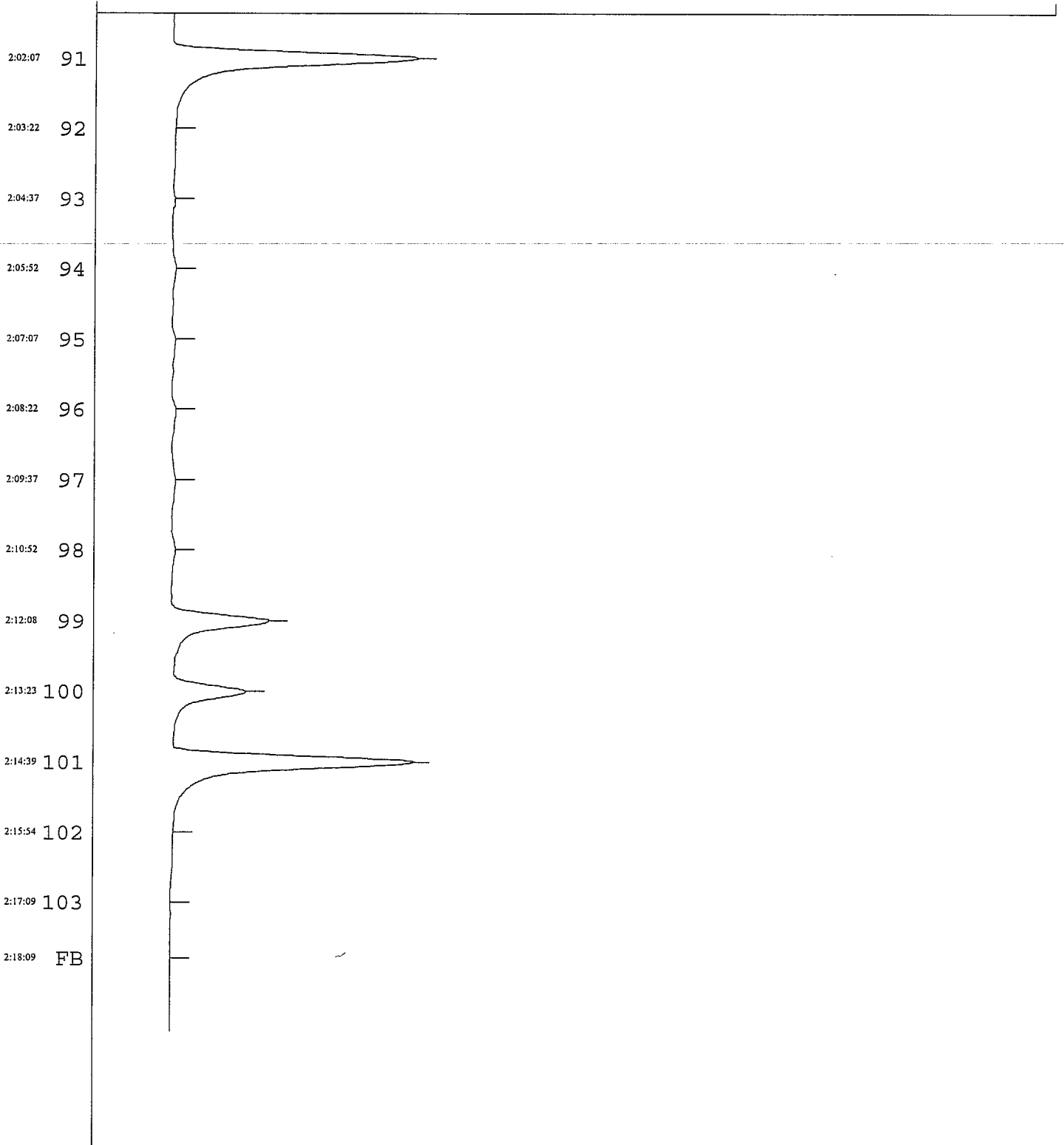
1/15/2007 19:45

Page:7

Data: CN01157  
Mthd: CYANIDE  
Samp: CN01157

0

100





**STL**

STL St. Louis  
Data Review Check List

**Wet Chemistry**

Due Dates: Earliest:	Latest:	Run Date: 4/15/07					
Method Name/#: CN							
Batch #: 6338198 6338185							
Lot #s: F6K210226 F6K180200							
NCM's							
<b>Review Item</b>				<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Review</b>
<b>Initial Calibration</b>							
Initial Calibration data in this package?							
If not, please specify initial calibration date:							
Initial Calibration meets method acceptance criteria:							
Corr. Coefficient = 0.995; Y-intercept < the absolute value of the RL							
Is the low level standard = the reporting limit?							
<b>Calibration Check (ICV)</b>							
ICV performed with initial calibration?							
ICV meets method acceptance criteria (max. 10% D)?							
<b>Continuing Calibration Verification (CCV)</b>							
CCV performed at the prescribed frequency?							
CCV meets method acceptance criteria (max. 10% D)?							
<b>Continuing Calibration Blank (CCB)</b>							
CCB performed after every CCV?							
CCB meets method acceptance criteria?							
Criteria: < the absolute value of the Reporting Limit (see client sheet for							
<b>Batch QC - Method Blanks</b>							
Is a Method Blank required for this analysis?							
Is the method blank below the Reporting Limit for targets of interest?							
<b>Batch QC - LCS</b>							
Is a LCS required for this analysis?							
Are the LCS (LCS D) recoveries within method acceptance?							
<b>Batch QC - MS/MSD</b>							
Is a MS/MSD or MS/Sample Duplicate required for this analysis?							
Are the MS(MSD) recoveries within method acceptance?							
<b>Batch QC - RPD</b>							
MS/MSD or Sample/Sample Duplicate RPD within acceptance criteria							
<b>Sample Results - Report</b>							
Are samples bracketed by acceptable CCV/CCB?							
Are results within the calibration range?							
Was analysis performed within Hold Time?							
Did samples require dilution due to: (check one if applicable) matrix interference    high target analyte concentration							
If dilutions were performed, was it within Hold Time?							
If dilutions were performed, are the undiluted runs in this submission?							
If not, please indicate where found:							
<b>Sample Results - Misc. information</b>							
Are Batch sheets, Preparation Logs (if applicable) included?							
Are copies of run logs included, initialed and dated?							
Were manual calculations performed?    reviewer must check calculations							
Were manual integrations performed, dated, and initialed?							
Client requirement sheets followed in data package?							
Reagents and Standards documented on prep/batch sheets?							
<b>Additional Comments:</b>							
<b>Analyst/Date:</b>				<b>Reviewer/Date:</b>			

Date 2/06/2007  
Time 9:52:43

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6338198

PDE115

Method Code: Cyanide, Total  
Analyst: Debbie Thomas

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JJ6WX-1-CU	ND	mg/kg	0.5	12/13-12/20/06	94.69	N	R	ND	0.53	1.00
JJ6Q4-1-CA	ND	mg/kg	0.5	12/13-12/20/06	94.35	N	R	ND	0.53	1.00
JJ6RJ-1-CH	ND	mg/kg	0.5	12/13-12/20/06	92.92	N	R	ND	0.54	1.00
JJ6R1-1-CL	ND	mg/kg	0.5	12/13-12/20/06	92.37	N	R	ND	0.54	1.00
JJ6TC-1-CP	ND	mg/kg	0.5	12/13-12/20/06	93.72	N	R	ND	0.53	1.00
JJ8P5-1-CT	ND	mg/kg	0.5	12/13-12/20/06	76.66	N	R	ND	0.65	1.00
JJ8QK-1-CA	ND	mg/kg	0.5	12/13-12/20/06	92.95	N	R	ND	0.54	1.00
JJ8V6-1-CH	ND	mg/kg	0.5	12/13-12/20/06	91.26	N	R	ND	0.55	1.00
JJ8WC-1-CP	ND	mg/kg	0.5	12/13-12/20/06	89.12	N	R	ND	0.56	1.00
JJKP91-1-AA	ND	mg/kg	0.5	12/13-12/20/06	.00		R	ND	0.50	1.00

Notes:

Check Standard	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JJKP91-1-AD		20.0	20.6955	103.47	01/12-01/15/07	(90-110)	1.00
JJKP91-1-AC		5.0	4.3 N	86.00	12/13-12/20/06	(90-110)	1.00

Notes:

N Spiked analyte recovery is outside stated control limits.

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Measured Dup.	SPIKE	Pct. Recovered	RPD	Prep. - Anal.	Dil.
JJ6WX-1-E4		ND	5	4.8605		97.21	.00	.00	12/13-12/20/06	1.00
JJ6Q4-1-FH		ND	5	3.801 N	3.5105	76.02	70.21	7.94	12/13-12/20/06	1.00
JJ8QK-1-FR		ND	5	3.299 N	5.242	65.98	104.84	45.49	12/13-12/20/06	1.00

Notes:

N Results and reporting limits have been adjusted for dry weight.  
N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0

PDE115  
 Method Code: Cyanide, Total  
 Analyst: Debbie Thomas  
 Severn Trent Laboratories, Inc.  
 Inorganics Batch Review  
 QC Batch 6338185  
 Date 2/06/2007  
 Time 9:32:49

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JJ28U-1-CU	ND	mg/kg	0.5	12/13-12/20/06	95.21	N	R	ND	0.53	1.00
JJ28P-1-CA	ND	mg/kg	0.5	12/13-12/20/06	93.72	N	R	ND	0.53	1.00
JJ28V-1-CH	ND	mg/kg	0.5	12/13-12/20/06	95.33	N	R	ND	0.52	1.00
JJ28W-1-CL	ND	mg/kg	0.5	12/13-12/20/06	91.57	N	R	ND	0.55	1.00
JJ28X-1-CP	ND	mg/kg	0.5	12/13-12/20/06	73.44	N	R	ND	0.68	1.00
JJ280-1-CW	ND	mg/kg	0.5	12/13-12/20/06	85.91	N	R	ND	0.58	1.00
JJ282-1-C2	ND	mg/kg	0.5	12/13-12/20/06	90.37	N	R	ND	0.55	1.00
JJ288-1-CD	ND	mg/kg	0.5	12/13-12/20/06	95.68	N	R	ND	0.52	1.00
JJ29D-1-CH	ND	mg/kg	0.5	12/13-12/20/06	93.91	N	R	ND	0.53	1.00
JJ29E-1-CJ	ND	mg/kg	0.5	12/13-12/20/06	94.89	N	R	ND	0.53	1.00
JJ29F-1-CK	ND	mg/kg	0.5	12/13-12/20/06	79.29	N	R	ND	0.63	1.00
JKP79-1-AA	ND	mg/kg	0.5	12/13-12/20/06	.00		R	ND	0.50	1.00

Notes:

Check Standard	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits
JKP79-1-AD		20.0	21.133	105.66	01/12-01/15/07	(90-110)
JKP79-1-AC		5.0	2.65 N	53.00	12/13-12/20/06	(90-110)

Notes:  
 N Spiked analyte recovery is outside stated control limits.

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	SPIKE	Pct. Recovered	Recovered DUP	RPD	Prep. - Anal.	Dil.
JJ28U-1-E4		ND	5	5.2165	5.2515	104.33	105.03	105.03	.66	12/13-12/20/06	1.00
JJ29F-1-FJ		ND	5	3.7005 N	4.806	74.01	96.12	25.99	12/13-12/20/06	1.00	

Notes:  
 Results and reporting limits have been adjusted for dry weight.  
 N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 2/06/07  
Time: 8:28:53

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6338198	INITIALS:	DATA ENTRY:
PREP DATE:	12/13/06	PREP _____	INITIALS _____
COMP DATE:	1/12/07	ANAL _____	DATE _____
USER:	HOUGHGHC		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJ6MX-1-C0	F-6K210226-001	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6MX-1-E5	F-6K210226-001-D	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6MX-1-E4	F-6K210226-001-S	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6Q4-1-CA	F-6K210226-002	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6Q4-1-FJ	F-6K210226-002-D	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6Q4-1-FH	F-6K210226-002-S	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6RJ-1-CH	F-6K210226-003	XX A 06 QP 01	Y-D	_____	SA7-10D
JJ6R1-1-CL	F-6K210226-004	XX A 06 QP 01	Y-D	_____	SA7-20
JJ6TC-1-CP	F-6K210226-005	XX A 06 QP 01	Y-D	_____	SA7-30
JJ8P5-1-CT	F-6K210226-006	XX A 06 QP 01	Y-D	_____	SA7-34
JJ8QK-1-CA	F-6K210226-007	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8QK-1-FT	F-6K210226-007-D	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8QK-1-FR	F-6K210226-007-S	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8V6-1-CH	F-6K210226-008	XX A 06 QP 01	Y-D	_____	SA26-0.5D
JJ8WC-1-CP	F-6K210226-009	XX A 06 QP 01	Y-D	_____	SA26-10
JKP91-1-AA	F-6L040000-198-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKP91-1-AD	F-6L040000-198-C	XX A 06 QP 01		_____	INTRA-LAB CHECK
JKP91-1-AC	F-6L040000-198-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

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RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 2/06/07  
Time: 8:28:53

STL St. Louis

QC BATCH #: 6338199  
PREP DATE: 12/04/06  
COMP DATE: 1/12/07  
USER: HOUGHG

INITIALS:  
PREP \_\_\_\_\_  
ANAL \_\_\_\_\_

DATA ENTRY:  
INITIALS \_\_\_\_\_  
DATE \_\_\_\_\_

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Control Limits

(90-110)

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RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 2/06/07  
Time: 8:28:25

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6338198	INITIALS:	DATA ENTRY:
PREP DATE:	12/13/06	PREP _____	INITIALS _____
COMP DATE:	1/12/07	ANAL _____	DATE _____
USER:	HOUGHG		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJ6MX-1-C0	F-6K210226-001	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6MX-1-E5	F-6K210226-001-D	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6MX-1-E4	F-6K210226-001-S	XX A 06 QP 01	Y-D	_____	SA7-0.5
JJ6Q4-1-CA	F-6K210226-002	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6Q4-1-FJ	F-6K210226-002-D	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6Q4-1-FH	F-6K210226-002-S	XX A 06 QP 01	Y-D	_____	SA7-10
JJ6RJ-1-CH	F-6K210226-003	XX A 06 QP 01	Y-D	_____	SA7-10D
JJ6R1-1-CL	F-6K210226-004	XX A 06 QP 01	Y-D	_____	SA7-20
JJ6TC-1-CP	F-6K210226-005	XX A 06 QP 01	Y-D	_____	SA7-30
JJ8P5-1-CT	F-6K210226-006	XX A 06 QP 01	Y-D	_____	SA7-34
JJ8QK-1-CA	F-6K210226-007	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8QK-1-FT	F-6K210226-007-D	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8QK-1-FR	F-6K210226-007-S	XX A 06 QP 01	Y-D	_____	SA26-0.5
JJ8V6-1-CH	F-6K210226-008	XX A 06 QP 01	Y-D	_____	SA26-0.5D
JJ8WC-1-CP	F-6K210226-009	XX A 06 QP 01	Y-D	_____	SA26-10
JKP91-1-AA	F-6L040000-198-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKP91-1-AD	F-6L040000-198-C	XX A 06 QP 01		_____	INTRA-LAB CHECK
JKP91-1-AC	F-6L040000-198-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

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RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 2/06/07  
Time: 8:28:25

STL St. Louis

QC BATCH #: 6338199

INITIALS:

DATA ENTRY:

PREP DATE: 12/04/06

PREP \_\_\_\_\_

INITIALS \_\_\_\_\_

COMP DATE: 1/12/07

ANAL \_\_\_\_\_

DATE \_\_\_\_\_

USER: HOUGHHC

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Control Limits

(90-110)

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RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 2/06/07  
Time: 8:31:30

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6338185	INITIALS:	DATA ENTRY:
PREP DATE:	12/13/06	PREP _____	INITIALS _____
COMP DATE:	1/12/07	ANAL _____	DATE _____
USER:	HOUGHG		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJ28J-1-C0	F-6K180200-004	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28J-1-E5	F-6K180200-004-D	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28J-1-E4	F-6K180200-004-S	XX A 06 QP 01	Y-D	_____	SA8-0.5
JJ28P-1-CA	F-6K180200-005	XX A 06 QP 01	Y-D	_____	SA8-10
JJ28V-1-CH	F-6K180200-006	XX A 06 QP 01	Y-D	_____	SA8-20
JJ28W-1-CL	F-6K180200-007	XX A 06 QP 01	Y-D	_____	SA8-30
JJ28X-1-CP	F-6K180200-008	XX A 06 QP 01	Y-D	_____	SA8-37
JJ280-1-CW	F-6K180200-009	XX A 06 QP 01	Y-D	_____	SA13-0.5
JJ282-1-C2	F-6K180200-010	XX A 06 QP 01	Y-D	_____	SA13-0.5D
JJ288-1-CD	F-6K180200-011	XX A 06 QP 01	Y-D	_____	SA13-10
JJ29D-1-CH	F-6K180200-012	XX A 06 QP 01	Y-D	_____	SA13-20
JJ29E-1-CJ	F-6K180200-013	XX A 06 QP 01	Y-D	_____	SA13-30
JJ29F-1-CK	F-6K180200-014	XX A 06 QP 01	Y-D	_____	SA13-40
JJ29F-1-FK	F-6K180200-014-D	XX A 06 QP 01	Y-D	_____	SA13-40
JJ29F-1-FJ	F-6K180200-014-S	XX A 06 QP 01	Y-D	_____	SA13-40
JKP79-1-AA	F-6L040000-185-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKP79-1-AD	F-6L040000-185-C	XX A 06 QP 01		_____	INTRA-LAB CHECK
JKP79-1-AC	F-6L040000-185-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

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Control Limits

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 2/06/07  
Time: 8:31:30

STL St. Louis

QC BATCH #: 6338186  
PREP DATE: 11/30/06  
COMP DATE: 1/12/07  
USER: HOUGHC

INITIALS:  
PREP \_\_\_\_\_  
ANAL \_\_\_\_\_

DATA ENTRY:  
INITIALS \_\_\_\_\_  
DATE \_\_\_\_\_

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Control Limits

(90-110)

(90-110)

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(90-110)

Page: 1

Order of Fit: First

Coefs: 1st: 0.000000 2nd: 9.528742

Report Date: 1/15/07  
 Analysis Date: 1/15/07  
 Data File: CN01157  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.999010  
 Corr: 0.999505  
 Std. Dev.: 6.096300

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
1	P			502.38		16:29:52
2	W			2.09	I	16:31:08
3	S1			0.45	SI	16:32:24
4	S2			5.33 <sup>5</sup>	S	16:33:40
5	S3			19.52 <sup>20</sup>	S	16:34:53
6	S4			102.36 <sup>100</sup>	S	16:36:08
7	S5			256.86 <sup>250</sup>	S	16:37:23
8	S6			295.48 <sup>300</sup>	S	16:38:38
9	S7			388.56 <sup>400</sup>	S	16:39:53
10	S8			507.46 <sup>500</sup>	S	16:41:08
11	ICV			200.76 <sup>200</sup>	<sup>100%</sup> <del>200%</del>	16:42:24
12	ICB			1.58	I	16:43:39
13	BLK			1.57	I	16:44:54
14	LCS	6333327		101.62 <sup>100</sup>	<sup>102%</sup>	16:46:09
15	HCS		Low	357.12 <sup>400</sup>	<sup>89%</sup>	16:47:23
16	JJT9F			2.95	I	16:48:38
17	JJ0TH			0.39	RI	16:49:53
18	JJ0TN			0.62	I	16:51:08
19	JJ0TV			3.64	I	16:52:23
20	JJ0TVD			98.57		16:53:39
21	JJ0TVS			96.24		16:54:55
22	JJ0V5			3.16	I	16:56:10
23	ccv			250.04 <sup>250</sup>	<sup>100%</sup>	16:57:25
24	ccb			0.82	I	16:58:40
25	JJ0WG			3.84	I	16:59:55
26	JJ0WP			24.55		17:01:11
27	JJ0WQ			2.67	I	17:02:26
28	JJ0W3			2.67	I	17:03:41
29	JJ0XF			0.00	-RI	17:04:56
30	JJ0X2			0.33	RI	17:06:11
31	JJ0X5			2.89	I	17:07:26
32	JJ0X5D			67.34		17:08:41
33	JJ0X5S			54.07		17:09:56
34	ccv			238.59 <sup>250</sup>	<sup>95%</sup>	17:11:11
35	ccb			1.01	I	17:12:26
36	BLK			1.93	I	17:13:41
37	LCS	6333274	Low	85.47 <sup>100</sup>	<sup>85%</sup>	17:14:57
38	HCS			359.34 <sup>400</sup>	<sup>90%</sup>	17:16:12
39	JJT4R			3.08	I	17:17:27
40	JJT44			1.68	I	17:18:42
41	JJT47			1.91	I	17:19:57
42	JJT5C			0.74	I	17:21:12
43	JJT5K			2.60	I	17:22:27
44	JJT5Q			2.36	I	17:23:42
45	JJT55			6.31		17:24:58

Page: 2

Order of Fit: First

Coefs: 1st: 0.000000 2nd: 9.528742

Report Date: 1/15/07  
 Analysis Date: 1/15/07  
 Data File: CN01157  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.999010  
 Corr: 0.999505  
 Std. Dev.: 6.096300

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
46	ccv			235.28/250	94%	17:26:13
47	ccb			1.65	I	17:27:28
48	JJT58			1.41	I	17:28:43
49	JJT66			1.41	I	17:29:58
50	JJT7F			0.94	I	17:31:13
51	JJT7Q			3.49	I	17:32:28
52	JJT8N			1.63	I	17:33:43
53	JJT87			2.56	I	17:34:58
54	JJT9D			2.09	I	17:36:13
55	JJ0QP			4.64	I	17:37:28
56	JJ0QPD			79.80		17:38:44
57	JJ0QPS			101.20		17:39:59
58	ccv			252.68/250	101%	17:41:14
59	ccb			2.06	I	17:42:29
60	blk			1.83	I	17:43:44
61	lcs		6338198	92.34/100	92%	17:44:59
62	hcs			413.91/400	103%	17:46:14
63	JJ6MX			4.14	I	17:47:29
64	JJ6MXD			97.21		17:48:45
65	JJ6Q4			6.22	I	17:50:00
66	JJ6Q4D			70.21		17:51:15
67	JJ6Q4S			76.02		17:52:29
68	JJ6RJ			5.28	I	17:53:44
69	JJ6R1			1.55	I	17:54:59
70	ccv			247.97/250	99%	17:56:15
71	ccb			2.71	I	17:57:30
72	JJ6TC			2.00	I	17:58:45
73	JJ8P5			2.00	I	18:00:00
74	JJ8QK			2.00	I	18:01:15
75	JJ8QKD			104.84		18:02:30
76	JJ8QKS			65.98		18:03:46
77	JJ8V6			2.21	I	18:05:01
78	JJ8WC			3.14	I	18:06:16
79	ccv			234.20/250	94%	18:07:32
80	ccb			3.13	I	18:08:47
81	blk			3.36	I	18:10:02
82	lcs			98.76/100	99%	18:11:17
83	hcs		6338185	422.66/400	106%	18:12:31
84	JJ28J			4.98	I	18:13:46
85	JJ28JD			105.03		18:15:02
86	JJ28JS			104.33		18:16:17
87	JJ28P			3.80	I	18:17:32
88	JJ28V			1.93	I	18:18:47
89	JJ28W			3.09	I	18:20:02
90	JJ28X			3.32	I	18:21:17



Page: 3

Order of Fit: First

Coefs: 1st: 0.000000 2nd: 9.528742

Report Date: 1/15/07  
 Analysis Date: 1/15/07  
 Data File: CN01157  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.999010  
 Corr: 0.999505  
 Std. Dev.: 6.096300

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
91	ccv			240.89/250	96%	18:22:33
92	ccb			2.61	I	18:23:48
93	JJ280			2.38	I	18:25:03
94	JJ282			3.53	I	18:26:18
95	JJ288			3.30	I	18:27:33
96	JJ29D			3.99	I	18:28:48
97	JJ29E			3.52	I	18:30:03
98	JJ29F			3.75	I	18:31:18
99	JJ29FD			96.12		18:32:34
100	JJ29FS			74.01		18:33:49
101	ccv			237.13/250	95%	18:35:05
102	ccb			2.57	I	18:36:20
103	end			0.00	RI	18:37:35

<b>Due Dates:</b> Earliest:	Latest:	<b>Run Date:</b> 01-22-07			
<b>Method Name/#:</b> CN 335.1, 335.2, 335.4, 9010B, 9012A, 4500					
<b>Batch #:</b> 6333348					
<b>Lot #s:</b> F6K170247					
<b>NCM's:</b> NA					
<b>Review Item</b>					
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Review</b>	
<b>Initial Calibration</b>					
Initial Calibration data in this package?	X			/	
If not, please specify initial calibration date:				/	
Initial Calibration meets method acceptance criteria:	X			/	
Corr. Coefficient = 0.995; Y-intercept < the absolute value of the RL				/	
Is the low level standard = the reporting limit?	X			/	
<b>Calibration Check (ICV)</b>					
ICV performed with initial calibration?	X			/	
ICV meets method acceptance criteria (max. 10% D)?	X			/	
<b>Continuing Calibration Verification (CCV)</b>					
CCV performed at the prescribed frequency?	X			/	
CCV meets method acceptance criteria (max. 10% D)?	X			/	
<b>Continuing Calibration Blank (CCB)</b>					
CCB performed after every CCV?	X			/	
CCB meets method acceptance criteria?	X			/	
Criteria: < the absolute value of the Reporting Limit (see client sheet for				/	
<b>Batch QC - Method Blanks</b>					
Is a Method Blank required for this analysis?	X			/	
Is the method blank below the Reporting Limit for targets of interest?	X			/	
<b>Batch QC - LCS</b>					
Is a LCS required for this analysis?	X			/	
Are the LCS (LCSD) recoveries within method acceptance?	X			/	
<b>Batch QC - MS/MSD</b>					
Is a MS/MSD or MS/Sample Duplicate required for this analysis?	X			/	
Are the MS(MSD) recoveries within method acceptance?	X			/	
<b>Batch QC - RPD</b>					
MS/MSD or Sample/Sample Duplicate RPD within acceptance criteria	X			/	
<b>Sample Results - Report</b>					
Are samples bracketed by acceptable CCV/CCB?	X			/	
Are results within the calibration range?	X			/	
Was analysis performed within Hold Time?	X			/	
Did samples require dilution due to: (check one if applicable)		X		/	
matrix interference				/	
high target analyte concentration				/	
If dilutions were performed, was it within Hold Time?			X	/	
If dilutions were performed, are the undiluted runs in this submission?			X	/	
If not, please indicate where found:				/	
<b>Sample Results - Misc. information</b>					
Are Batch sheets, Preparation Logs (if applicable) included?	X			/	
Are copies of run logs included, initialed and dated?	X			/	
Were manual calculations performed? reviewer must check calculations		X		/	
Were manual integrations performed, dated, and initialed?		X		/	
Client requirement sheets followed in data package?	X			/	
Reagents and Standards documented on prep/batch sheets?	X			/	
<b>Additional Comments:</b>					
<b>Analyst/Date:</b> DNT 01-24-07			<b>Reviewer/Date:</b> Ben AS 1/24/07		

RR  
BA 1/24/07

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 1/24/07  
Time: 11:21:06

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
-----------------	------------------	----	------------------	-----------------	----------------	----------------	-------------------------

METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6333348	INITIALS:	DATA ENTRY:
PREP DATE:	12/11/06	PREP _____	INITIALS _____
COMP DATE:	12/11/06	ANAL _____	DATE _____
USER:	THOMASD		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJRAF-1-CQ	F-6K150251-017	XX I 06 QP 01	Y-D	_____	EB111406
JJT4A-1-CN	F-6K160199-001	XX I 06 QP 01	Y-D	_____	EB111506
JJ00E-1-CK	F-6K170247-013	XX I 06 QP 01	Y-D	_____	EB111606
JJ00E-1-DL	F-6K170247-013-S	XX I 06 QP 01	Y-D	_____	EB111606
JJ00E-1-DM	F-6K170247-013-X	XX I 06 QP 01	Y-D	_____	EB111606
JJ28E-1-CM	F-6K180200-001	XX I 06 QP 01	Y-D	_____	M29
JJ28E-1-F0	F-6K180200-001-D	XX I 06 QP 01	Y-D	_____	M29
JJ28E-1-FX	F-6K180200-001-S	XX I 06 QP 01	Y-D	_____	M29
JJ28F-1-CV	F-6K180200-002	XX I 06 QP 01	Y-D	_____	EB111706
JK7P7-1-AD	F-6K290000-348-B	XX I 06 QP 01		_____	INTRA-LAB BLANK
JK7P7-1-AA	F-6K290000-348-B	XX I 06 QP 01		_____	INTRA-LAB BLANK
JK7P7-1-AE	F-6K290000-348-C	XX I 06 QP 01		_____	INTRA-LAB CHECK
JK7P7-1-AC	F-6K290000-348-C	XX I 06 QP 01		_____	INTRA-LAB CHECK

*only data  
Reported  
this date  
1/24/07*

Control Limits

(90-110)  
(90-110)  
(90-110)  
(90-110)

Date 1/24/2007  
Time 12:23:33

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6333348

PDE115

Method Code: Cyanide, Total  
Analyst: Chris Hough

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JURAF-1-CQ	6.39	ug/L	5	12/11-12/13/06	.00	N	R	6.74	5.0	1.00
JJT4A-1-CN	ND	ug/L	5	12/11-12/13/06	.00	N	R	ND	5.0	1.00
JJ00E-1-CK	5.23	ug/L	5	01/19-01/22/07	.00	N	R	5.2	5.0	1.00
JJ00E-1-DM	4.04	ug/L	5	01/19-01/22/07	.00	N	R	4.0 B	5.0	1.00
JJ28E-1-CM	ND	ug/L	5	12/11-12/13/06	.00	N	R	ND	5.0	1.00
JJ28F-1-CV	ND	ug/L	5	12/11-12/13/06	.00	N	R	ND	5.0	1.00
JK7P7-1-AD	ND	ug/L	5	01/19-01/22/07	.00	N	R	ND	5.0	1.00
JK7P7-1-AA	ND	ug/L	5	01/19-01/22/07	.00	N	R	ND	5.0	1.00

Notes:  
B Estimated result. Result is less than RL.

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits
JK7P7-1-AE		1.00	97.01	97.01	01/19-01/22/07	(90-110)
JK7P7-1-AC		1.00	94.12	94.12	12/11-12/13/06	(90-110)

Notes:

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Measured Dup.	Pct. Recovered	Prep. - Anal.
JJ28E-1-FX		ND	100	.898 N	ND	.89	12/11-12/13/06
							01/19-01/22/07

Notes:  
N Spiked analyte recovery is outside stated control limits.

Measured Spike

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.
JJ00E-1-DL		5.23	100	105.33	100.10	01/19-01/22/07

Notes:

*Handwritten signature and date: 01-24-07*

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0

Lot #y:

STL St. Louis Laboratory  
Cyanide Distillation Log  
Method 335.4/9012B

TO TRACCS  
 Distilled Sample  
 Client Requirements Sheets  
 Bar-Code Sheets  
 Quantaumo Batch Sheets  
 Distillation Prep Std Log

6333348  
Batch #: 7016409, 7016410

LC5/LS50/MS = 0.5 ml.  
HCS = 2.0 ml CN Intermediate  
QC Std

Analyst: \_\_\_\_\_  
Preparation Date: \_\_\_\_\_  
 Soil  
 Water

Distillation Time: 60

Sequence Number	Laboratory ID	Sample Weight (mf) (Nominally 50 mf)	NaOH Scrubber Volume (Nominally 50ml)	pH check Spike volume added (ml)	Sulfide Interference (Lead Acetate) checked	Nitrate or Nitrite Interference (Sulfamic acid) checked	Comments (Note any interference treatment)
#1	BLK	50	50	OK	OK		
#2	LCS						
#3	HCS						
#4	JML71						
#5	JML71-S						
#6	JML71-X						
#7	JML76						
#8	JMJL5						
#9	JMJL7						
#10	JMJL7-S						
#11	JMJL7-X						
#12	JMJM6						
#13	JMJM5						
#14	JMJMM						
#15	JMJMP						
#16	JJ00E						
#17	JJ00E-S						
#18	JJ00E-X						
#20							
#21							
#22							
#23							

Flow Rate = approx. 2 bubbles/second  
Distillation time criteria: 60 min. minimum

Report Date: 1/22/07  
 Analysis Date: 1/22/07  
 Data File: CN01227C  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R<sup>2</sup>: 0.999133  
 Corr: 0.999566  
 Std. Dev.: 5.707334

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
1	P			491.93		14:27:04
2	W			0.95	I	14:28:20
3	S1			0.48	SI	14:29:36
4	S2			5.47	s	14:30:52
5	S3			22.35	s	14:32:04
6	S4			105.09	s	14:33:19
7	S5			255.83	s	14:34:34
8	S6			301.24	s	14:35:49
9	S7			406.81	s	14:37:04
10	S8			489.31	s	14:38:20
11	ICV			205.19		14:39:34
12	ICB			1.19	I	14:40:49
13	BLK			2.14	I	14:42:04
14	LCS			97.01 <sup>100</sup>		14:43:19
15	HCS			377.09 <sup>400</sup>		14:44:35
16	JML71		7016410	13.79		14:45:51
17	JML71 S			103.90		14:47:05
18	JML71 X			12.84		14:48:21
19	JML76			11.41		14:49:36
20	JMJL5			1.43	I	14:50:50
21	JMJL7			3.09	I	14:52:05
22	JMJL7 S			96.77		14:53:20
23	CCV			245.61 <sup>250</sup>		14:54:35
24	CCB		7016409	1.90	I	14:55:51
25	JMJL7 X			2.38	I	14:57:07
26	JMJMG			3.57	I	14:58:23
27	JMJMJ			3.80		14:59:40
28	JMJMM			0.71	I	15:00:54
29	JMJMP			2.14	I	15:02:09
30	JJ00E		ENSR F6K170247-013	5.23		15:03:24
31	JJ00E S			105.33		15:04:36
32	JJ00E X		6333348	4.04	I	15:05:51
33	CCV			257.50 <sup>250</sup>		15:07:06
34	CCB			0.48	I	15:08:22
35	BLK			2.38	I	15:09:38
36	LCS			1.43	I	15:10:54
37	HCS			100.81		15:12:10
38	JM1MA			2.38	I	15:13:25
39	JM1MA S			2.85	I	15:14:40
40	JM1MA X			1.19	I	15:15:55
41	JM1MH			4.04		15:17:08
42	JMX63			11.65		15:18:24
43	JMX63 S			0.00	-RI	15:19:38
44	JMX63 X			1.19	I	15:20:53
45	CCV			274.85		15:22:08

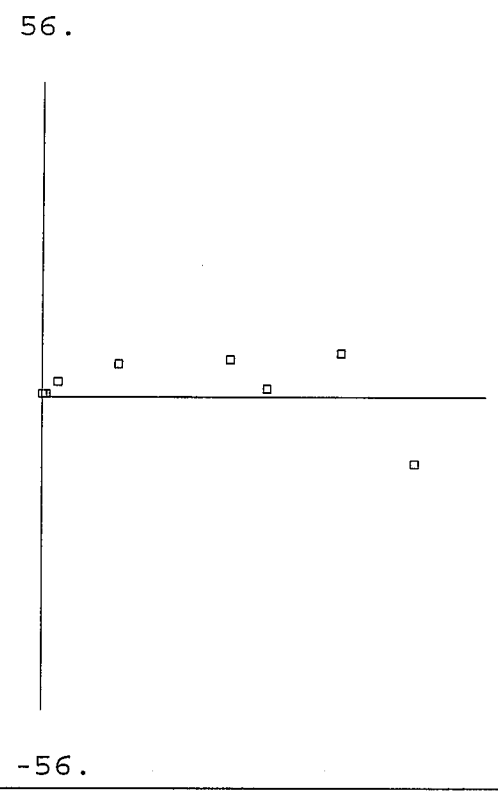
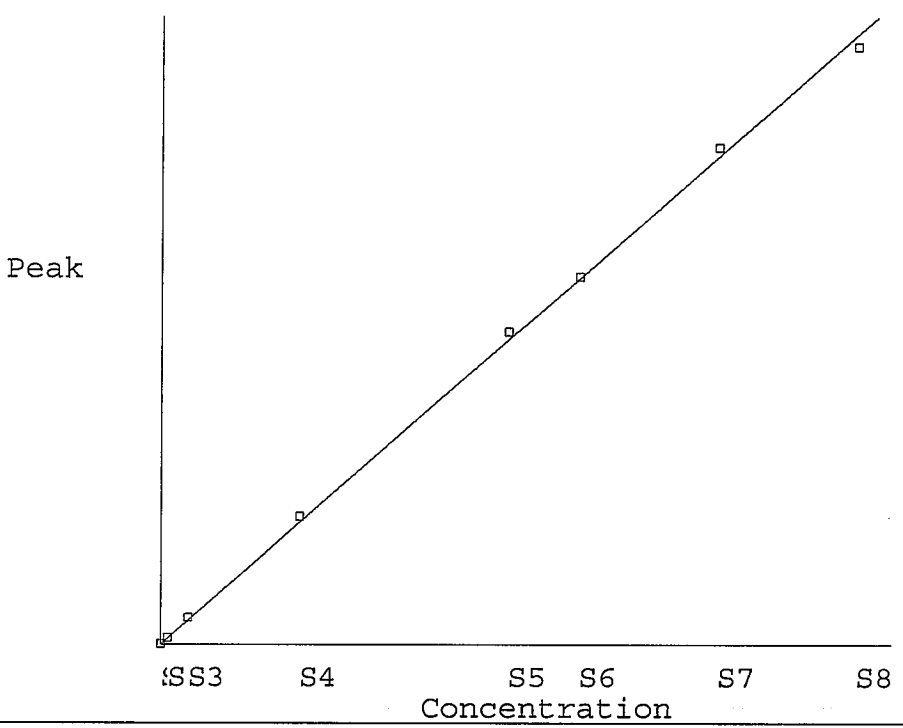
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 D01-2409

Report Date: 1/22/07  
Analysis Date: 1/22/07  
Data File: CN01227C  
Method Name: CYANIDE  
Units: ug/L  
Description: Cyanide

R<sup>2</sup>: 0.999133  
Corr: 0.999566  
Std. Dev.: 5.707334

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
46	CCB			15.22	I	15:23:23
47	BLK			15.69	I	15:24:38
48	BLK			19.26	I	15:25:53
49	BLK			18.78	I	15:27:08
50	BLK			19.02	I	15:28:23
51	BLK			18.07	I	15:29:38
52	END OF RUN			18.07	I	15:30:53

Data File: CN01227C  
Method File: CYANIDE  
Sample Table File: CN01227C



S#	Peak	Value	Calc	Residual
S1	0.05	0.00	0.48	0.48
S2	0.56	5.00	5.47	0.47
S3	2.30	20.00	22.35	2.35
S4	10.79	100.00	105.09	5.09
S5	26.28	250.00	255.83	5.83
S6	30.94	300.00	301.24	1.24
S7	41.78	400.00	406.81	6.81
S8	50.26	500.00	489.31	-10.69

Coefficients:  
 Intercept : 0  
 Slope : 9.73637  
 Std Dev : 5.70733  
 Corr Coef : 0.999566  
 R<sup>2</sup> : 0.999133



1/22/2007

15:32

Page:1

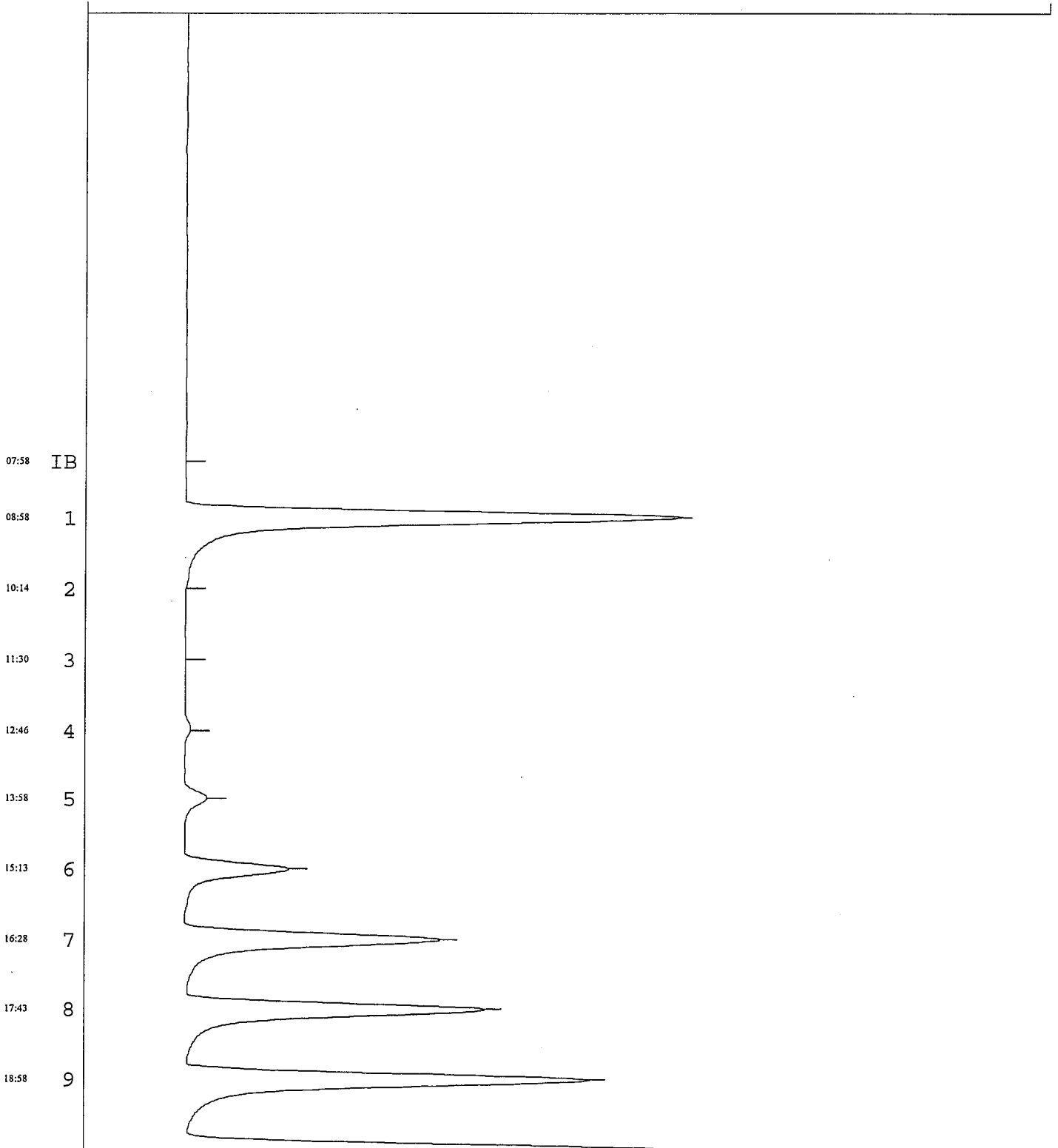
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Mthd: CYANIDE

Samp: CN01227C

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1/22/2007

15:32

Page:2

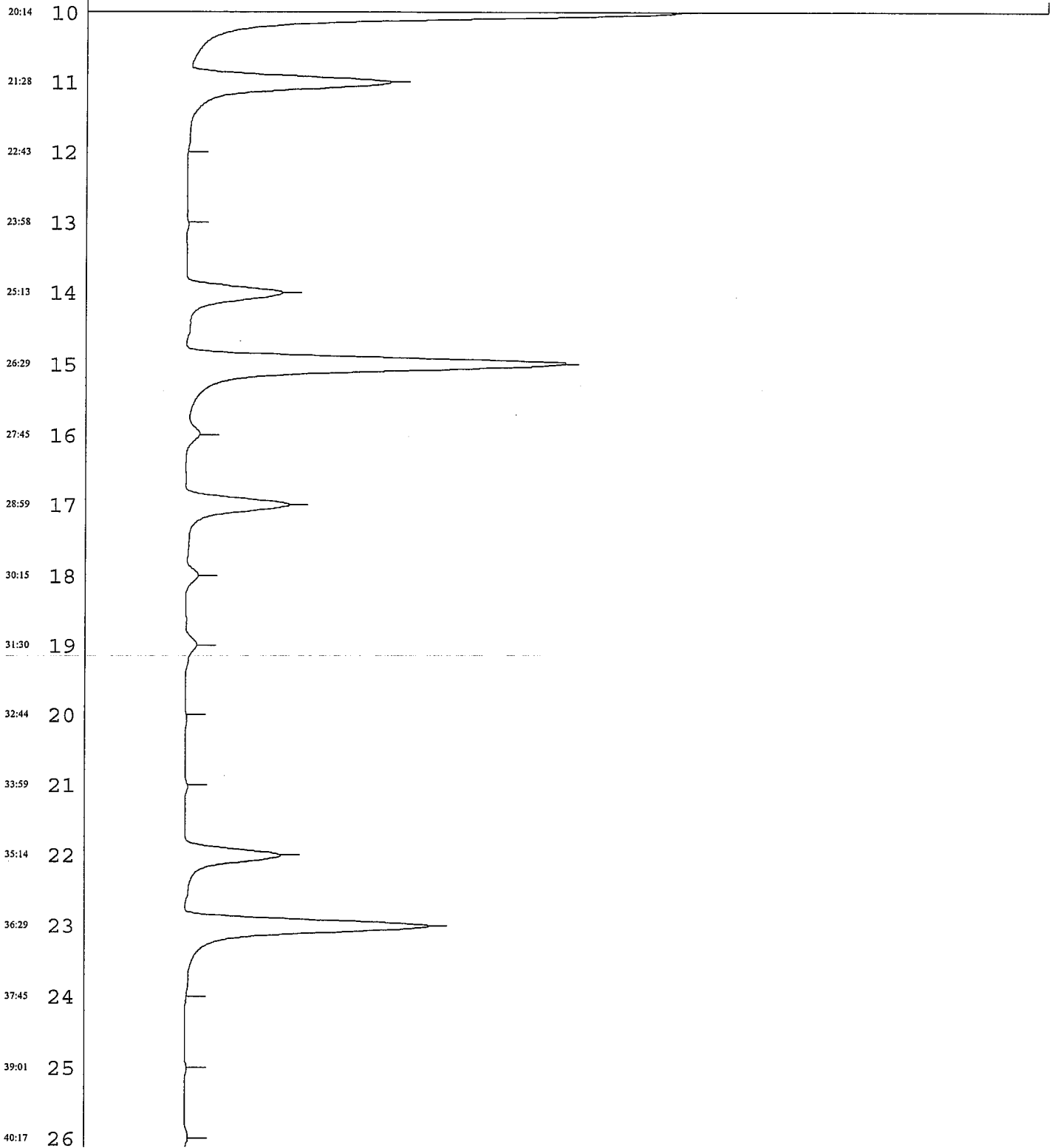
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Samp: CN01227C

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1/22/2007

15:32

Page:3

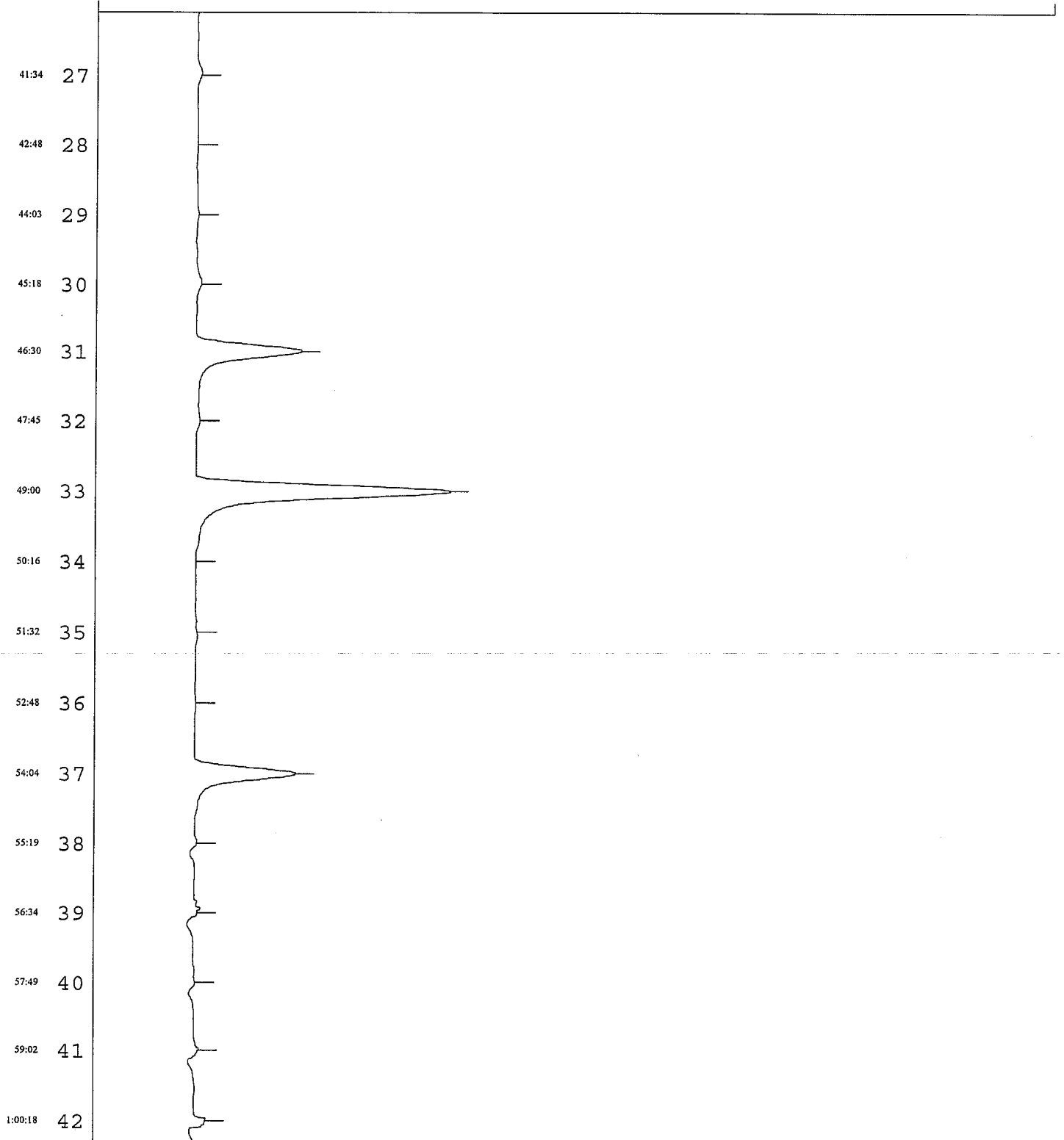
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Mthd: CYANIDE

Samp: CN01227C

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100



1/22/2007

15:32

Page:4

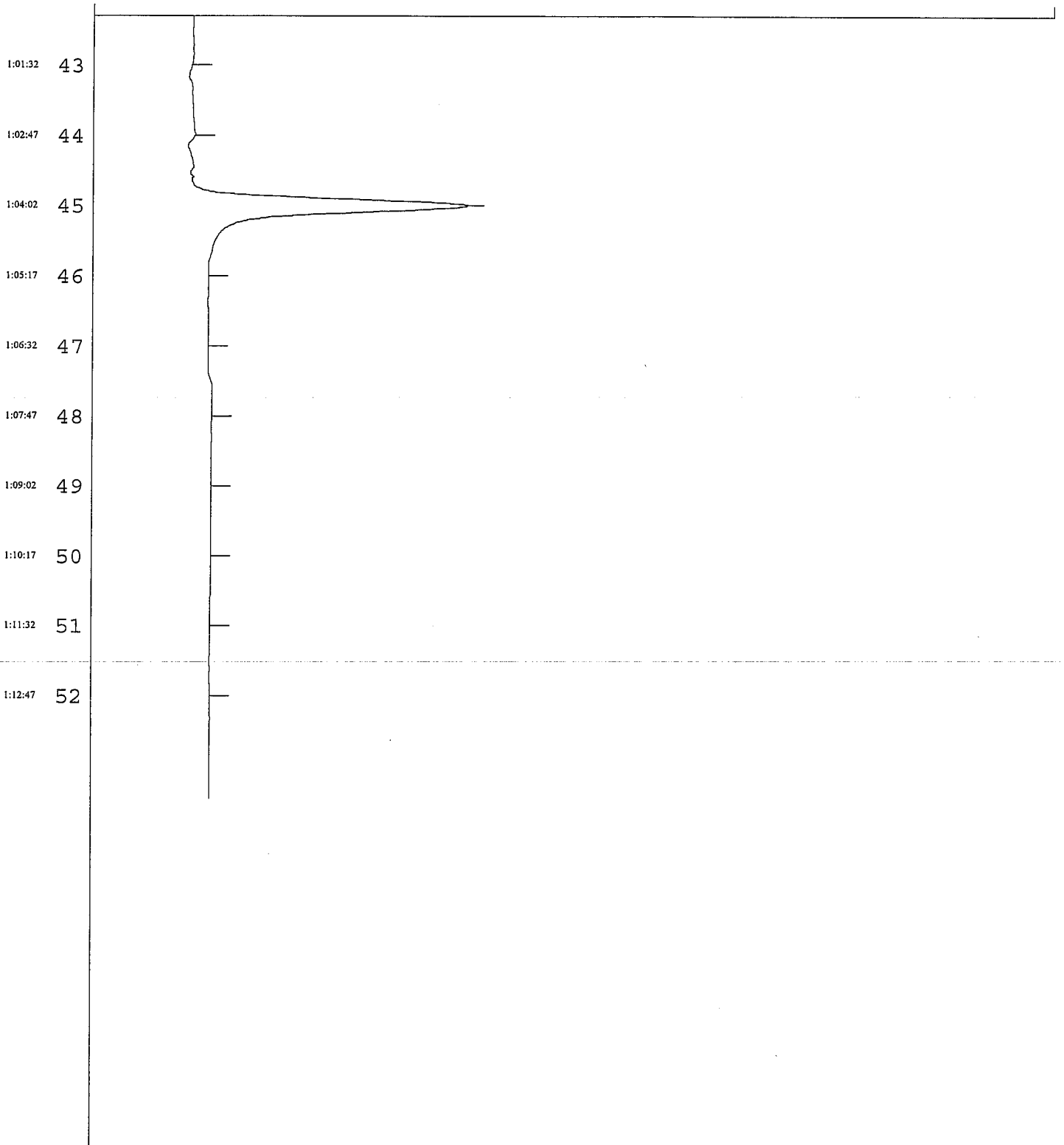
Data: CN01227C

Mthd: CYANIDE

Samp: CN01227C

0

100





**STL**

STL St. Louis  
Data Review Check List

**Wet Chemistry**

Due Dates: Earliest:		Latest:		Run Date:		
Method Name/#: (N) <sup>Not reported</sup>						
Batch #: 6333348 6320310 6317181 6331257 6331214						
Lot #: F6K150251 F6K160199 F6K170247 F6K180200 F6K080215 F6K090232						
NCM's F6K100205 F6K080325 F6K110180 F6K140246 F6K140289						
Review Item			Yes	No	N/A	Review
<b>Initial Calibration</b>						
Initial Calibration data in this package?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If not, please specify initial calibration date:						
Initial Calibration meets method acceptance criteria:			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Corr. Coefficient = 0.995; Y-intercept < the absolute value of the RL						
Is the low level standard = the reporting limit?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Calibration Check (ICV)</b>						
ICV performed with initial calibration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ICV meets method acceptance criteria (max. 10% D)?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Continuing Calibration Verification (CCV)</b>						
CCV performed at the prescribed frequency?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CCV meets method acceptance criteria (max. 10% D)?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Continuing Calibration Blank (CCB)</b>						
CCB performed after every CCV?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CCB meets method acceptance criteria?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria: < the absolute value of the Reporting Limit (see client sheet for						
<b>Batch QC - Method Blanks</b>						
Is a Method Blank required for this analysis?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the method blank below the Reporting Limit for targets of interest?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Batch QC - LCS</b>						
Is a LCS required for this analysis?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the LCS (LCSD) recoveries within method acceptance?				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<i>NCM</i>
<b>Batch QC - MS/MSD</b>						
Is a MS/MSD or MS/Sample Duplicate required for this analysis?			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the MS(MSD) recoveries within method acceptance?			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<i>NCM</i>
<b>Batch QC - RPD</b>						
MS/MSD or Sample/Sample Duplicate RPD within acceptance criteria			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Sample Results - Report</b>						
Are samples bracketed by acceptable CCV/CCB?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are results within the calibration range?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was analysis performed within Hold Time?				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did samples require dilution due to: (check one if applicable)						
matrix interference						
high target analyte concentration						
If dilutions were performed, was it within Hold Time?				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If dilutions were performed, are the undiluted runs in this submission?				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If not, please indicate where found:						
<b>Sample Results - Misc. information</b>						
Are Batch sheets, Preparation Logs (if applicable) included?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are copies of run logs included, initialed and dated?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were manual calculations performed? reviewer must check calculations				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were manual integrations performed, dated, and initialed?				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Client requirement sheets followed in data package?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reagents and Standards documented on prep/batch sheets?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Additional Comments:</b>						
Analyst/Date: <i>CA for JC</i>			Reviewer/Date: <i>CA</i> 12/18/06			

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/17/06  
Time: 17:21:44

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
--------------	---------------	----	---------------	--------------	-------------	-------------	----------------------

METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #: 6333348                      INITIALS:                      DATA ENTRY:

PREP DATE: 12/11/06                      PREP \_\_\_\_\_                      INITIALS \_\_\_\_\_

COMP DATE: 12/11/06                      ANAL \_\_\_\_\_                      DATE \_\_\_\_\_

USER: HOUGHC

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJRAF-1-CQ	F-6K150251-017	XX I 06 QP 01	Y-D	_____	EB111406
JJT4A-1-CN	F-6K160199-001	XX I 06 QP 01	Y-D	_____	EB111506
JJ00E-1-CK	F-6K170247-013	XX I 06 QP 01	Y-D	_____	EB111606 <i>not run Set to N</i>
JJ28E-1-CM	F-6K180200-001	XX I 06 QP 01	Y-D	_____	M29
JJ28E-1-F0	F-6K180200-001-D	XX I 06 QP 01	Y-D	_____	M29
JJ28E-1-FX	F-6K180200-001-S	XX I 06 QP 01	Y-D	_____	M29
JJ28F-1-CV	F-6K180200-002	XX I 06 QP 01	Y-D	_____	EB111706
JK7P7-1-AA	F-6K290000-348-B	XX I 06 QP 01		_____	INTRA-LAB BLANK
JK7P7-1-AC	F-6K290000-348-C	XX I 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

(90-110)

*CH*  
*12/17/06*

Date 12/17/2006  
Time 18:31:31

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6333348

PDE115

Method Code: Cyanide, Total  
Analyst: Chris Hough

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JJRAF-1-CQ	6.39	ug/L	5	12/11-12/13/06	.00	N		6.4	5.0	1.00
JJT4A-1-CN	ND	ug/L	5	12/11-12/13/06	.00	N		ND	5.0	1.00
JJ00E-1-CK	NONE	ug/L	5	12/11-12/13/06	.00	N		NON	5.0	1.00
JJ28E-1-CM	ND	ug/L	5	12/11-12/13/06	.00	N		ND	5.0	1.00
JJ28F-1-CV	ND	ug/L	5	12/11-12/13/06	.00	N		ND	5.0	1.00
JK7P7-1-AA	ND	ug/L	5	12/11-12/13/06	.00	N		ND	5.0	1.00

Set 10  
N

Notes:

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JK7P7-1-AC		100	94.12	94.12	12/11-12/13/06	(90-110)	1.00

Notes:

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Measured Dup.	Pct. Recovered	SPIKE	DUP	RPD	Prep. - Anal.	Dil.
JJ28E-1-FX		ND	100	.898	ND	.89	.00	200.00		12/11-12/13/06	1.00

Notes:

N Spiked analyte recovery is outside stated control limits.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0



STL

STL St. Louis

CYANIDE DISTILLATION

Due Dates: <sup>HOLD</sup> Earliest: 11/28 Latest: 12/1	Analyst/Run Date: <u>12-11-06</u> (3)
Method #/Name: CN- / 9012, 9012A	Sample Type: <u>SOIL</u> <u>WATER</u>
Batch #: 6331257, 6333348	
Lot #s: <u>F6K150251, F6K170199, F6K180200</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJQ8W	1g	50 ml	NA	NA	
2	JJQ82	↓	50 ml	↓	↓	
3	JJQ84	↓	50 ml	↓	↓	
4	JJQ84-D	↓	50 ml	↓	↓	
5	JJQ84-S	↓	50 ml	↓	↓	
6	BLK	50ml	50 ml	y	y	6333348 ↓
7	LCS	↓	50 ml	y	y	
8	HCS	↓	50 ml	↓	↓	
9	JJRAF	↓	50 ml	↓	↓	
10	JJT4A	↓	50 ml	↓	↓	
11	JJ28E	↓	50 ml	↓	↓	
12	JJ28E-D	↓	50 ml	↓	↓	
13	JJ28E-S	↓	50 ml	↓	↓	
14	JJ28F	↓	50 ml	↓	↓	
<del>15</del>	<del>JKM64</del>	↓	50 ml	↓	↓	
16						
<del>17</del>	<del>JKM64-S</del>	↓	50 ml	↓	↓	
<del>18</del>	<del>JKM64-X</del>	↓	50 ml	↓	↓	
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples		
	Client Requirement Sheets		
	Quantums Batch Sheets		
	Distillation Prep STDlog		

Analyst/Date:
Reviewer/Date:



RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/17/06  
Time: 16:43:43

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
--------------	---------------	----	---------------	--------------	-------------	-------------	----------------------

METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6320310	INITIALS:	DATA ENTRY:
PREP DATE:	12/08/06	PREP _____	INITIALS _____
COMP DATE:	12/08/06	ANAL _____	DATE _____
USER:	HOUGHGHC		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JH7XJ-1-CW	F-6K080215-015	XX A 06 QP 01	Y-D	_____	SA10-40
JJCG6-1-C0	F-6K090232-007	XX A 06 QP 01	Y-D	_____	SA14-0.5
JJCH3-1-CA	F-6K090232-008	XX A 06 QP 01	Y-D	_____	SA14-10
JJCJT-1-CG	F-6K090232-009	XX A 06 QP 01	Y-D	_____	SA14-20
JJCJ4-1-CJ	F-6K090232-010	XX A 06 QP 01	Y-D	_____	SA14-30
JJCKC-1-CJ	F-6K090232-011	XX A 06 QP 01	Y-D	_____	SA14-40
JJCKX-1-CL	F-6K090232-012	XX A 06 QP 01	Y-D	_____	SA15-0.5
JJCPW-1-CJ	F-6K090232-013	XX A 06 QP 01	Y-D	_____	SA15-10
JJCP7-1-CN	F-6K090232-014	XX A 06 QP 01	Y-D	_____	SA15-10D
JJCQG-1-CU	F-6K090232-015	XX A 06 QP 01	Y-D	_____	SA15-20
JJCQ2-1-CV	F-6K090232-016	XX A 06 QP 01	Y-D	_____	SA15-30
JJCQ5-1-CW	F-6K090232-017	XX A 06 QP 01	Y-D	_____	SA15-35
JJFPD-1-CX	F-6K100205-003	XX A 06 QP 01	Y-D	_____	SA16-0.5
JJFQH-1-C4	F-6K100205-004	XX A 06 QP 01	Y-D	_____	SA16-10
JJFQQ-1-CF	F-6K100205-005	XX A 06 QP 01	Y-D	_____	SA16-20
JLA64-1-AA	F-6K160000-310-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JLA64-1-AC	F-6K160000-310-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

CH 12/17/06

Control Limits

PDE115  
 Method Code: Cyanide, Total  
 Analyst: Chris Hough  
 Severn Trent Laboratories, Inc.  
 Inorganics Batch Review  
 QC Batch 6320310  
 Date 12/17/2006  
 Time 17:50:49

Work Order	Result	Units	IDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output IDL	Dil.
JH7XU-1-CW	ND	mg/kg	0.5	12/08-12/13/06	67.60	N		ND	0.74	1.00
JJCG6-1-C0	ND	mg/kg	0.5	12/08-12/13/06	91.33	N		ND	0.55	1.00
JJCH3-1-CA	ND	mg/kg	0.5	12/08-12/13/06	88.47	N		ND	0.57	1.00
JJCUJ-1-CG	ND	mg/kg	0.5	12/08-12/13/06	80.63	N		ND	0.62	1.00
JJCUJ-1-CJ	ND	mg/kg	0.5	12/08-12/13/06	62.54	N		ND	0.80	1.00
JJCKC-1-CJ	ND	mg/kg	0.5	12/08-12/13/06	80.95	N		ND	0.62	1.00
JJCKX-1-CL	1.033	mg/kg	0.5	12/08-12/13/06	86.60	N		1.2	0.58	1.00
JJCPW-1-CJ	ND	mg/kg	0.5	12/08-12/13/06	85.17	N		ND	0.59	1.00
JJCP7-1-CN	ND	mg/kg	0.5	12/08-12/13/06	91.00	N		ND	0.55	1.00
JJCGG-1-CU	ND	mg/kg	0.5	12/08-12/13/06	90.73	N		ND	0.55	1.00
JJCG2-1-CV	ND	mg/kg	0.5	12/08-12/13/06	73.46	N		ND	0.68	1.00
JJCG5-1-CW	.544	mg/kg	0.5	12/08-12/13/06	72.72	N		0.75	0.69	1.00
JJFPD-1-CX	ND	mg/kg	0.5	12/08-12/13/06	93.65	N		ND	0.53	1.00
JJFQH-1-C4	ND	mg/kg	0.5	12/08-12/13/06	89.77	N		ND	0.56	1.00
JJFQO-1-CF	ND	mg/kg	0.5	12/08-12/13/06	91.80	N		ND	0.54	1.00
JLA64-1-AA	ND	mg/kg	0.5	12/08-12/13/06	.00			ND	0.50	1.00

Notes:  
 Results and reporting limits have been adjusted for dry weight.

Check Standard  
 Work Order JLA64-1-AC  
 Exception Code 5.0  
 True Spike 3.50  
 Measured Spike N  
 Percent Recovered 70.00  
 Prep. - Anal. 12/08-12/13/06  
 Control Limits (90-110)  
 Dil. 1.00

Notes:  
 N Spiked analyte recovery is outside stated control limits.

TEST TOTAL # 0  
 SAMPLE # 0  
 PRODUCTION TOTALS  
 QC # 0  
 MATRIX # 0  
 OTHER # 0  
 MISC # 0  
 HOURS 0

(90-110)



**STL**

STL St. Louis

**CYANIDE DISTILLATION**

<b>Due Dates:</b> Earliest: _____ Latest: _____	<b>Analyst/Run Date:</b> <i>WJ 12-08-06</i> (2) (3)
<b>Method #/Name:</b> CN- / 9012, 9012A	<b>Sample Type:</b> <u>SOIL</u> WATER
<b>Batch #:</b> <i>6320310</i>	
<b>Lot #s:</b> <i>F6K090232</i>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	<i>BLK</i>		50 ml			
2	<i>LCS</i>		50 ml			
3	<i>HCS</i>		50 ml			
4	<i>JJCS4</i>		50 ml			
5	<i>JJCKC</i>		50 ml			
6	<i>JJCKX</i>		50 ml			
7	<i>JJCPW</i>		50 ml			
8	<i>JJCP7</i>		50 ml			
9	<i>JJCG6</i>		50 ml			
10	<i>JJCR2</i>		50 ml			
11	<i>JJCR5</i>		50 ml			
12	<i>JJFPD</i>		50 ml			
13	<i>JJFQH</i>		50 ml			
14	<i>JJ7FQR</i>		50 ml			
15	<i>JJ7XJ</i>		50 ml			
16						
17			50 ml			
18			50 ml			
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	✓	
	Client Requirement Sheets	✓	
	Quantums Batch Sheets	✓	
	Distillation Prep STDlog		✓

<b>Analyst/Date:</b> <i>WJ 12-07-06</i>
<b>Reviewer/Date:</b>

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/17/06  
Time: 14:47:17

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #: 6317181      INITIALS:      DATA ENTRY:

PREP DATE: 12/07/06 12/8/06      PREP \_\_\_\_\_      INITIALS \_\_\_\_\_

COMP DATE: 12/07/06      ANAL \_\_\_\_\_      DATE \_\_\_\_\_

USER: HOUGHC CA 12/17/06

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JH8R7-1-CE	F-6K080325-001	XX A 06 QP AI	B	_____	NBP-000000024
JH8R7-1-EA	F-6K080325-001-S	XX A 06 QP AI	B	_____	NBP-000000024
JH8R7-1-EC	F-6K080325-001-X	XX A 06 QP AI	B	_____	NBP-000000024 DUP
JL5X-1-AA	F-6K130000-181-B	XX A 06 QP AI		_____	INTRA-LAB BLANK
JL5X-1-AC	F-6K130000-181-C	XX A 06 QP AI		_____	INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

CA  
12/17/06

PDE115  
 Method Code: Cyanide, Total  
 Analyst: Chris Hough  
 Severn Trent Laboratories, Inc.  
 Inorganics Batch Review  
 QC Batch 6317181  
 Date 12/17/2006  
 Time 17:40:06

Work Order	Result	Units	IDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output IDL	Dil.
JH8R7-1-CE	ND	ug/kg	500	12/07-12/13/06	92.29	N		ND	542	1.00
JH8R7-1-EC	ND	ug/kg	500	12/07-12/13/06	92.29	N		ND	542	1.00
JLA5X-1-AA	ND	ug/kg	500	12/07-12/17/06	.00			ND	500	1.00

Notes:

Check Standard	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
Work Order JLA5X-1-AC		5000	3501	70.02	12/07-12/17/06	(90-110)	1.00

Notes: N Spiked analyte recovery is outside stated control limits.

Measured Spike	Exception Code	Measured Sample	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Dil.
Work Order JH8R7-1-EA		ND	5000	4950	99.00	12/07-12/17/06	1.00

Notes: Results and reporting limits have been adjusted for dry weight.

TEST	TOTAL #	SAMPLE #	QC #	PRODUCTION TOTALS	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	0	0



**STL**

STL St. Louis

**CYANIDE DISTILLATION**

<b>Due Dates:</b> Earliest: _____ Latest: _____	<b>Analyst/Run Date:</b> <u>Dr 12-08-06</u> (1)
<b>Method #/Name:</b> CN- / 9012, 9012A	<b>Sample Type:</b> <u>SOIL</u> WATER
<b>Batch #:</b> <u>6317181</u>	
<b>Lot #s:</b> <u>F6K080325</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?	COMMENTS
1	<u>BLK</u>	<u>1g</u>	50 ml		
2	<u>LCS</u>		50 ml		
3	<u>HCS</u>		50 ml		
4	<u>JJ8R7</u>		50 ml		
5	<u>JJ8R7-S</u>		50 ml		
6	<u>JJ8R7-X</u>		50 ml		
7			50 ml		
8			50 ml		
9			50 ml		
10			50 ml		
11			50 ml		
12			50 ml		
13			50 ml		
14			50 ml		
15			50 ml		
16					
17			50 ml		
18			50 ml		
19			50 ml		
20			50 ml		

Sent To TRAACS		YES	NO
Distilled Cyanide Samples		<input checked="" type="checkbox"/>	
Client Requirement Sheets		<input checked="" type="checkbox"/>	
Quantums Batch Sheets		<input checked="" type="checkbox"/>	
Distillation Prep STDlog			<input checked="" type="checkbox"/>

<b>Analyst/Date:</b> <u>Dr 12-07-06</u>
<b>Reviewer/Date:</b>





RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/17/06  
Time: 17:02:12

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #: 6331257 INITIALS: DATA ENTRY:  
PREP DATE: 12/11/06 PREP \_\_\_\_\_ INITIALS \_\_\_\_\_  
COMP DATE: 12/11/06 ANAL \_\_\_\_\_ DATE \_\_\_\_\_  
USER: HOUGHHC

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJQ27-1-C4	F-6K150251-002	XX A 06 QP 01	Y-D	_____	SA6-0.5D
JJQ27-1-FE	F-6K150251-002-D	XX A 06 QP 01	Y-D	_____	SA6-0.5D
JJQ27-1-FD	F-6K150251-002-S	XX A 06 QP 01	Y-D	_____	SA6-0.5D
JJQ4W-1-CM	F-6K150251-006	XX A 06 QP 01	Y-D	_____	SA6-35
JJQ46-1-C4	F-6K150251-007	XX A 06 QP 01	Y-D	_____	SA5-0.5
JJQ6Q-1-CF	F-6K150251-008	XX A 06 QP 01	Y-D	_____	SA5-10
JJQ6V-1-CH	F-6K150251-009	XX A 06 QP 01	Y-D	_____	SA5-20
JJQ6X-1-CH	F-6K150251-010	XX A 06 QP 01	Y-D	_____	SA5-30
JJQ62-1-CH	F-6K150251-011	XX A 06 QP 01	Y-D	_____	SA5-37
JJQ7H-1-CF	F-6K150251-012	XX A 06 QP 01	Y-D	_____	SA4-0.5
JJQ8F-1-CK	F-6K150251-013	XX A 06 QP 01	Y-D	_____	SA4-10
JJQ8W-1-CN	F-6K150251-014	XX A 06 QP 01	Y-D	_____	SA4-20
JJQ82-1-CP	F-6K150251-015	XX A 06 QP 01	Y-D	_____	SA4-30
JJQ84-1-CQ	F-6K150251-016	XX A 06 QP 01	Y-D	_____	SA4-40
JJQ84-1-D0	F-6K150251-016-D	XX A 06 QP 01	Y-D	_____	SA4-40
JJQ84-1-DX	F-6K150251-016-S	XX A 06 QP 01	Y-D	_____	SA4-40
JJC8V-1-AA	F-6K270000-257-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JJC8V-1-AC	F-6K270000-257-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

CH  
12/17/06

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/17/06  
Time: 17:02:12

STL St. Louis

QC BATCH #: 6331258  
PREP DATE: 11/27/06  
COMP DATE: 12/11/06  
USER: HOUGHC

INITIALS:  
PREP \_\_\_\_\_  
ANAL \_\_\_\_\_

DATA ENTRY:  
INITIALS \_\_\_\_\_  
DATE \_\_\_\_\_

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Control Limits

(90-110)

(90-110)

(90-110)

(90-110)

(90-110)

PDE115  
 Method Code: Cyanide, Total  
 Analyst: Chris Hough  
 Severn Trent Laboratories, Inc.  
 Inorganics Batch Review  
 QC Batch 6331257  
 Date 12/17/2006  
 Time 18:09:36

Work Order	Result	Units	IDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output IDL	Dil.
JJQ27-1-C4	ND	mg/kg	0.5	12/11-12/13/06	86.15	N		ND	0.58	1.00
JJQ4W-1-CM	ND	mg/kg	0.5	12/11-12/13/06	67.41	N		ND	0.74	1.00
JJQ46-1-C4	ND	mg/kg	0.5	12/11-12/13/06	77.45	N		ND	0.65	1.00
JJQ6Q-1-CF	ND	mg/kg	0.5	12/11-12/13/06	85.85	N		ND	0.58	1.00
JJQ6V-1-CH	ND	mg/kg	0.5	12/11-12/13/06	84.80	N		ND	0.59	1.00
JJQ6X-1-CH	ND	mg/kg	0.5	12/11-12/13/06	92.38	N		ND	0.54	1.00
JJQ62-1-CH	ND	mg/kg	0.5	12/11-12/13/06	60.08	N		ND	0.83	1.00
JJQ7H-1-CF	ND	mg/kg	0.5	12/11-12/13/06	91.01	N		ND	0.55	1.00
JJQ8F-1-CK	ND	mg/kg	0.5	12/11-12/13/06	94.01	N		ND	0.53	1.00
JJQ8W-1-CN	ND	mg/kg	0.5	12/11-12/13/06	91.50	N		ND	0.55	1.00
JJQ82-1-CP	ND	mg/kg	0.5	12/11-12/13/06	87.69	N		ND	0.57	1.00
JJQ84-1-CQ	ND	mg/kg	0.5	12/11-12/13/06	94.12	N		ND	0.53	1.00
JJC8V-1-AA	ND	mg/kg	0.5	12/11-12/13/06	.00			ND	0.50	1.00

Notes:  
 Check standard  
 Work Order Exception Code True Spike Measured Spike Percent Recovered Prep. - Anal. Control Limits Dil.  
 JJC8V-1-AC 5.0 3.885 N 77.70 12/11-12/13/06 (90-110) 1.00

Notes:  
 N Spiked analyte recovery is outside stated control limits.  
 MS - MSD  
 Work Order Exception Code Measured Sample True Spike Measured SPIKE Measured DUP. SPIKE Pct. Recovered RPD Dil.  
 JJQ27-1-FD ND ND 5 4.632 4.813 92.64 96.26 3.83 12/11-12/13/06  
 JJQ84-1-DX ND ND 5 .381 N 4.826 7.62 96.52 170.73 12/11-12/13/06 1.00

Notes:  
 Results and reporting limits have been adjusted for dry weight.  
 N Spiked analyte recovery is outside stated control limits.

TEST TOTAL # SAMPLE # QC # PRODUCTION TOTALS MATRIX # OTHER # MISC # HOURS  
 0 0 0 0 0 0 0



STL

STL St. Louis

CYANIDE DISTILLATION

Due Dates: <sup>HOLD</sup> Earliest: 11/28 Latest: 12/1	Analyst/Run Date: <u>12-11-06</u> (3)
Method #/Name: CN- / 9012, 9012A	Sample Type: <u>SOIL</u> <u>WATER</u>
Batch #: <u>6331257, 6333348</u>	
Lot #s: <u>F6K150251, F6K170199, F6K180200</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJQ8W	1g	50 ml	NA	NA	
2	JJQ82	↓	50 ml	↓	↓	
3	JJQ84	↓	50 ml	↓	↓	
4	JJQ84-D	↓	50 ml	↓	↓	
5	JJQ84-S	↓	50 ml	↓	↓	
6	BLK	50ml	50 ml	y	y	6333348 ↓
7	LCS	↓	50 ml	y	y	
8	HCS	↓	50 ml	↓	↓	
9	JJRAF	↓	50 ml	↓	↓	
10	JJT4A	↓	50 ml	↓	↓	
11	JJ28E	↓	50 ml	↓	↓	
12	JJ28E-D	↓	50 ml	↓	↓	
13	JJ28E-S	↓	50 ml	↓	↓	
14	JJ28F	↓	50 ml	↓	↓	
15	<del>JKM64</del>	↓	50 ml	↓	↓	
16	<del>JKM64-S</del>	↓	50 ml	↓	↓	
17	<del>JKM64-S</del>	↓	50 ml	↓	↓	
18	<del>JKM64-X</del>	↓	50 ml	↓	↓	
19			50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples		
	Client Requirement Sheets		
	Quantums Batch Sheets		
	Distillation Prep STDlog		

Analyst/Date:
Reviewer/Date:



**STL**

STL St. Louis

**CYANIDE DISTILLATION**

<b>Due Dates:</b> Earliest: _____ Latest: _____	<b>Analyst/Run Date:</b> <u>Jan 12/1/06</u> <u>(2)</u>
<b>Method #/Name:</b> CN- / 9012, 9012A	<b>Sample Type:</b> <u>SOIL</u> WATER
<b>Batch #:</b> <u>633/24, 633/257</u>	
<b>Lot #s:</b> <u>F6K150257,</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g—soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	JJQ10	1g	50 ml	NA	NA	
2	JJQ10-D	↓	50 ml	↓	↓	
3	JJQ10-S	↓	50 ml	↓	↓	
4	JJQ40	↓	50 ml	↓	↓	
5	BLK	↓	50 ml	↓	↓	
6	LCS	↓	50 ml	↓	↓	
7	HCS	↓	50 ml	↓	↓	
8	JJQ27	↓	50 ml	↓	↓	
9	JJQ27-D	↓	50 ml	↓	↓	
10	JJQ27-S	↓	50 ml	↓	↓	
11	JJQ4W	↓	50 ml	↓	↓	
12	JJQ46	↓	50 ml	↓	↓	
13	JJQ60	↓	50 ml	↓	↓	
14	JJQ6V	↓	50 ml	↓	↓	
15	JJQ6X	↓	50 ml	↓	↓	
16						
17	JJQ62	↓	50 ml	↓	↓	
18	JJQ7H	↓	50 ml	↓	↓	
19	JJQ8F	↓	50 ml	↓	↓	
20			50 ml			

Sent To TRAACS		YES	NO
Distilled Cyanide Samples			
Client Requirement Sheets			
Quantums Batch Sheets			
Distillation Prep STDlog			

<b>Analyst/Date:</b> _____
<b>Reviewer/Date:</b> _____

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/17/06  
Time: 16:52:51

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
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METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #: 6331214 INITIALS: DATA ENTRY:  
PREP DATE: 12/11/06 PREP \_\_\_\_\_ INITIALS \_\_\_\_\_  
COMP DATE: 12/11/06 ANAL \_\_\_\_\_ DATE \_\_\_\_\_  
USER: HOUGHCH

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJJHE-1-C6	F-6K110180-003	XX A 06 QP 01	Y-D	_____	SA12-20
JJJHE-1-C7	F-6K110180-003-S	XX A 06 QP 01	Y-D	_____	SA12-20
JJJHE-1-C8	F-6K110180-003-X	XX A 06 QP 01	Y-D	_____	SA12-20 DUP
JJJHF-1-C6	F-6K110180-004	XX A 06 QP 01	Y-D	_____	SA12-30
JJNEQ-1-CV	F-6K140246-003	XX A 06 QP 01	Y-D	_____	SA3-0.5
JJNF1-1-C2	F-6K140246-004	XX A 06 QP 01	Y-D	_____	SA3-0.5D
JJNF4-1-CD	F-6K140246-005	XX A 06 QP 01	Y-D	_____	SA3-10
JJNF9-1-CJ	F-6K140246-006	XX A 06 QP 01	Y-D	_____	SA3-20
JJNGF-1-CL	F-6K140246-007	XX A 06 QP 01	Y-D	_____	SA3-30
JJNGH-1-CN	F-6K140246-008	XX A 06 QP 01	Y-D	_____	SA3-40
JJNQD-1-AX	F-6K140289-001	XX A 06 QP 01	B	_____	S-5-1
JJNQ2-1-AX	F-6K140289-002	XX A 06 QP 01	B	_____	S-5-2
JJNQ3-1-AX	F-6K140289-003	XX A 06 QP 01	B	_____	S-5-3
JJQ10-1-CW	F-6K150251-001	XX A 06 QP 01	Y-D	_____	SA6-0.5
JJQ10-1-EL	F-6K150251-001-D	XX A 06 QP 01	Y-D	_____	SA6-0.5
JJQ10-1-EK	F-6K150251-001-S	XX A 06 QP 01	Y-D	_____	SA6-0.5
JJQ3H-1-C4	F-6K150251-003	XX A 06 QP 01	Y-D	_____	SA6-10
JJQ34-1-CF	F-6K150251-004	XX A 06 QP 01	Y-D	_____	SA6-20

*CA*  
12/17/06

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/17/06  
Time: 16:52:51

STL St. Louis

QC BATCH #: 6331214  
PREP DATE: 12/11/06  
COMP DATE: 12/11/06  
USER: HOUGHGHC

INITIALS:  
PREP \_\_\_\_\_  
ANAL \_\_\_\_\_

DATA ENTRY:  
INITIALS \_\_\_\_\_  
DATE \_\_\_\_\_

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJQ4Q-1-CJ	F-6K150251-005	XX A 06 QP 01	Y-D	_____	SA6-30
JKC57-1-AA	F-6K270000-214-B	XX A 06 QP 01		_____	INTRA-LAB BLANK
JKC57-1-AC	F-6K270000-214-C	XX A 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

(90-110)

(90-110)

Date 12/17/2006  
Time 18:00:22

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6331214

PDE115

Method Code: Cyanide, Total  
Analyst: Chris Hough

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JJJHE-1-C6	ND	mg/kg	0.5	12/11-12/13/06	92.40	N		ND	0.54	1.00
JJJHE-1-C8	ND	mg/kg	0.5	12/11-12/13/06	92.40	N		ND	0.54	1.00
JJJHF-1-C6	ND	mg/kg	0.5	12/11-12/13/06	62.01	N		ND	0.81	1.00
JJNEQ-1-CV	ND	mg/kg	0.5	12/11-12/13/06	93.56	N		ND	0.53	1.00
JJNF1-1-C2	ND	mg/kg	0.5	12/11-12/13/06	93.74	N		ND	0.53	1.00
JJNF4-1-CD	ND	mg/kg	0.5	12/11-12/13/06	93.70	N		ND	0.53	1.00
JJNF9-1-CJ	ND	mg/kg	0.5	12/11-12/13/06	91.07	N		ND	0.55	1.00
JJNGF-1-CL	ND	mg/kg	0.5	12/11-12/13/06	77.60	N		ND	0.64	1.00
JJNGH-1-CN	ND	mg/kg	0.5	12/11-12/13/06	67.90	N		ND	0.74	1.00
JJNQD-1-AX	ND	mg/kg	0.5	12/11-12/13/06	89.21	N		ND	0.56	1.00
JJNQ2-1-AX	ND	mg/kg	0.5	12/11-12/13/06	89.06	N		ND	0.56	1.00
JJNQ3-1-AX	ND	mg/kg	0.5	12/11-12/13/06	85.02	N		ND	0.59	1.00
JJQ10-1-CW	ND	mg/kg	0.5	12/11-12/13/06	94.22	N		ND	0.53	1.00
JJQ3H-1-C4	ND	mg/kg	0.5	12/11-12/13/06	92.39	N		ND	0.54	1.00
JJQ34-1-CF	ND	mg/kg	0.5	12/11-12/13/06	92.29	N		ND	0.54	1.00
JJQ4Q-1-CJ	ND	mg/kg	0.5	12/11-12/13/06	94.97	N		ND	0.53	1.00
JJC57-1-AA	ND	mg/kg	0.5	12/11-12/13/06	.00			ND	0.50	1.00

Notes:

Check Standard  
Work Order  
JKC57-1-AC

Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits
	5.0	4.784	95.68	12/11-12/13/06	(90-110)
				Dil.	Dil.
				1.00	1.00

Notes:

MS - MSD

Work Order  
JJQ10-1-EK

Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	Pct.	Recovered DUP	RPD	Prep. - Anal.
	ND	5	5.421	4.758	108.42	95.16	13.02	12/11-12/13/06
								Dil.
								1.00

Notes:



Date 12/17/2006  
Time 18:00:22

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6331214

PDE115

Method Code: Cyanide, Total  
Analyst: Chris Hough

Notes:  
Results and reporting limits have been adjusted for dry weight.

Measured Spike	Exception Code	Measured Sample	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Dil.
JUUHE-1-C7	ND	ND	5	4.813	96.26	12/11-12/13/06	1.00

Notes:  
Results and reporting limits have been adjusted for dry weight.

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
SULFIDE	13	9	4	0	0	0	2.5



**STL**

STL St. Louis

**CYANIDE DISTILLATION**

<b>Due Dates:</b> Earliest: <u>4/24</u> Latest:	<b>Analyst/Run Date:</b> <u>12-11-06</u> ①
<b>Method #/Name:</b> <u>CN- / 9012, 9012A</u>	<b>Sample Type:</b> <u>SOIL</u> WATER
<b>Batch #:</b> <u>6331214</u>	
<b>Lot #s:</b> <u>F6K110180, F6K140246,</u>	

SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g—soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	BK	1g	50 ml	NA	NA	
2	LCS		50 ml			
3	HCS		50 ml			
4	JJHE		50 ml			
5	JJHE-S		50 ml			
6	JJHE-X		50 ml			
7	JJHF		50 ml			
8	JJNEQ		50 ml			
9	JJNF1		50 ml			
10	JJNF4		50 ml			
11	JJNF9		50 ml			
12	JJN6F		50 ml			
13	JJN6H		50 ml			
14	JJN8D		50 ml			
15	JJN8Z		50 ml			
16						
17	JJN83		50 ml			
18	JJQ3H		50 ml			
19	JJQ34		50 ml			
20			50 ml			

Sent To TRAACS		YES	NO
Distilled Cyanide Samples			
Client Requirement Sheets			
Quantums Batch Sheets			
Distillation Prep STDlog			

<b>Analyst/Date:</b>
<b>Reviewer/Date:</b>

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
1	P			473.50		14:12:40
2	W			3.90	I	14:13:56
3	S1			0.73	-sI	14:15:12
4	S2			8.10	s	14:16:28
5	S3			21.30	s	14:17:42
6	S4			96.85	s	14:18:57
7	S5			253.34	s	14:20:12
8	S6			288.75	s	14:21:27
9	S7			403.31	s	14:22:41
10	S8			502.62	s	14:23:57
11	ICV			205.02	100% 102%	14:25:12
12	ICB			3.84	<S I	14:26:27
13	BLK			3.36	<S I	14:27:42
14	LCS			36.30	100% 36%	14:28:58
15	JH8R71CE			3.75	I	14:30:12
16	JH8R71EA x			3.50	I	14:31:27
17	JH8R71EC s			99.00	I	14:32:42
18	BLK			3.22	<S I	14:33:57
19	LCS			70.02	100% 70%	14:35:13
20	JH7XJ1CW			3.39	I	14:36:28
21	JJCG61C0			3.81	I	14:37:43
22	JJCH31CA			4.23	I	14:38:58
23	CCV			237.42	1250 95%	14:40:14
24	CCB			3.73	<S I	14:41:30
25	JJCJT1CG			4.37	I	14:42:46
26	JJCJ41CJ			4.57	I	14:44:02
27	JJCKC1CJ			7.00	I	14:45:18
28	JJCKX1CL			20.66	I	14:46:28
29	JJCPW1CJ			6.28	I	14:47:44
30	JJCP71CN			4.90	I	14:49:00
31	JJCQG1CU			8.91	I	14:50:16
32	JJCQ21CV			3.72	I	14:51:31
33	JJCQ51CW			10.87	I	14:52:47
34	JJFPD1CX			7.93	I	14:54:03
35	CCV			255.92	1250 102%	14:55:15
36	CCB			3.39	<S I	14:56:30
37	JJFQH1C4			3.14	I	14:57:45
38	JJFQQ1CF			3.56	I	14:59:00
39	BLK			3.30	<S I	15:00:15
40	LCS			95.67	100% 95%	15:01:31
41	JJJHE1C6			3.25	I	15:02:46
42	JJJHE1C7 x5			4.79	I	15:04:01
43	JJJHE1C8 5x			96.26	I	15:05:17
44	JJJHF1C6			2.94	I	15:06:31
45	JJNEQ1CV			3.36	I	15:07:46

6317181

6320310

6331214

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
46	JJNF11C2			3.56	I	15:09:01
47	CCV			260.07/100	168%	15:10:16
48	CCB			3.72/5	I	15:11:31
49	JJNF41CD			5.27	I	15:12:46
50	JJNF91CJ			3.44	I	15:14:01
51	JJNGF1CL			2.97	I	15:15:16
52	JJNGH1CN			3.39	I	15:16:31
53	JJNQD1AX			4.93	I	15:17:46
54	JJNQ21AX			4.68	I	15:19:01
55	JJNQ31AX			4.87	I	15:20:17
56	JJQ101CW			3.95	I	15:21:33
57	JJQ101EL S			108.42		15:22:49
58	JJQ101EK D			95.16		15:24:04
59	CCV			253.45/250	101%	15:25:19
60	CCB			4.28/5	I	15:26:34
61	JJQ3H1C4			3.81	I	15:27:49
62	JJQ341CF			4.90	I	15:29:04
63	JJQ4Q1CJ			3.98	I	15:30:19
64	BLK			5.29	I	15:31:34
65	LCS			77.70/100	78%	15:32:49
66	JJQ271C4			4.12	I	15:34:04
67	JJQ271FE D			96.25		15:35:20
68	JJQ271FD S			92.64		15:36:35
69	JJQ4W1CM			4.03	I	15:37:50
70	JJQ461C4			3.56	I	15:39:05
71	CCV			255.36/250	102%	15:40:20
72	CCB			5.07	I	15:41:35
73	JJQ6Q1CF			2.35	I	15:42:50
74	JJQ6V1CH			3.22	I	15:44:05
75	JJQ6X1CH			2.52	I	15:45:20
76	JJQ621CH			2.27	I	15:46:35
77	JJQ7H1CF			2.69	I	15:47:50
78	JJQ8F1CK			3.78	I	15:49:05
79	JJQ8W1CN			4.20	I	15:50:20
80	JJQ821CP			7.98	I	15:51:35
81	JJQ841CQ			6.61	I	15:52:50
82	JJQ841D0 D			96.51		15:54:06
83	CCV			258.61/250	103%	15:55:21
84	CCB			4.73/5	I	15:56:36
85	JJQ841DX S			7.62	I	15:57:51
86	BLK			4.68/5	I	15:59:06
87	LCS			94.12/100	94%	16:00:22
88	JJRAF1CQ CH			88.26		16:01:37
89	JJRAF JJA1CN			6.39	I	16:02:52
90	JJTYA JJQ0E1CK MISSING			2.99	I	16:04:07

6331257

6333348

MISS part  
↓

LCS  
JJRAF  
JJTYA  
12/14/06

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
91	JJ28E1CM			1.84	I	16:05:22
92	JJ28E1F0 D			17.96		16:06:38
93	JJ28E1FX S			2.46	I	16:07:53
94	JJ28F1CV			2.66	I	16:09:08
95	CCV			244.82	1/250 98%	16:10:23
96	CCB			4.84	LS I	16:11:38
97	BLK			3.69	LS I	16:12:53
98	LCS			93.14	1/100 93%	16:14:08
99	JJ8W51CN			3.64	I	16:15:23
100	JJ8W51FD S			103.40		16:16:39
101	JJ8W51FE x			3.81	I	16:17:54
102	JKG0H1CM			3.55	I	16:19:09
103	JKJQ51CK			3.75	I	16:20:24
104	JKJTN1CQ			1.70	I	16:21:39
105	JKJT31CQ			3.47	I	16:22:54
106	JKJT61CQ			2.10		16:24:09
107	CCV			237.08	1/250 95%	16:25:25
108	CCB			4.06	LS I	16:26:40
109	JKMPR1CM			1.34	I	16:27:55
110	JKMQW1CU			1.53	I	16:29:10
111	JKMQ11CU			4.65	I	16:30:25
112	JKMRK1CU			4.84	I	16:31:40
113	JKPND			3.02	I	16:32:55
114	JKPNW			1.42	I	16:34:11
115	BLK			11.93		16:35:27
116	LCS			25.36		16:36:42
117	F6K140153-001			4.03	I	16:37:57
118	F6K140153-001X			1.09		16:39:12
119	CCV			239.88	1/250 96%	16:40:27
120	CCB			3.50	LS I	16:41:42
121	F6K140153-001S			20.29		16:42:57
122	F6K140153-002			8.60		16:44:13
123	F6K140153-003			13.05		16:45:28
124	F6K140153-004			2.26	I	16:46:43
125	F6K140153-005			2.23	I	16:47:58
126	F6K140153-006			3.10	I	16:49:13
127	F6K140153-007			3.75	I	16:50:28
128	F6K140153-008			1.48	I	16:51:43
129	F6K140153-009			0.78	-I	16:52:58
130	F6K150192-001			0.97		16:54:13
131	CCV			240.89	1/250 96%	16:55:28
132	CCB			3.38	LS I	16:56:43
133	F6K150192-002			1.11	I	16:57:58
134	F6K150192-003			1.98	I	16:59:13
135	F6K150192-004			2.63	I	17:00:28

6338419

None of Reactive

6341147

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
136	F6K150192-005			2.15	I	17:01:43
137	F6K150192-006			2.57	I	17:02:58
138	F6K150192-007			1.42	I	17:04:13
139	F6K150192-008			1.84	I	17:05:28
140	F6K150192-009			2.26	I	17:06:43
141	F6K160161-001			2.01	I	17:07:58
142	F6K160161-002			2.21	I	17:09:14
143	CCV			251.54	100% I	17:10:30
144	CCB			3.05	I	17:11:45
145	BLK			1.67	I	17:13:00
146	LCS			779.34	R	17:14:16
147	F6K160161-003			7.45	I	17:15:31
148	F6K160161-004			3.16	I	17:16:46
149	F6K160161-005			1.56	I	17:18:01
150	F6K160161-006			1.53	I	17:19:16
151	F6K160161-007			2.85	I	17:20:31
152	F6K160161-008			0.58	-RI	17:21:46
153	F6K160161-009			2.35	I	17:23:01
154	F6K160161-010			1.87	I	17:24:16
155	CCV			242.24	100% I	17:25:31
156	CCB			3.16	I	17:26:46
157	F6K160161-010X			1.78	I	17:28:01
158	F6K160161-010S			370.65		17:29:17
159	F6K280158-001			3.52	I	17:30:32
160	F6K280158-002			1.25	I	17:31:47
161	F6K280158-003			71.64		17:33:03
162	F6K290125-001			1.42	I	17:34:18
163	F6K290125-002			1.17	I	17:35:33
164	F6K290125-003			1.14	I	17:36:48
165	F6K290125-004			4.70	I	17:38:03
166	F6K290125-005			1.31	I	17:39:18
167	CCV			238.31	100% I	17:40:33
168	CCB			2.60	I	17:41:48
169	F6K290125-006			1.67	I	17:43:03
170	F6K290125-007			1.64	I	17:44:18
171	F6K290125-008			2.74	I	17:45:33
172	F6K290125-009			0.91	I	17:46:48
173	BLK			0.44	-RI	17:48:04
174	LCS			113.21		17:49:20
175	F6K220292-001			1.50	I	17:50:35
176	F6L010116-001			1.25	I	17:51:50
177	F6L010116-002			0.55	-RI	17:53:05
178	F6K290125-010			1.19	I	17:54:20
179	CCV			242.91	100% I	17:55:35
180	CCB			2.26	I	17:56:50

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~~6341147~~ CH 12/17/00  
 6342040 Reactive

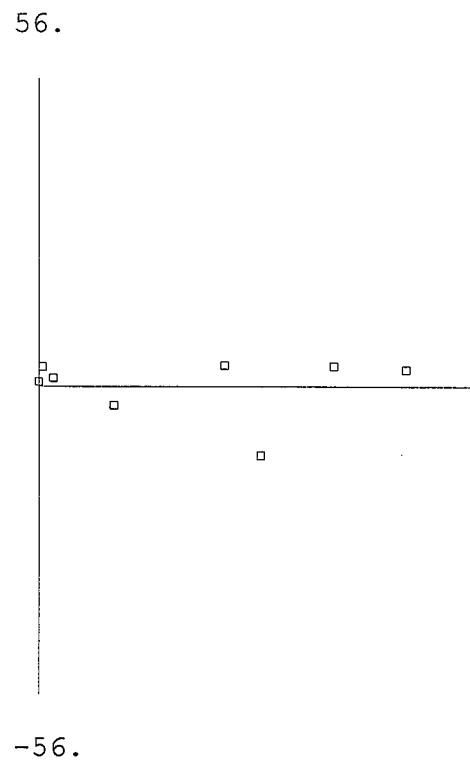
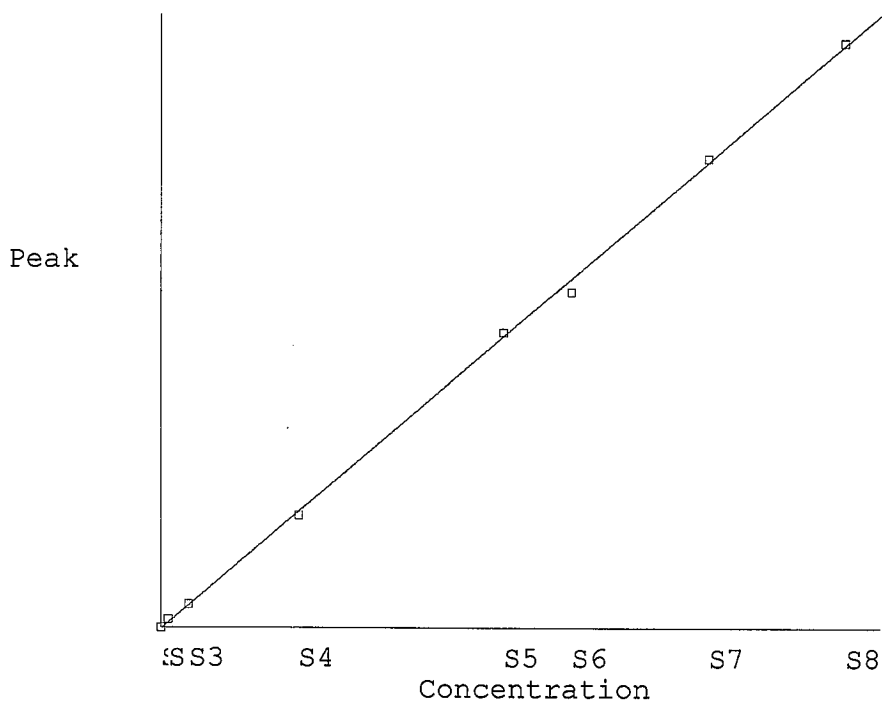
6346092

6346093

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
181	F6K300131-001			8.73		17:58:06
182	F6K300131-002			0.41	-RI	17:59:21
183	F6K300131-003			3.07	I	18:00:36
184	F6K300131-004			0.13	-RI	18:01:51
185	F6K300131-005			2.34	I	18:03:06
186	F6L010316-001	6346094		0.52	-RI	18:04:21
187	F6L010316-002			0.72	-RI	18:05:36
188	F6L010316-003			0.24	-RI	18:06:51
189	F6L010316-004			0.00	-zRI	18:08:06
190	F6L010316-005			0.00	-zRI	18:09:21
191	CCV				254.68	1250 102%
192	CCB			1.70	LS I	18:11:51
193	F6L010316-006	6346093		0.55	-RI	18:13:06
194	F6K290125-010X			0.30	-RI	18:14:21
195	F6K290125-010S			27.18		18:15:37
196	CCV			239.29	1250 96%	18:16:52
197	CCB			1.56	LS I	18:18:07
198	BLK			453.39		18:19:23
199	BLK			2.40	I	18:20:38



S#	Peak	Value	Calc	Residual
S1	-0.01	0.00	0.73	0.73
S2	0.79	5.00	8.10	3.10
S3	2.23	20.00	21.30	1.30
S4	10.46	100.00	96.85	-3.15
S5	27.50	250.00	253.34	3.34
S6	31.36	300.00	288.75	-11.25
S7	43.83	400.00	403.31	3.31
S8	54.65	500.00	502.62	2.62

Coefficients:

Intercept : 0.80651  
 Slope : 9.18299  
 Std Dev : 5.43805  
 Corr Coef : 0.999662  
 R^2 : 0.999325



12/15/2006

16:45

Page:1

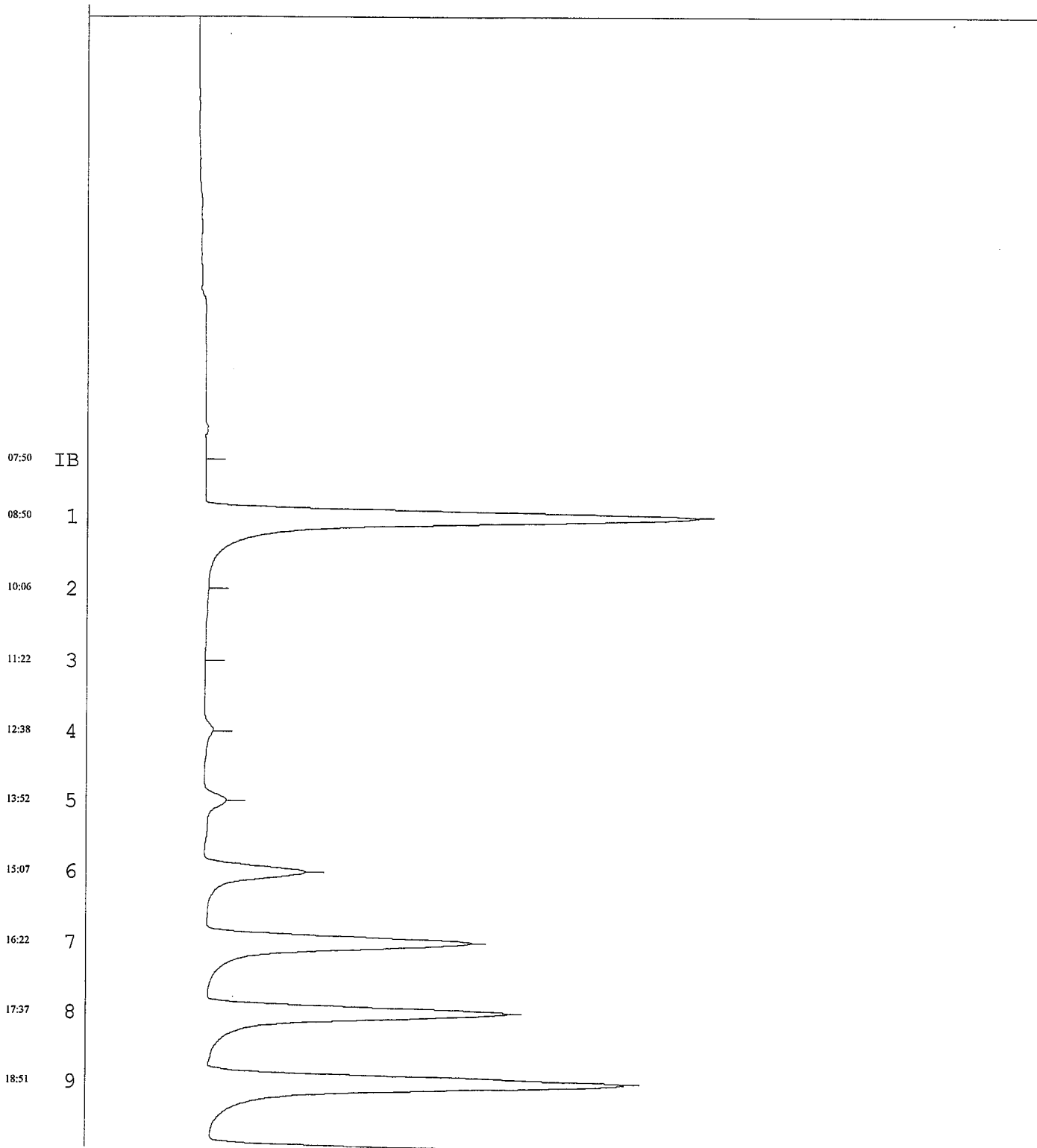
Data: CN1213A

Mthd: CYANIDE

Samp: CN1213A

0

100



12/15/2006

16:45

Page:2

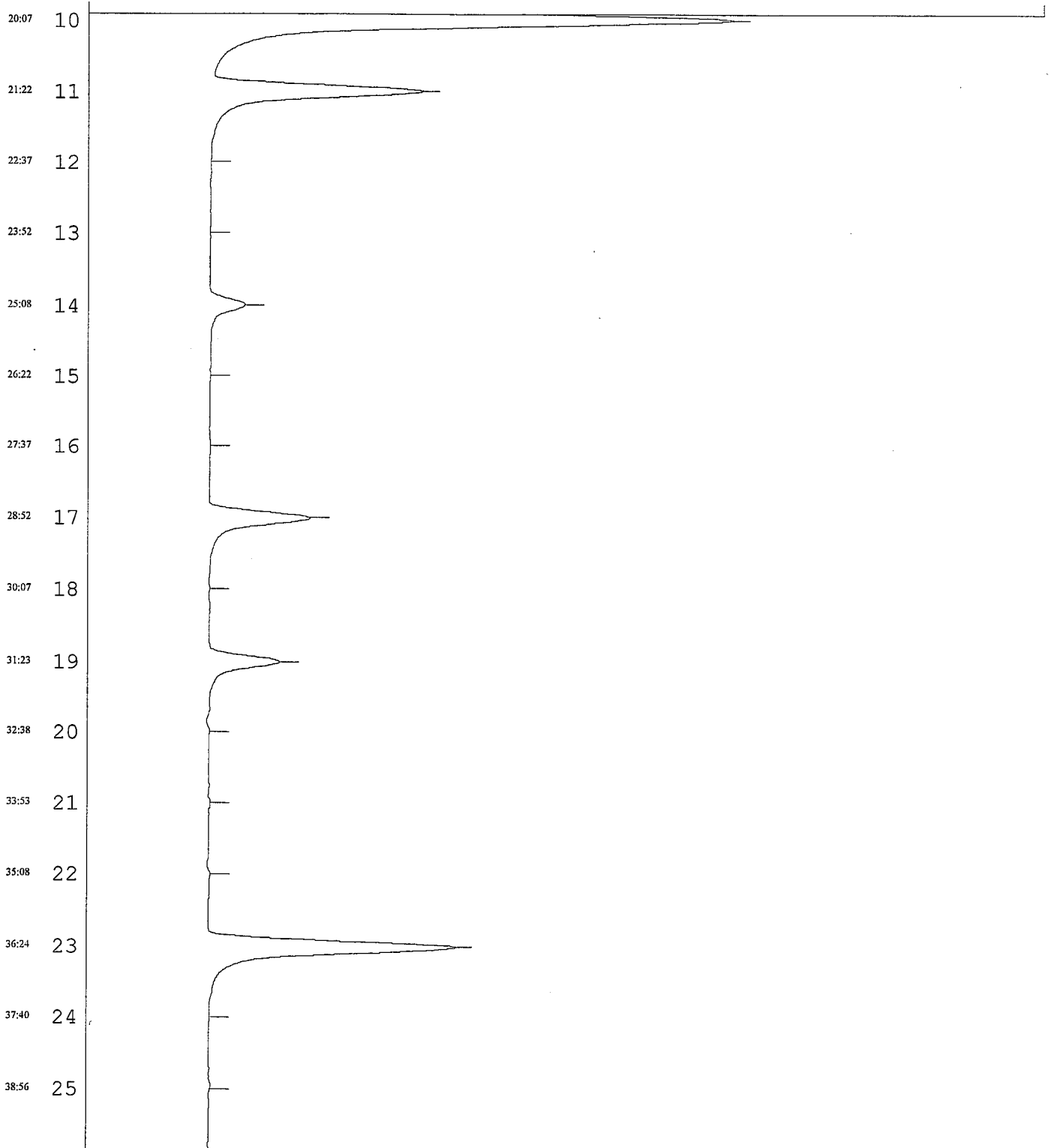
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Mthd: CYANIDE

Samp: CN1213A

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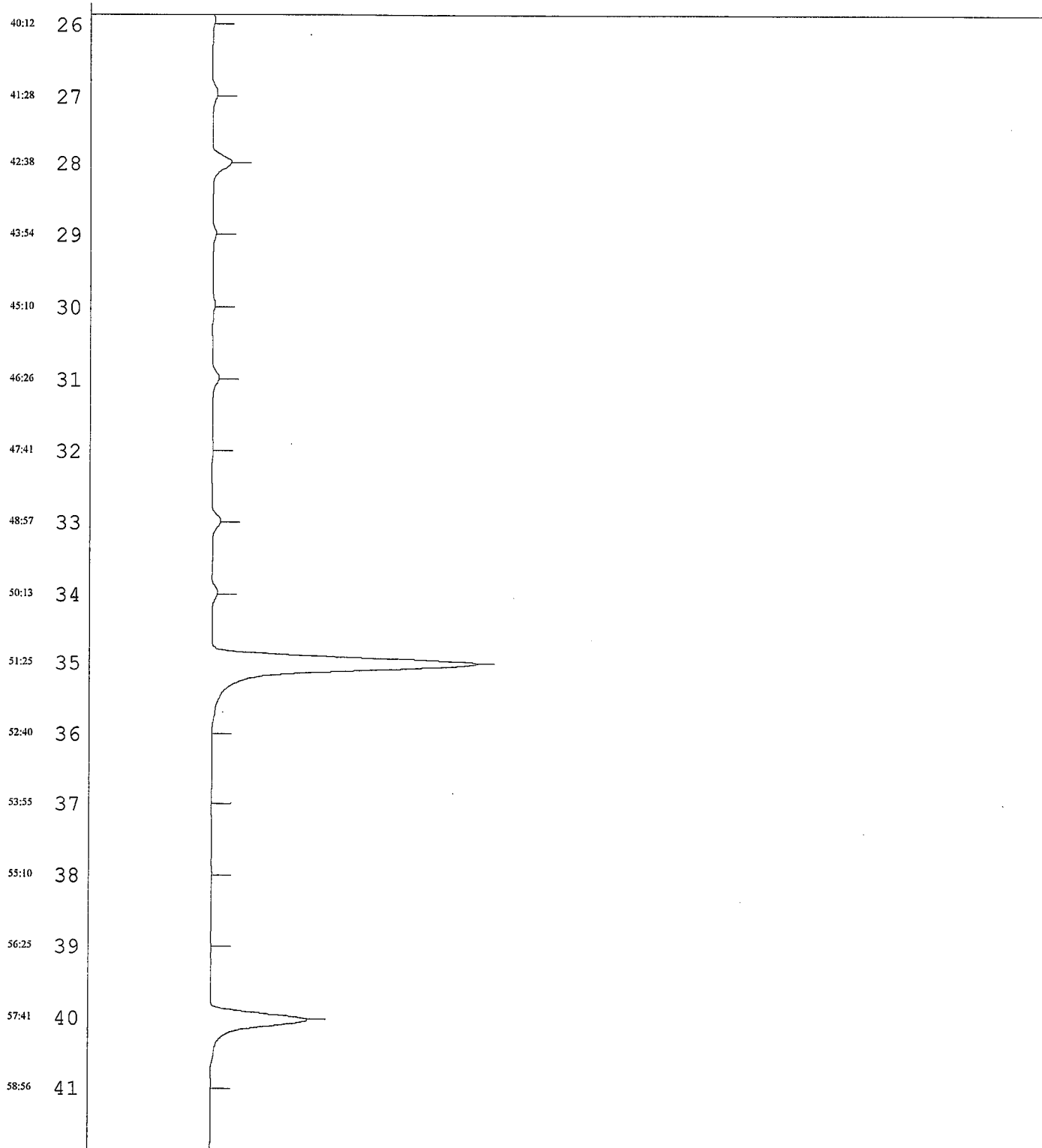
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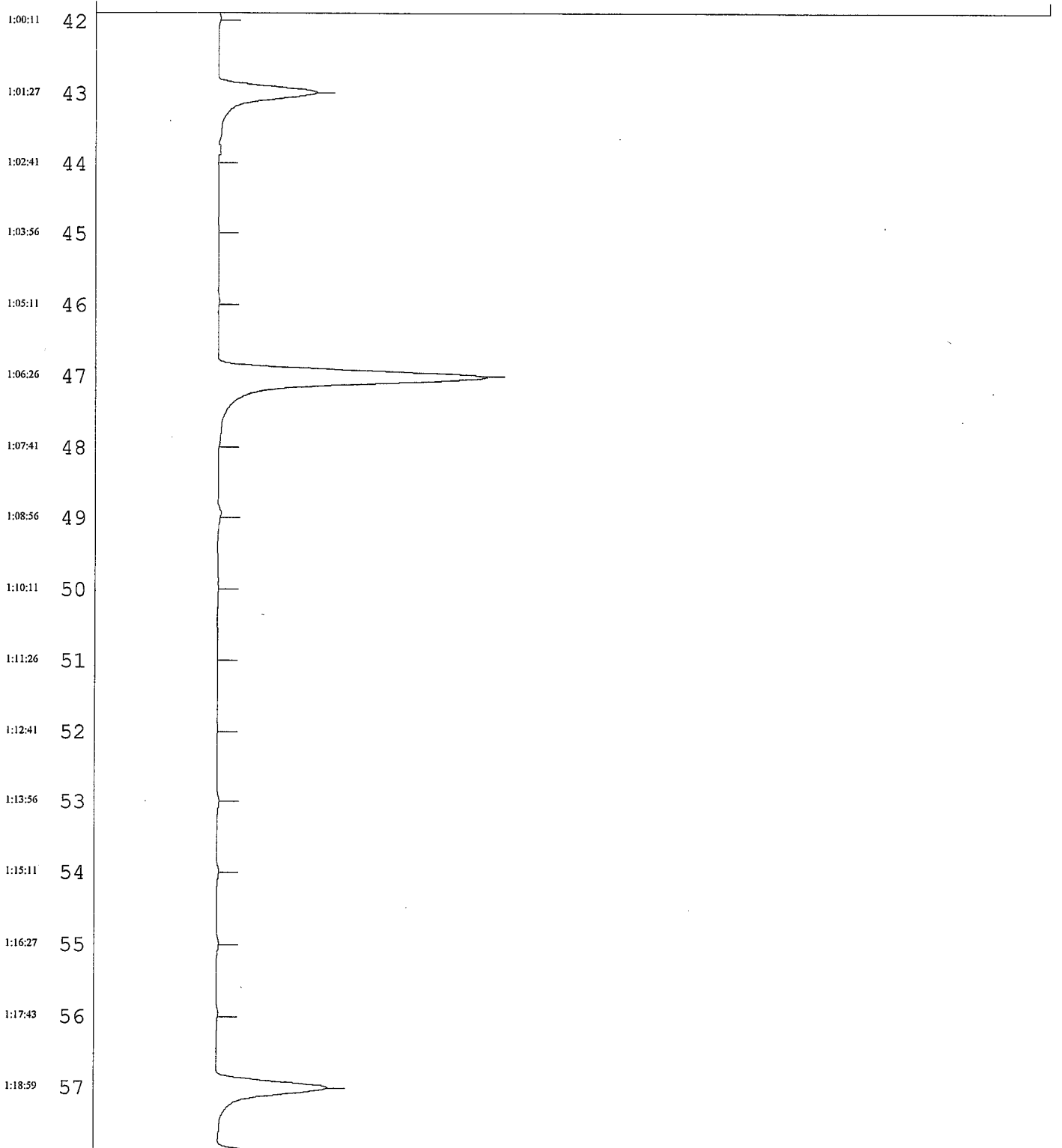


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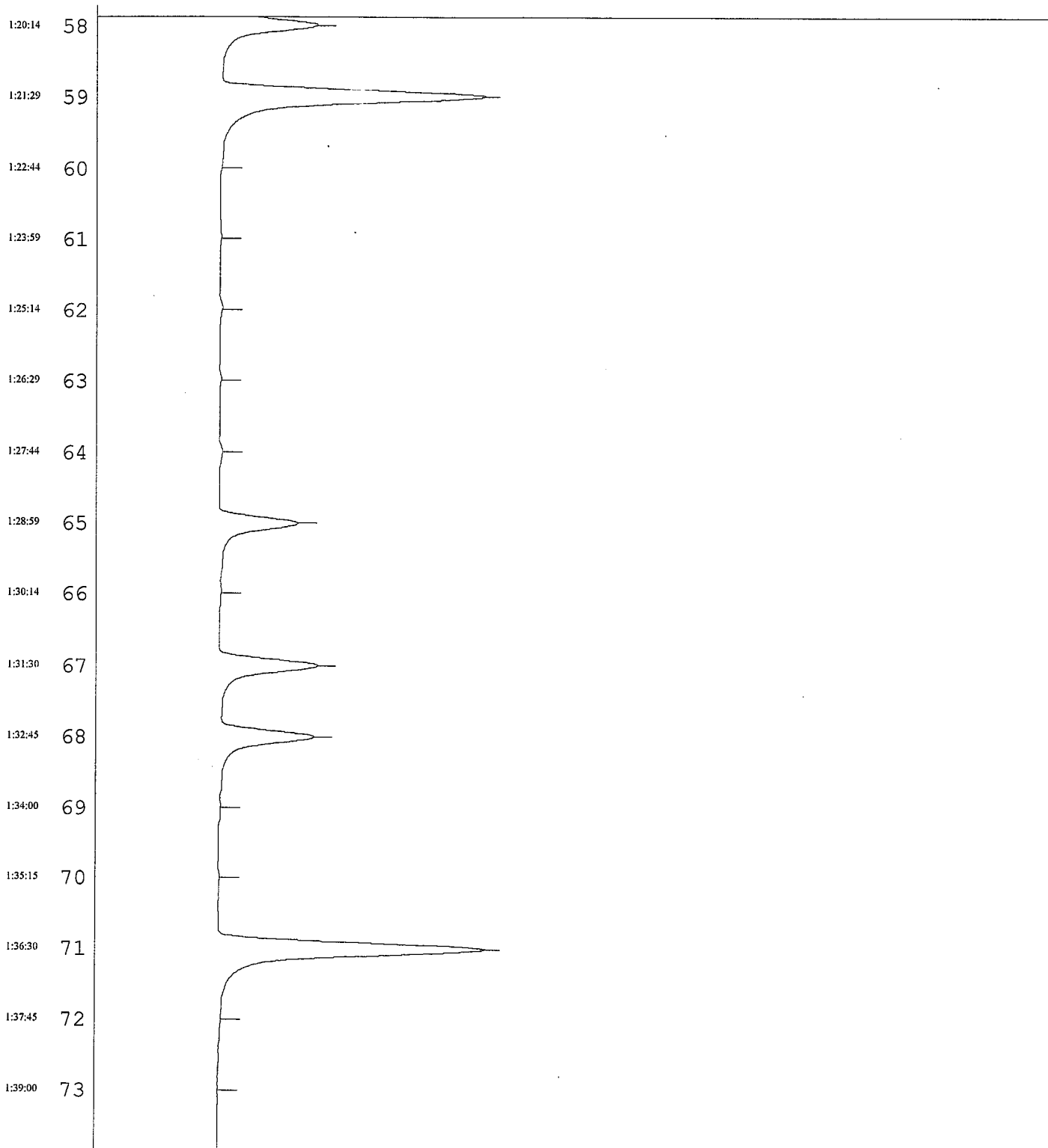


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12/15/2006

16:45

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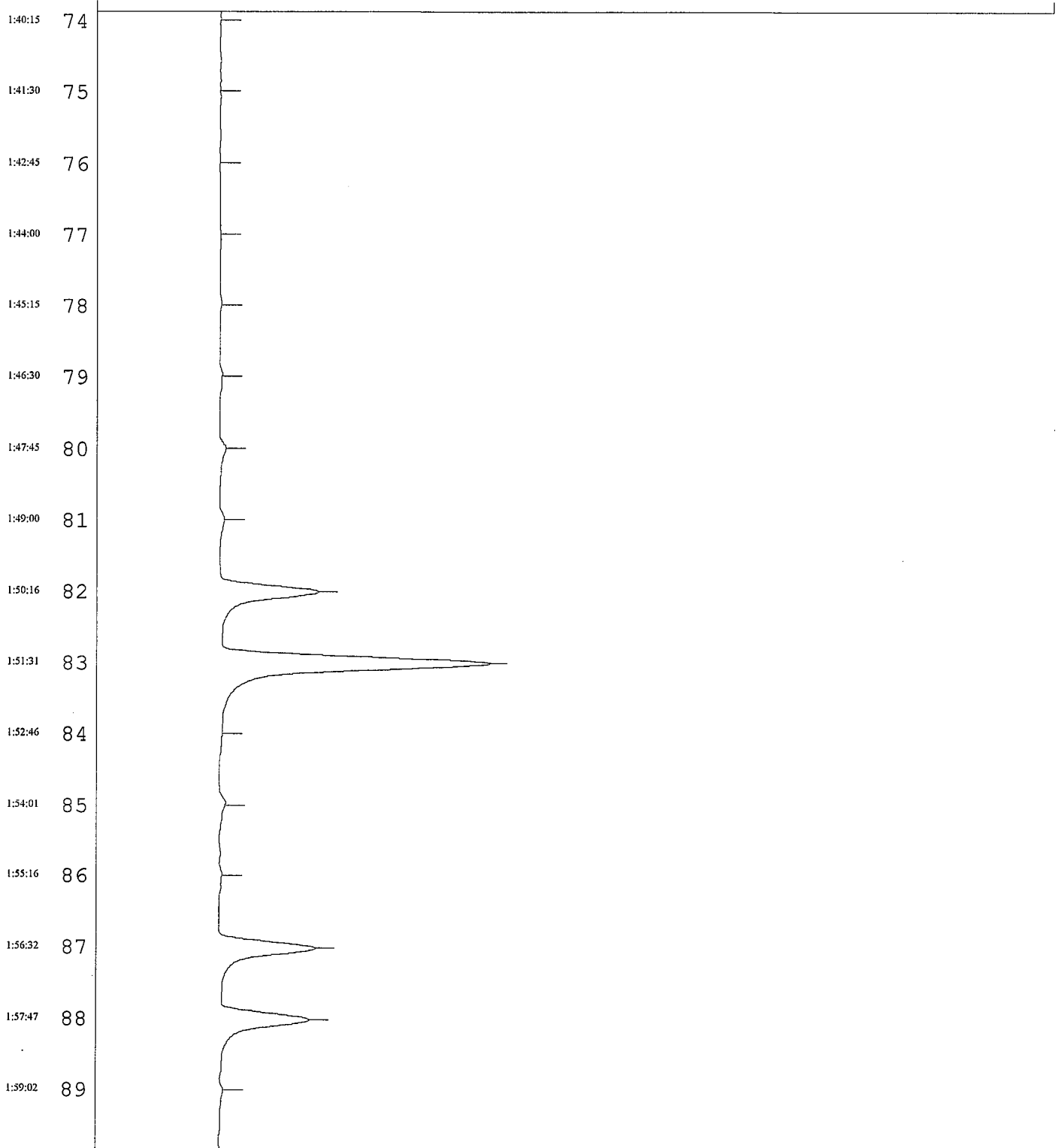
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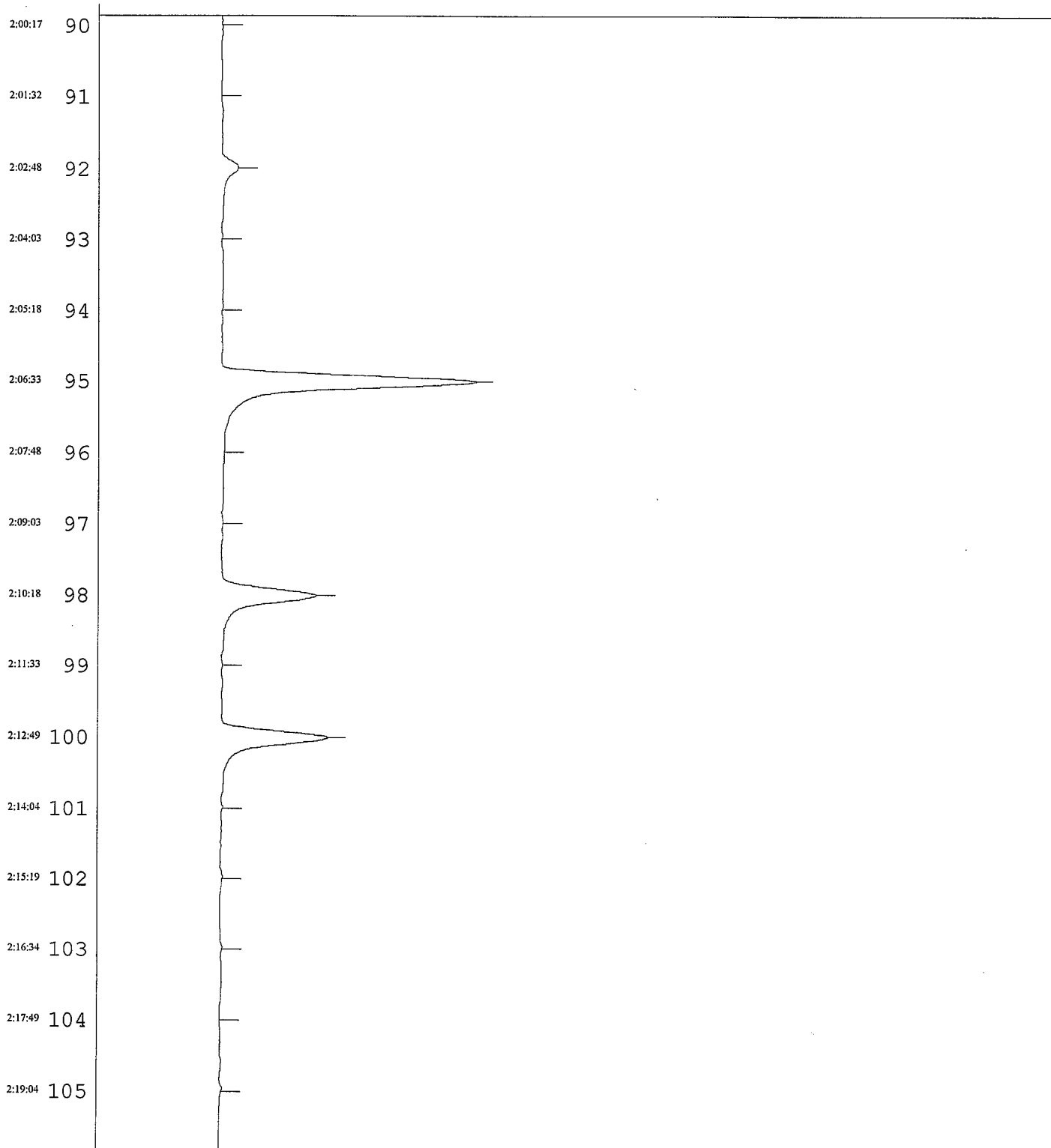


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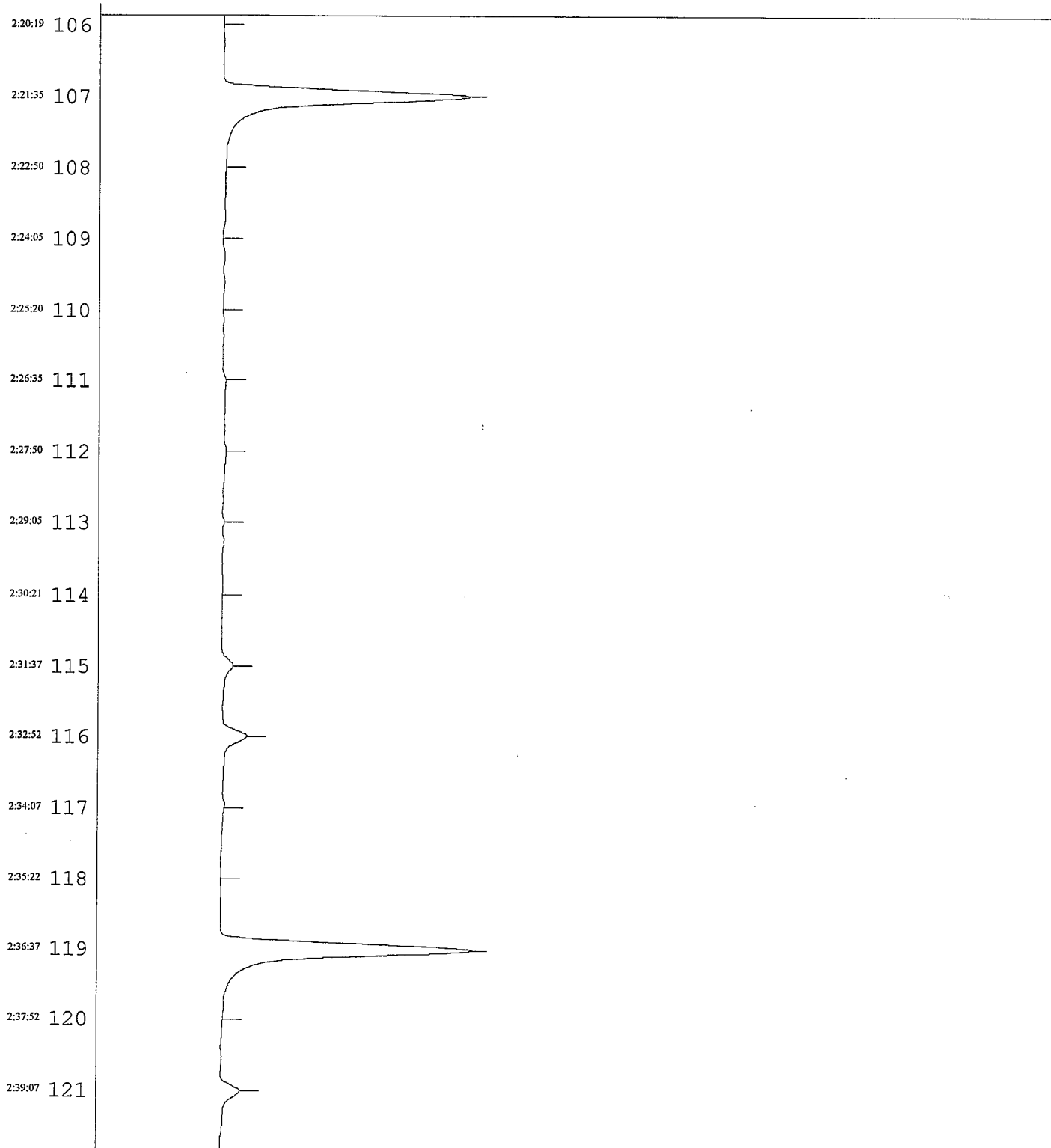


12/15/2006 16:45

Page:8

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Samp: CN1213A  
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100





12/15/2006

16:45

Page:9

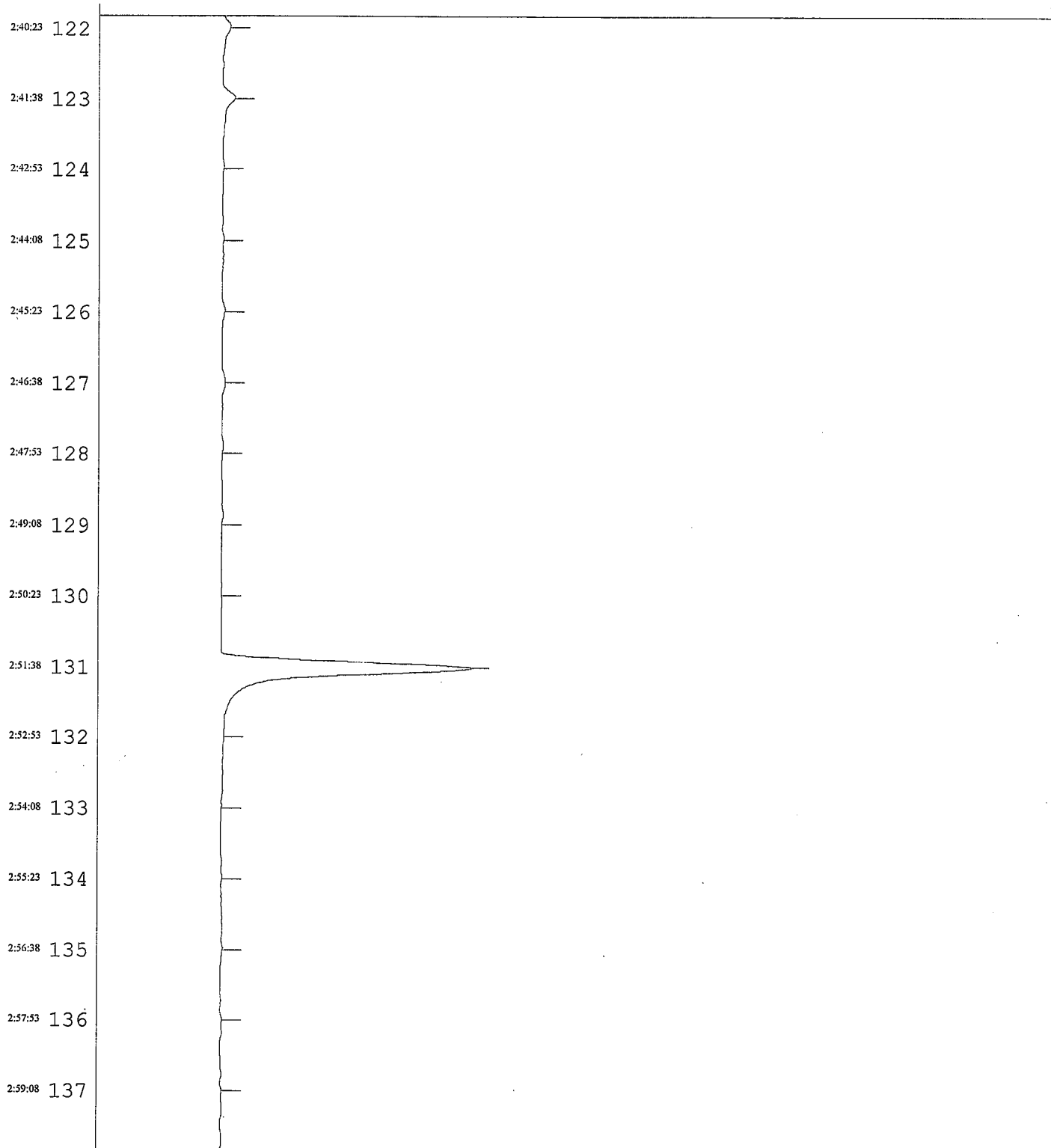
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Mthd: CYANIDE

Samp: CN1213A

0

100



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16:45

Page:10

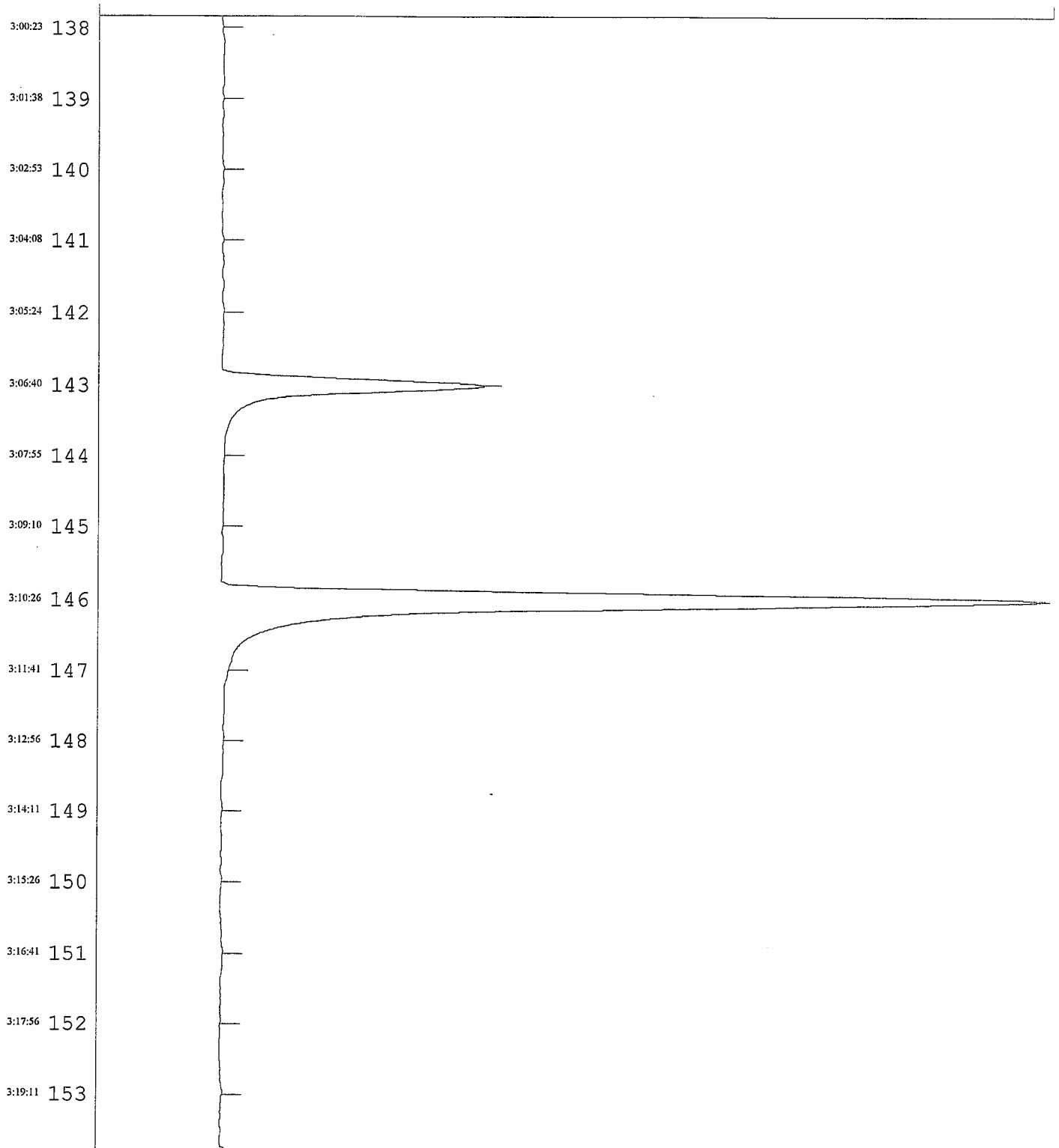
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100

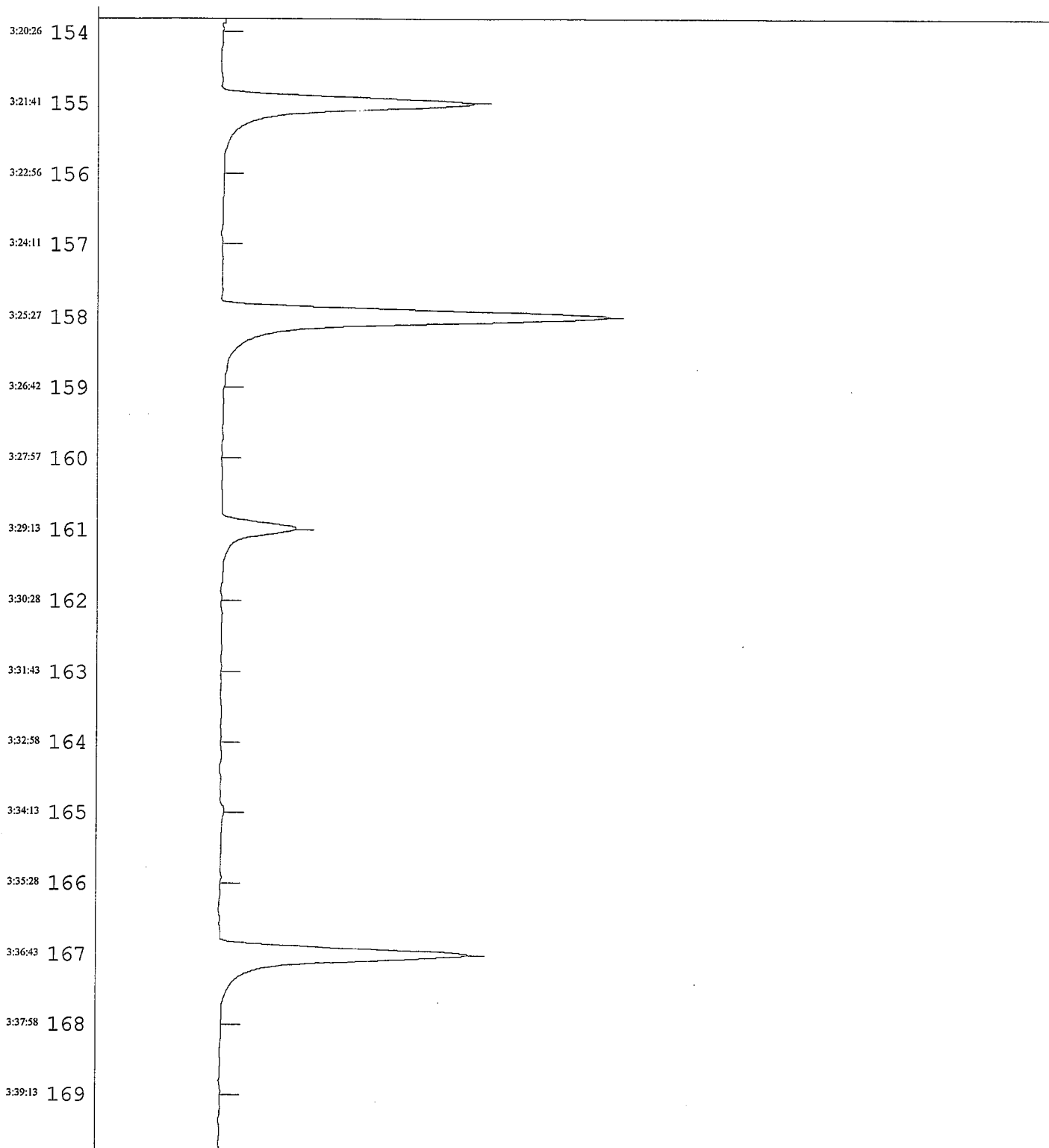


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Page:11

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100



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Page:12

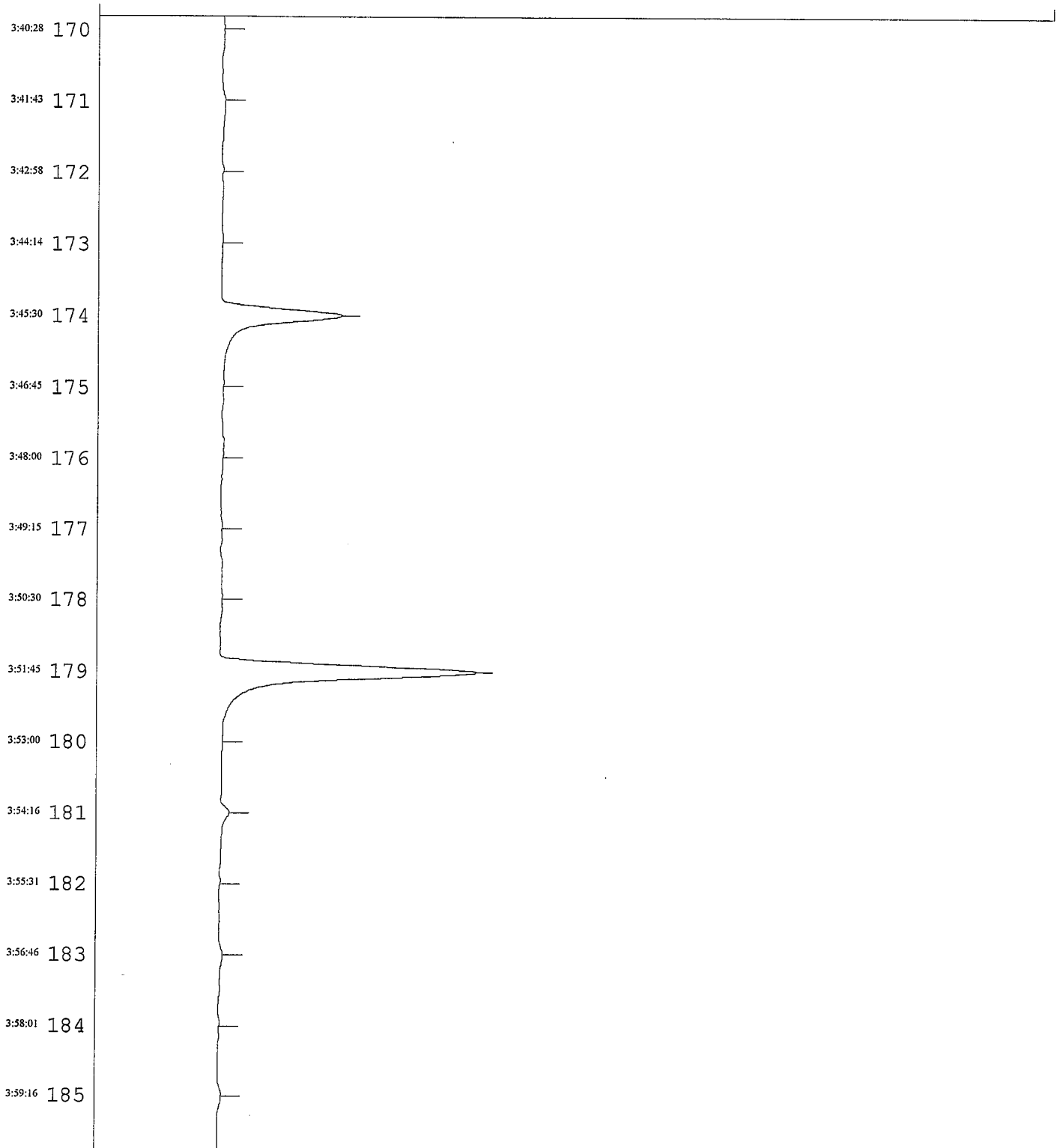
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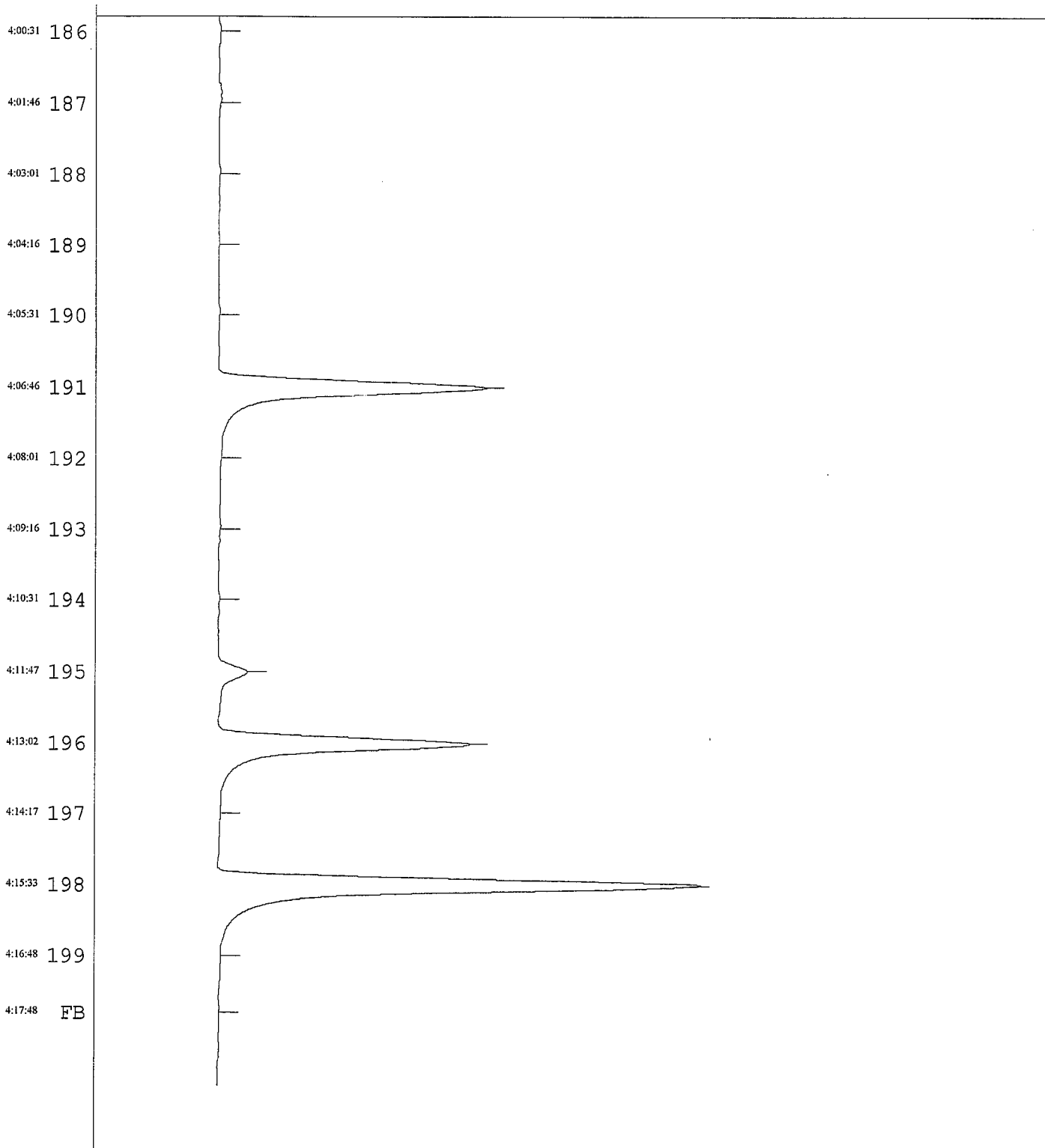
12/15/2006 16:45

Page:13

Data: CN1213A  
Mthd: CYANIDE  
Samp: CN1213A

0

100



Due Dates: Earliest:		Latest:		Run Date: 12/13/06		
Method Name/#: CN						
Batch #: 6338419						
Lot #s: F6K210226 F6K300168 F6L010196						
NCM's						
Review Item			Yes	No	N/A	Review
<b>Initial Calibration</b>						
Initial Calibration data in this package?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If not, please specify initial calibration date:						<input checked="" type="checkbox"/>
Initial Calibration meets method acceptance criteria:			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Corr. Coefficient = 0.995; Y-intercept < the absolute value of the RL						
Is the low level standard = the reporting limit?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Calibration Check (ICV)</b>						
ICV performed with initial calibration?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ICV meets method acceptance criteria (max. 10% D)?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Continuing Calibration Verification (CCV)</b>						
CCV performed at the prescribed frequency?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CCV meets method acceptance criteria (max. 10% D)?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Continuing Calibration Blank (CCB)</b>						
CCB performed after every CCV?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CCB meets method acceptance criteria?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria: < the absolute value of the Reporting Limit (see client sheet for						
<b>Batch QC - Method Blanks</b>						
Is a Method Blank required for this analysis?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the method blank below the Reporting Limit for targets of interest?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Batch QC - LCS</b>						
Is a LCS required for this analysis?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the LCS (LCSD) recoveries within method acceptance?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Batch QC - MS/MSD</b>						
Is a MS/MSD or MS/Sample Duplicate required for this analysis?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the MS(MSD) recoveries within method acceptance?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Batch QC - RPD</b>						
MS/MSD or Sample/Sample Duplicate RPD within acceptance criteria			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Sample Results - Report</b>						
Are samples bracketed by acceptable CCV/CCB?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are results within the calibration range?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Was analysis performed within Hold Time? NCM			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Did samples require dilution due to: (check one if applicable) matrix interference    high target analyte concentration				<input checked="" type="checkbox"/>		
If dilutions were performed, was it within Hold Time?					<input checked="" type="checkbox"/>	
If dilutions were performed, are the undiluted runs in this submission?					<input checked="" type="checkbox"/>	
If not, please indicate where found:						
<b>Sample Results - Misc. information</b>						
Are Batch sheets, Preparation Logs (if applicable) included?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are copies of run logs included, initialed and dated?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were manual calculations performed?    reviewer must check calculations				<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were manual integrations performed, dated, and initialed?				<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Client requirement sheets followed in data package?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Reagents and Standards documented on prep/batch sheets?			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Additional Comments:</b>						
Analyst/Date: CH for TC			Reviewer/Date: CH			

RQC050

Severn Trent Laboratories, Inc.  
WET CHEM BATCHSHEET

Run Date: 12/18/06  
Time: 14:43:49

STL St. Louis

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE
--------------	---------------	----	---------------	--------------	-------------	-------------	----------------------

METHOD: QP Cyanide, Total (9012A, Automated)  
Cyanide, Total

QC BATCH #:	6338419	INITIALS:	DATA ENTRY:
PREP DATE:	12/12/06	PREP _____	INITIALS _____
COMP DATE:	12/12/06	ANAL _____	DATE _____
USER:	HOUGHGHC		

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
JJ8W5-1-CN	F-6K210226-012	XX I 06 QP 01	Y-D	_____	EB112006
JJ8W5-1-FD	F-6K210226-012-S	XX I 06 QP 01	Y-D	_____	EB112006
JJ8W5-1-FE	F-6K210226-012-X	XX I 06 QP 01	Y-D	_____	EB112006 DUP
JKG0H-1-CM	F-6K290206-001	XX I 06 QP 01	Y-D	_____	M120
JKJQ5-1-CK	F-6K300168-001	XX I 06 QP 01	Y-D	_____	PB112906
JKJTN-1-CQ	F-6K300168-002	XX I 06 QP 01	Y-D	_____	M92
JKJTT3-1-CQ	F-6K300168-003	XX I 06 QP 01	Y-D	_____	M97
JKJTT6-1-CQ	F-6K300168-004	XX I 06 QP 01	Y-D	_____	EB112906
JKMPR-1-CM	F-6L010196-001	XX I 06 QP 01	Y-D	_____	M98
JKMQW-1-CU	F-6L010196-002	XX I 06 QP 01	Y-D	_____	M7B
JKMQ1-1-CU	F-6L010196-003	XX I 06 QP 01	Y-D	_____	IAR
JKMRK-1-CU	F-6L010196-004	XX I 06 QP 01	Y-D	_____	EB113006
JKQ3M-1-AA	F-6L040000-419-B	XX I 06 QP 01		_____	INTRA-LAB BLANK
JKQ3M-1-AC	F-6L040000-419-C	XX I 06 QP 01		_____	INTRA-LAB CHECK

Control Limits

(90-110)

(90-110)

*CK*  
*12/18/06*

Date 12/18/2006  
Time 15:44:59

Severn Trent Laboratories, Inc.  
Inorganics Batch Review  
QC Batch 6338419

PDE115

Method Code: Cyanide, Total  
Analyst: Chris Hough

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
JJ8W5-1-CN	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JJ8W5-1-FE	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKG0H-1-CM	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKJQ5-1-CK	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKJTN-1-CQ	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKJT3-1-CQ	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKJT6-1-CQ	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKMPR-1-CM	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKMQW-1-CU	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKMQ1-1-CU	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKMRK-1-CU	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00
JKQ3M-1-AA	ND	ug/L	5	12/12-12/13/06	.00	N		ND	5.0	1.00

Notes:

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
JKQ3M-1-AC		100	93.14	93.14	12/12-12/13/06	(90-110)	1.00

Notes:

Measured Spike

Work Order	Exception Code	Measured Sample	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Dil.
JJ8W5-1-FD		ND	100	103.4	103.40	12/12-12/13/06	1.00

Notes:

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0





STL

STL St. Louis

CYANIDE DISTILLATION

Due Dates: Earliest: 12-04 <i>Hold</i>	Latest: 12/15	Analyst/Run Date: <i>DA 12-12-06</i>	<i>(1)</i>
Method #/Name: CN- / 9012, 9012A		Sample Type: SOIL	<u>WATER</u>
Batch #: 6338419			
Lot #s: <i>FLK 210226, FLK 290206, FLK 300168, FLK 070194, FLK 070205</i>			

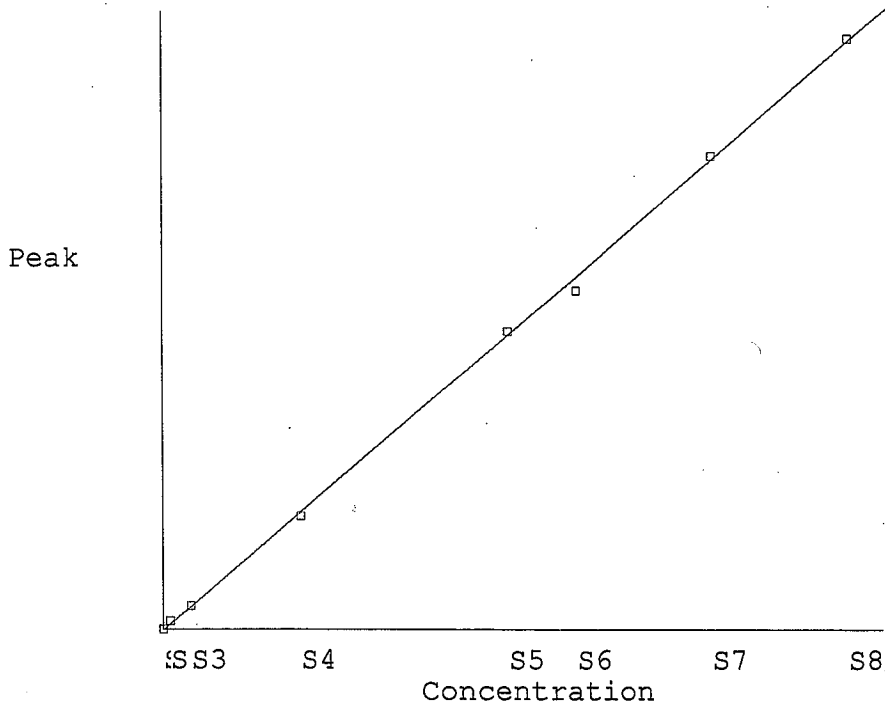
SEQUENCE NO.	SAMPLE NO.	SAMPLE Weight/Volume 1g-soil 50 ml water	FINAL VOLUME	Interference Checks Performed?		COMMENTS
1	<i>B/K</i>	<i>50 ml</i>	50 ml	<i>y</i>	<i>y</i>	
2	<i>LCS</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
3	<i>HCS</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
4	<i>JJ8W5</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
5	<i>JJ8W5-S</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
6	<i>JJ8W5-X</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
7	<i>JK60H</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
8	<i>JKJQS</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
9	<i>JKJTN</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
10	<i>JKJT3</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
11	<i>JKJTL</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
12	<i>JKmPR</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
13	<i>JKmQW</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
14	<i>JKmQI</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
15	<i>JKmRK</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
16						
17	<i>JKPND</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
18	<i>JKPNW</i>	<i>↓</i>	50 ml	<i>y</i>	<i>y</i>	
19	<del><i>JKPNX</i></del>	<del><i>↓</i></del>	<del>50 ml</del>	<del><i>y</i></del>	<del><i>y</i></del>	<del></del>
20			50 ml			

Sent To TRAACS		YES	NO
	Distilled Cyanide Samples	<i>X</i>	
	Client Requirement Sheets	<i>X</i>	
	Quantums Batch Sheets	<i>X</i>	
	Distillation Prep STDlog	<i>X</i>	<i>(Signature)</i>

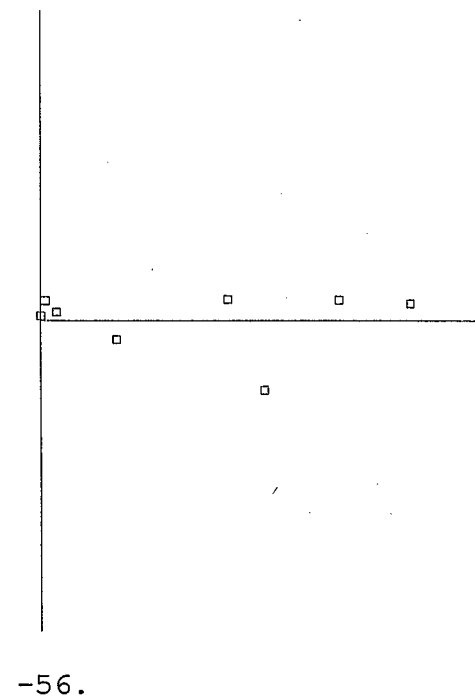
Analyst/Date: <i>DA 12-12-06</i>
Reviewer/Date:

12/15/06 16:45  
 Data File: CN1213A  
 Method File: CYANIDE  
 Sample Table File: CN1213A

Standard Set #1.



56.



S#	Peak	Value	Calc	Residual
S1	-0.01	0.00	0.73	0.73
S2	0.79	5.00	8.10	3.10
S3	2.23	20.00	21.30	1.30
S4	10.46	100.00	96.85	-3.15
S5	27.50	250.00	253.34	3.34
S6	31.36	300.00	288.75	-11.25
S7	43.83	400.00	403.31	3.31
S8	54.65	500.00	502.62	2.62

Coefficients:

Intercept : 0.80651  
 Slope : 9.18299  
 Std Dev : 5.43805  
 Corr Coef : 0.999662  
 R^2 : 0.999325

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
1	P			473.50		14:12:40
2	W			3.90	I	14:13:56
3	S1			0.73	-sI	14:15:12
4	S2			8.10	s	14:16:28
5	S3			21.30	s	14:17:42
6	S4			96.85	s	14:18:57
7	S5			253.34	s	14:20:12
8	S6			288.75	s	14:21:27
9	S7			403.31	s	14:22:41
10	S8			502.62	s	14:23:57
11	ICV			205.02	100% 102%	14:25:12
12	ICB			3.84	LS I	14:26:27
13	BLK			3.36	LS I	14:27:42
14	LCS			36.30	100% 36%	14:28:58
15	JH8R71CE			3.75	I	14:30:12
16	JH8R71EA	x		3.50	I	14:31:27
17	JH8R71EC	s		99.00		14:32:42
18	BLK			3.22	LS I	14:33:57
19	LCS			70.02	100% 70%	14:35:13
20	JH7XJ1CW			3.39	I	14:36:28
21	JJCG61C0			3.81	I	14:37:43
22	JJCH31CA			4.23	I	14:38:58
23	CCV			237.42	100% 95%	14:40:14
24	CCB			3.73	LS I	14:41:30
25	JJCJT1CG			4.37	I	14:42:46
26	JJCJ41CJ			4.57	I	14:44:02
27	JJCKC1CJ			7.00		14:45:18
28	JJCKX1CL			20.66		14:46:28
29	JJCPW1CJ			6.28	I	14:47:44
30	JJCP71CN			4.90	I	14:49:00
31	JJCQG1CU			8.91		14:50:16
32	JJCQ21CV			3.72	I	14:51:31
33	JJCQ51CW			10.87		14:52:47
34	JJFPD1CX			7.93		14:54:03
35	CCV			255.92	100% 102%	14:55:15
36	CCB			3.39	LS I	14:56:30
37	JJFQH1C4			3.14	I	14:57:45
38	JJFQQ1CF			3.56	I	14:59:00
39	BLK			3.30	LS I	15:00:15
40	LCS			95.67	100% 95%	15:01:31
41	JJJHE1C6			3.25	I	15:02:46
42	JJJHE1C7	x		4.79	I	15:04:01
43	JJJHE1C8	s		96.26		15:05:17
44	JJJHF1C6			2.94	I	15:06:31
45	JJNEQ1CV			3.36	I	15:07:46

6317181

6320310

6331214

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
46	JJNF11C2			3.56	I	15:09:01
47	CCV			260.07	104%	15:10:16
48	CCB			3.72	I	15:11:31
49	JJNF41CD			5.27	I	15:12:46
50	JJNF91CJ			3.44	I	15:14:01
51	JJNGF1CL			2.97	I	15:15:16
52	JJNGH1CN			3.39	I	15:16:31
53	JJNQD1AX			4.93	I	15:17:46
54	JJNQ21AX			4.68	I	15:19:01
55	JJNQ31AX			4.87	I	15:20:17
56	JJQ101CW			3.95	I	15:21:33
57	JJQ101EL S			108.42		15:22:49
58	JJQ101EK D			95.16		15:24:04
59	CCV			253.45	101%	15:25:19
60	CCB			4.28	I	15:26:34
61	JJQ3H1C4			3.81	I	15:27:49
62	JJQ341CF			4.90	I	15:29:04
63	JJQ4Q1CJ			3.98	I	15:30:19
64	BLK			5.29	I	15:31:34
65	LCS			77.70	100%	15:32:49
66	JJQ271C4			4.12	I	15:34:04
67	JJQ271FE D			96.25		15:35:20
68	JJQ271FD S			92.64		15:36:35
69	JJQ4W1CM			4.03	I	15:37:50
70	JJQ461C4			3.56	I	15:39:05
71	CCV			255.36	102%	15:40:20
72	CCB			5.07	I	15:41:35
73	JJQ6Q1CF			2.35	I	15:42:50
74	JJQ6V1CH			3.22	I	15:44:05
75	JJQ6X1CH			2.52	I	15:45:20
76	JJQ621CH			2.27	I	15:46:35
77	JJQ7H1CF			2.69	I	15:47:50
78	JJQ8F1CK			3.78	I	15:49:05
79	JJQ8W1CN			4.20	I	15:50:20
80	JJQ821CP			7.98	I	15:51:35
81	JJQ841CQ			6.61	I	15:52:50
82	JJQ841D0 D			96.51		15:54:06
83	CCV			258.61	103%	15:55:21
84	CCB			4.73	I	15:56:36
85	JJQ841DX S			7.62	I	15:57:51
86	BLK			4.68	I	15:59:06
87	LCS			94.12	100%	16:00:22
88	JJRAF1CQ CP			88.26		16:01:37
89	JJT4A1CN			6.39	I	16:02:52
90	JJ00E1CK MISSING			2.99	I	16:04:07

6331257

6331257

6333348

MISS part  
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LCS  
33RAF  
12/13/06

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
91	JJ28E1CM			1.84	I	16:05:22
92	JJ28E1F0 D			17.96		16:06:38
93	JJ28E1FX S			2.46	I	16:07:53
94	JJ28F1CV			2.66	I	16:09:08
95	CCV			244.82	1/250 98%	16:10:23
96	CCB			4.84	<5 I	16:11:38
97	BLK			3.69	<5 I	16:12:53
98	LCS			93.14	1/100 93%	16:14:08
99	JJ8W51CN			3.64	I	16:15:23
100	JJ8W51FD S			103.40		16:16:39
101	JJ8W51FE x			3.81	I	16:17:54
102	JKG0H1CM			3.55	I	16:19:09
103	JKJQ51CK			3.75	I	16:20:24
104	JKJTN1CQ			1.70	I	16:21:39
105	JKJT31CQ			3.47	I	16:22:54
106	JKJT61CQ			2.10	I	16:24:09
107	CCV			237.08	1/250 95%	16:25:25
108	CCB			4.06	<5 I	16:26:40
109	JKMPR1CM			1.34	I	16:27:55
110	JKMQW1CU			1.53	I	16:29:10
111	JKMQ11CU			4.65	I	16:30:25
112	JKMRK1CU			4.84	I	16:31:40
113	JKPND			3.02	I	16:32:55
114	JKPNW			1.42	I	16:34:11
115	BLK			11.93		16:35:27
116	LCS			25.36		16:36:42
117	F6K140153-001			4.03	I	16:37:57
118	F6K140153-001X			1.09	I	16:39:12
119	CCV			239.88	1/250 96%	16:40:27
120	CCB			3.50	<5 I	16:41:42
121	F6K140153-001S			20.29		16:42:57
122	F6K140153-002			8.60		16:44:13
123	F6K140153-003			13.05		16:45:28
124	F6K140153-004			2.26	I	16:46:43
125	F6K140153-005			2.23	I	16:47:58
126	F6K140153-006			3.10	I	16:49:13
127	F6K140153-007			3.75	I	16:50:28
128	F6K140153-008			1.48	I	16:51:43
129	F6K140153-009			0.78	-I	16:52:58
130	F6K150192-001			0.97	I	16:54:13
131	CCV			240.89	1/250 96%	16:55:28
132	CCB			3.38	<5 I	16:56:43
133	F6K150192-002			1.11	I	16:57:58
134	F6K150192-003			1.98	I	16:59:13
135	F6K150192-004			2.63	I	17:00:28

6338419

Reactive

6341147

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
136	F6K150192-005			2.15	I	17:01:43
137	F6K150192-006			2.57	I	17:02:58
138	F6K150192-007			1.42	I	17:04:13
139	F6K150192-008			1.84	I	17:05:28
140	F6K150192-009			2.26	I	17:06:43
141	F6K160161-001			2.01	I	17:07:58
142	F6K160161-002			2.21	I	17:09:14
143	CCV			251.54		17:10:30
144	CCB			3.05	I	17:11:45
145	BLK			1.67	I	17:13:00
146	LCS			779.34	R	17:14:16
147	F6K160161-003			7.45	I	17:15:31
148	F6K160161-004			3.16	I	17:16:46
149	F6K160161-005			1.56	I	17:18:01
150	F6K160161-006			1.53	I	17:19:16
151	F6K160161-007			2.85	I	17:20:31
152	F6K160161-008			0.58	-RI	17:21:46
153	F6K160161-009			2.35	I	17:23:01
154	F6K160161-010			1.87	I	17:24:16
155	CCV			242.24		17:25:31
156	CCB			3.16	I	17:26:46
157	F6K160161-010X			1.78	I	17:28:01
158	F6K160161-010S			370.65		17:29:17
159	F6K280158-001			3.52	I	17:30:32
160	F6K280158-002			1.25	I	17:31:47
161	F6K280158-003			71.64		17:33:03
162	F6K290125-001			1.42	I	17:34:18
163	F6K290125-002			1.17	I	17:35:33
164	F6K290125-003			1.14	I	17:36:48
165	F6K290125-004			4.70	I	17:38:03
166	F6K290125-005			1.31	I	17:39:18
167	CCV			238.31		17:40:33
168	CCB			2.60	I	17:41:48
169	F6K290125-006			1.67	I	17:43:03
170	F6K290125-007			1.64	I	17:44:18
171	F6K290125-008			2.74	I	17:45:33
172	F6K290125-009			0.91	I	17:46:48
173	BLK			0.44	-RI	17:48:04
174	LCS			113.21		17:49:20
175	F6K220292-001			1.50	I	17:50:35
176	F6L010116-001			1.25	I	17:51:50
177	F6L010116-002			0.55	-RI	17:53:05
178	F6K290125-010			1.19	I	17:54:20
179	CCV			242.91		17:55:35
180	CCB			2.26	I	17:56:50

I

~~6341147~~ C# 12/17/06

6342040 Reactive

6346092

6346093

100%  
 250  
 25  
 250  
 25  
 250  
 25  
 250  
 25

Report Date: 12/15/06  
 Analysis Date: 12/13/06  
 Data File: CN1213A  
 Method Name: CYANIDE  
 Units: ug/L  
 Description: Cyanide

R^2: 0.999325  
 Corr: 0.999662  
 Std. Dev.: 5.438048

Sample	Sample ID	Dilution	Weight	Corr. Conc.	Flags	Time
181	F6K300131-001			8.73		17:58:06
182	F6K300131-002			0.41	-RI	17:59:21
183	F6K300131-003			3.07	I	18:00:36
184	F6K300131-004			0.13	-RI	18:01:51
185	F6K300131-005			2.34	I	18:03:06
186	F6L010316-001			0.52	-RI	18:04:21
187	F6L010316-002			0.72	-RI	18:05:36
188	F6L010316-003			0.24	-RI	18:06:51
189	F6L010316-004			0.00	-zRI	18:08:06
190	F6L010316-005			0.00	-zRI	18:09:21
191	CCV			254.68		18:10:36
192	CCB			1.70	I	18:11:51
193	F6L010316-006			0.55	-RI	18:13:06
194	F6K290125-010X			0.30	-RI	18:14:21
195	F6K290125-010S			27.18		18:15:37
196	CCV			239.29		18:16:52
197	CCB			1.56	I	18:18:07
198	BLK			453.39		18:19:23
199	BLK			2.40	I	18:20:38

6346094  
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 6346093

254.68 / 250 102%  
 1.70 < 5  
 239.29 / 250 96%  
 1.56 < 5

12/15/2006

16:45

Page:1

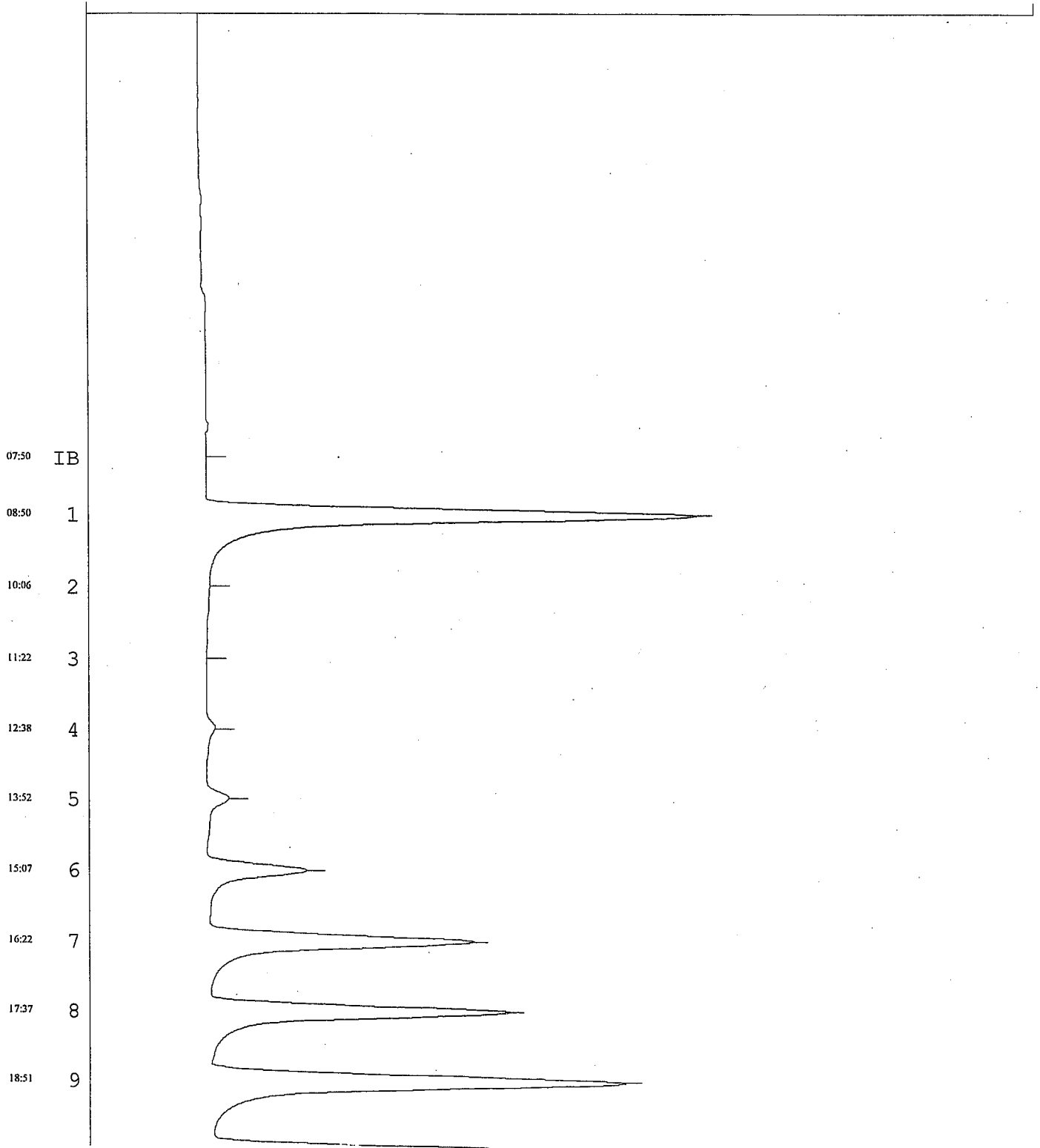
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Mthd: CYANIDE

Samp: CN1213A

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100





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16:45

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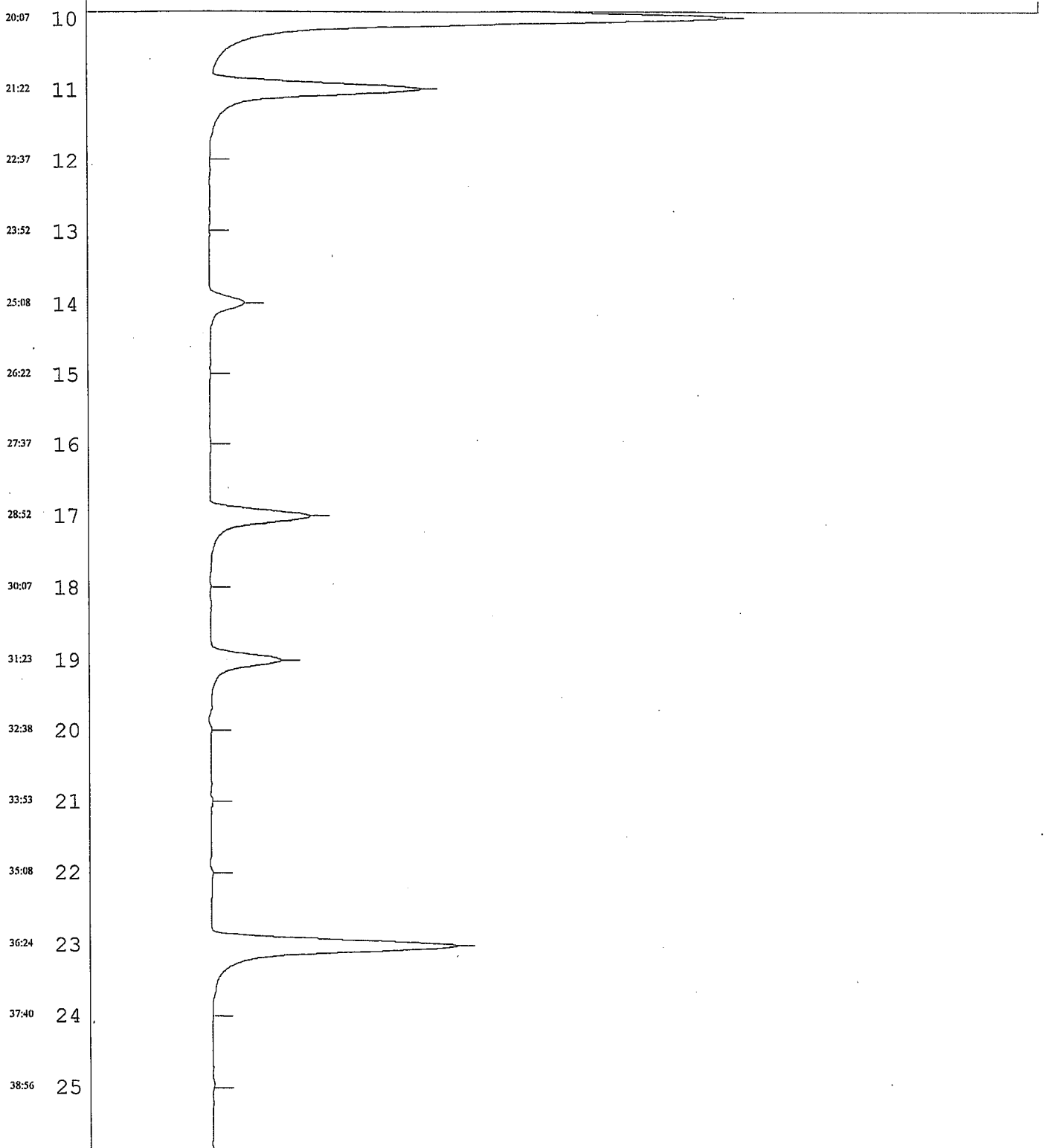
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Samp: CN1213A

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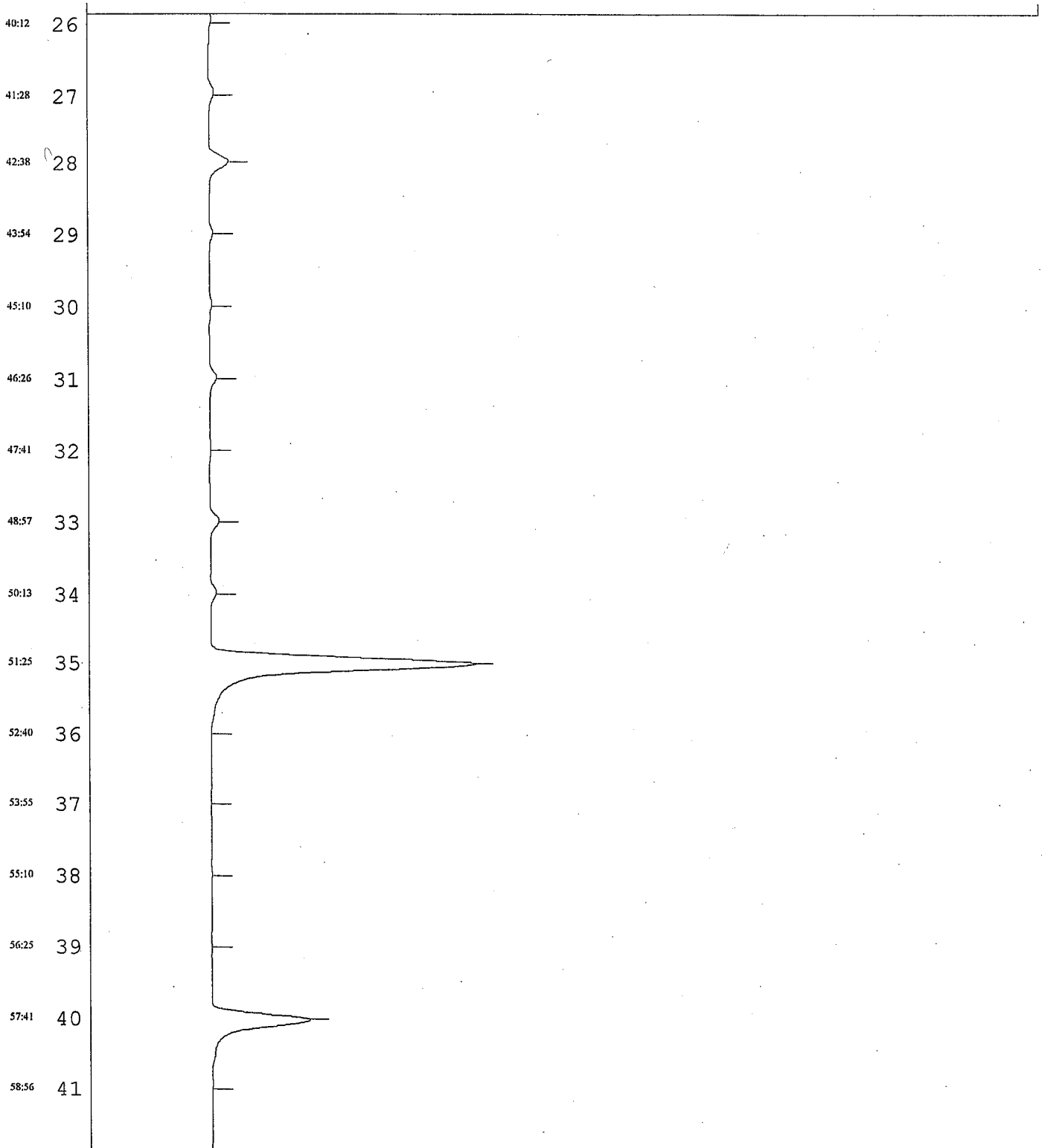
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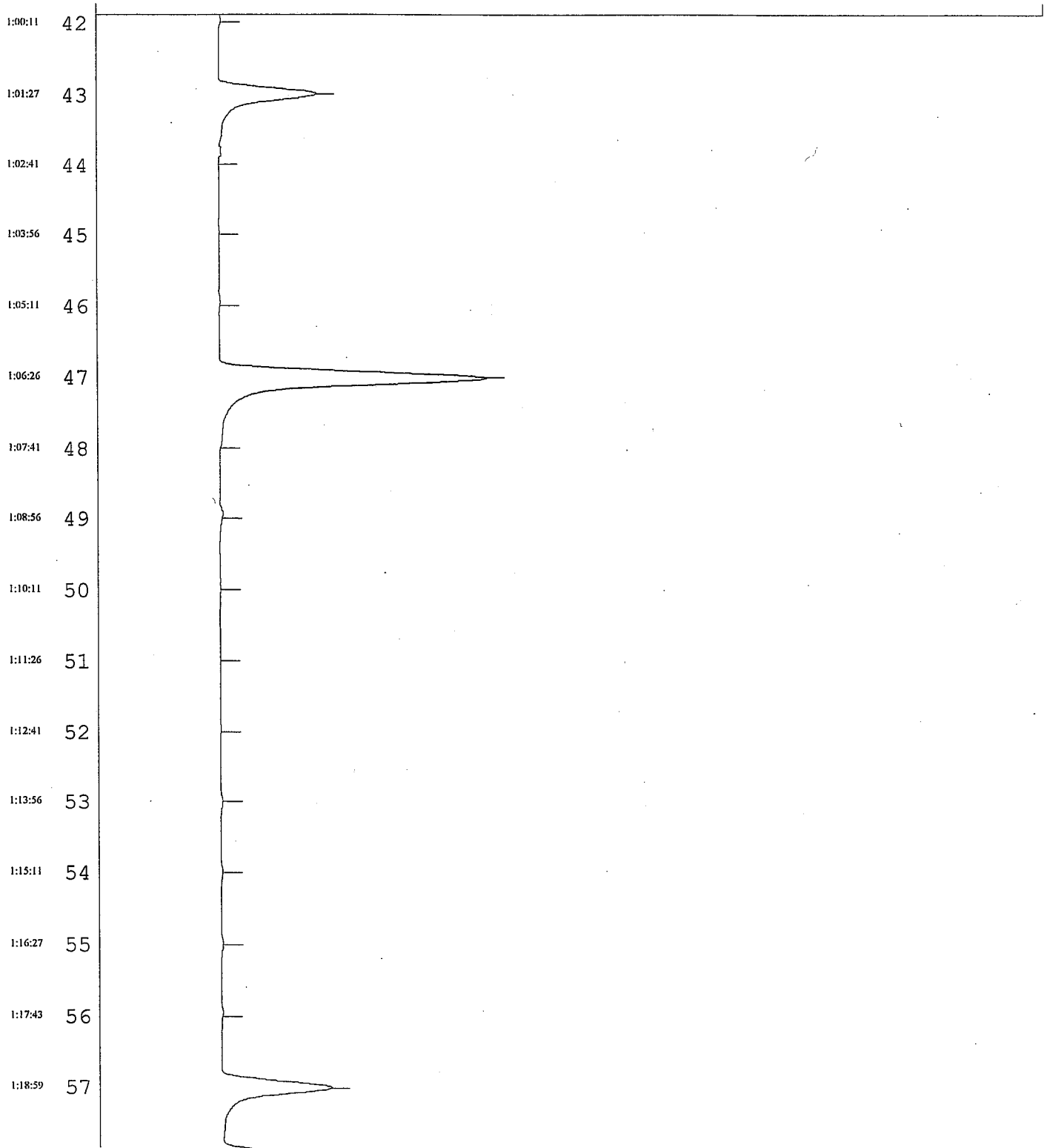


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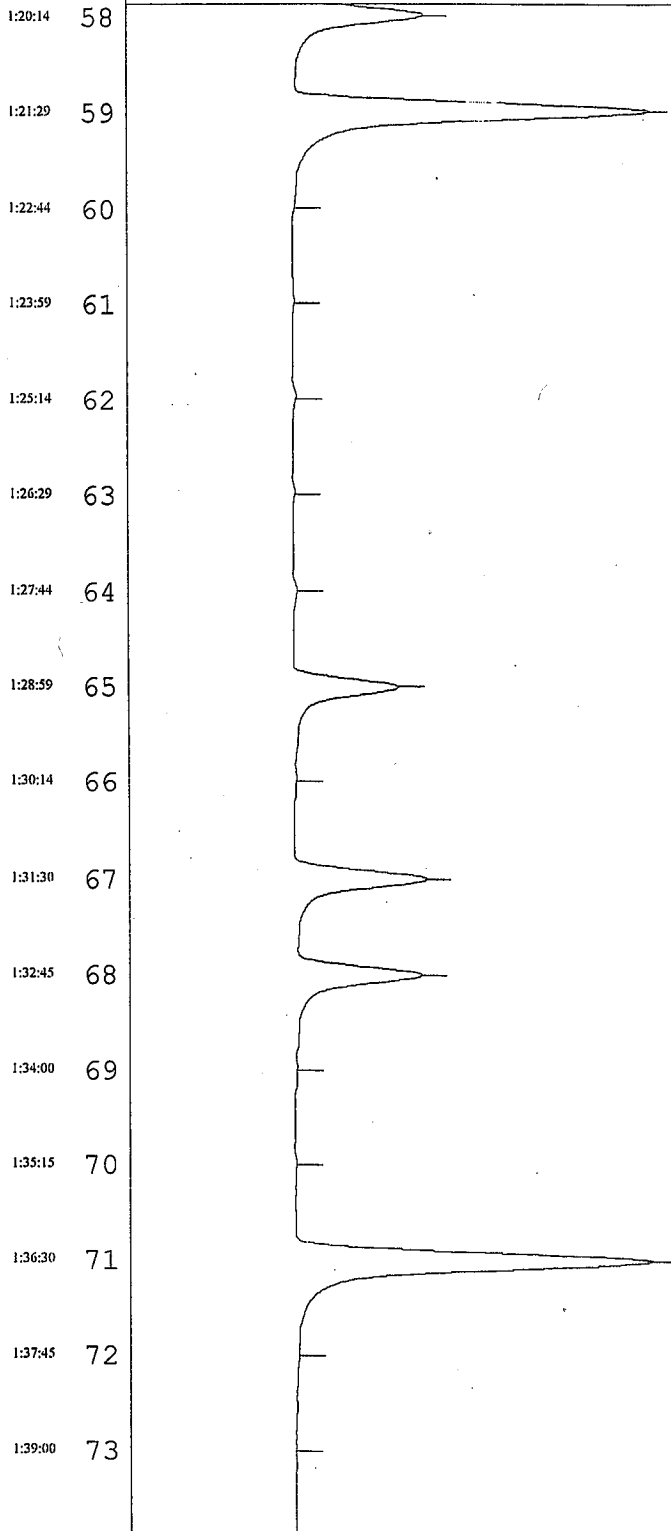
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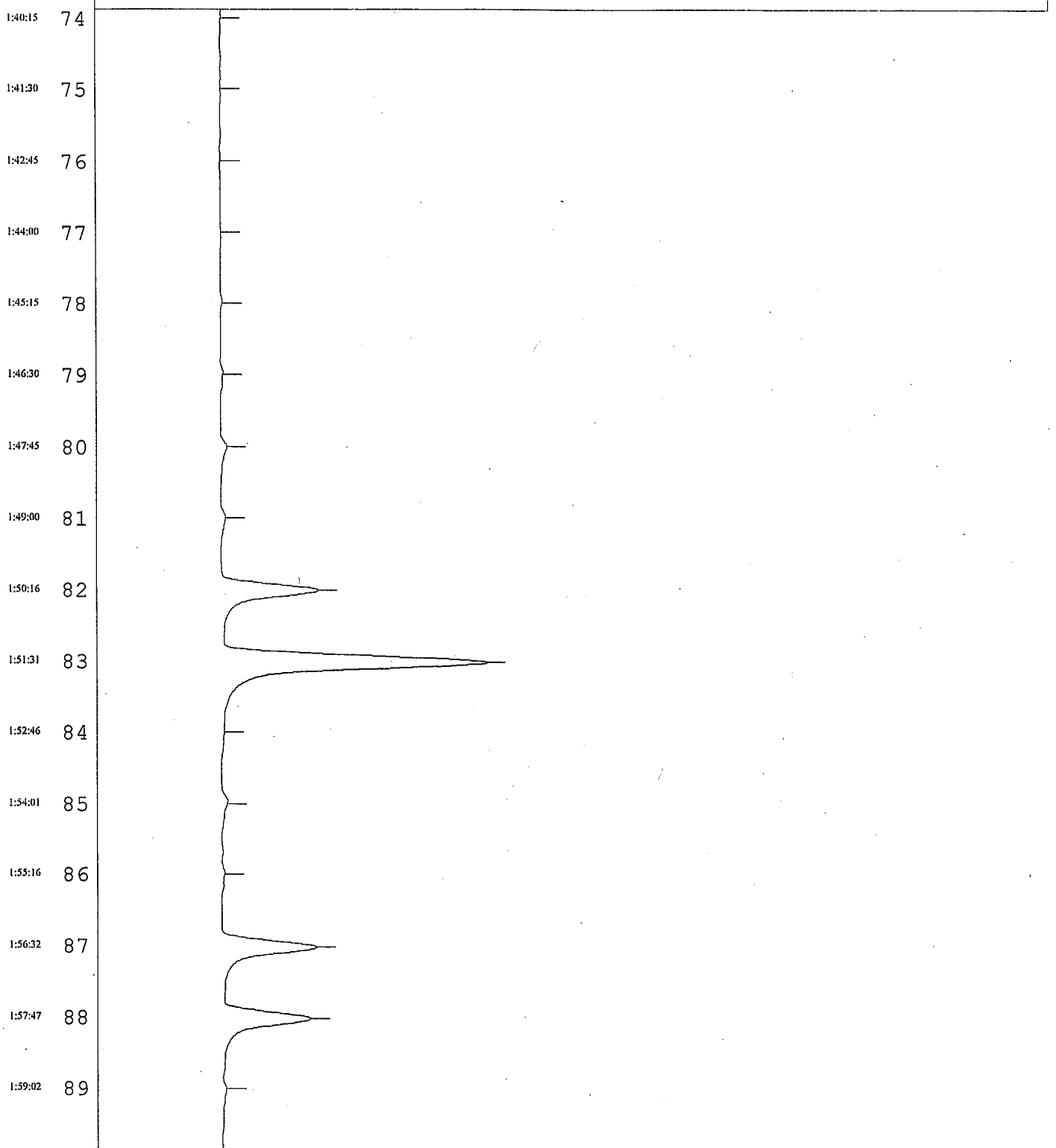
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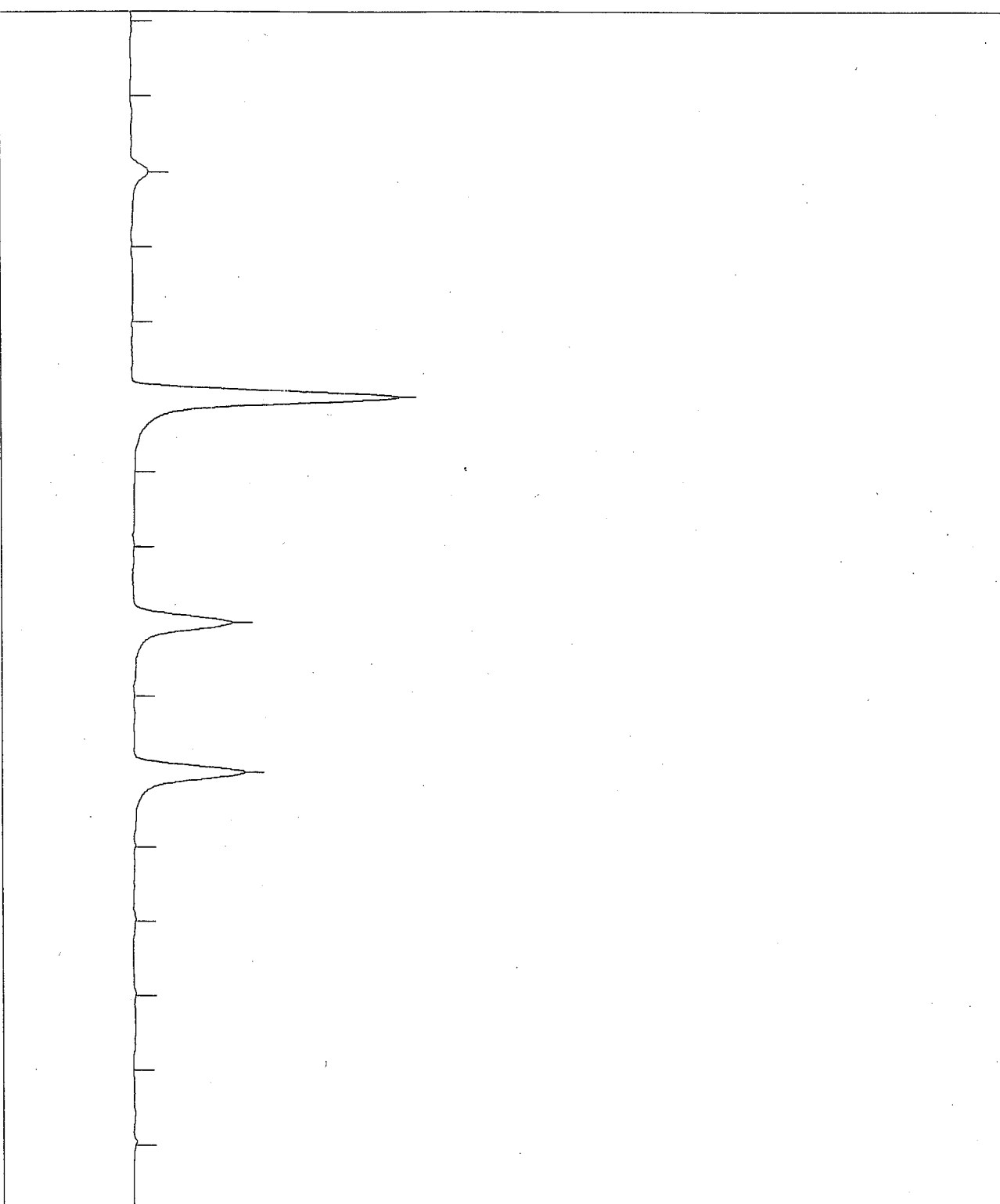
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Samp: CN1213A

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100

2:00:17 90  
2:01:32 91  
2:02:48 92  
2:04:03 93  
2:05:18 94  
2:06:33 95  
2:07:48 96  
2:09:03 97  
2:10:18 98  
2:11:33 99  
2:12:49 100  
2:14:04 101  
2:15:19 102  
2:16:34 103  
2:17:49 104  
2:19:04 105



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16:45

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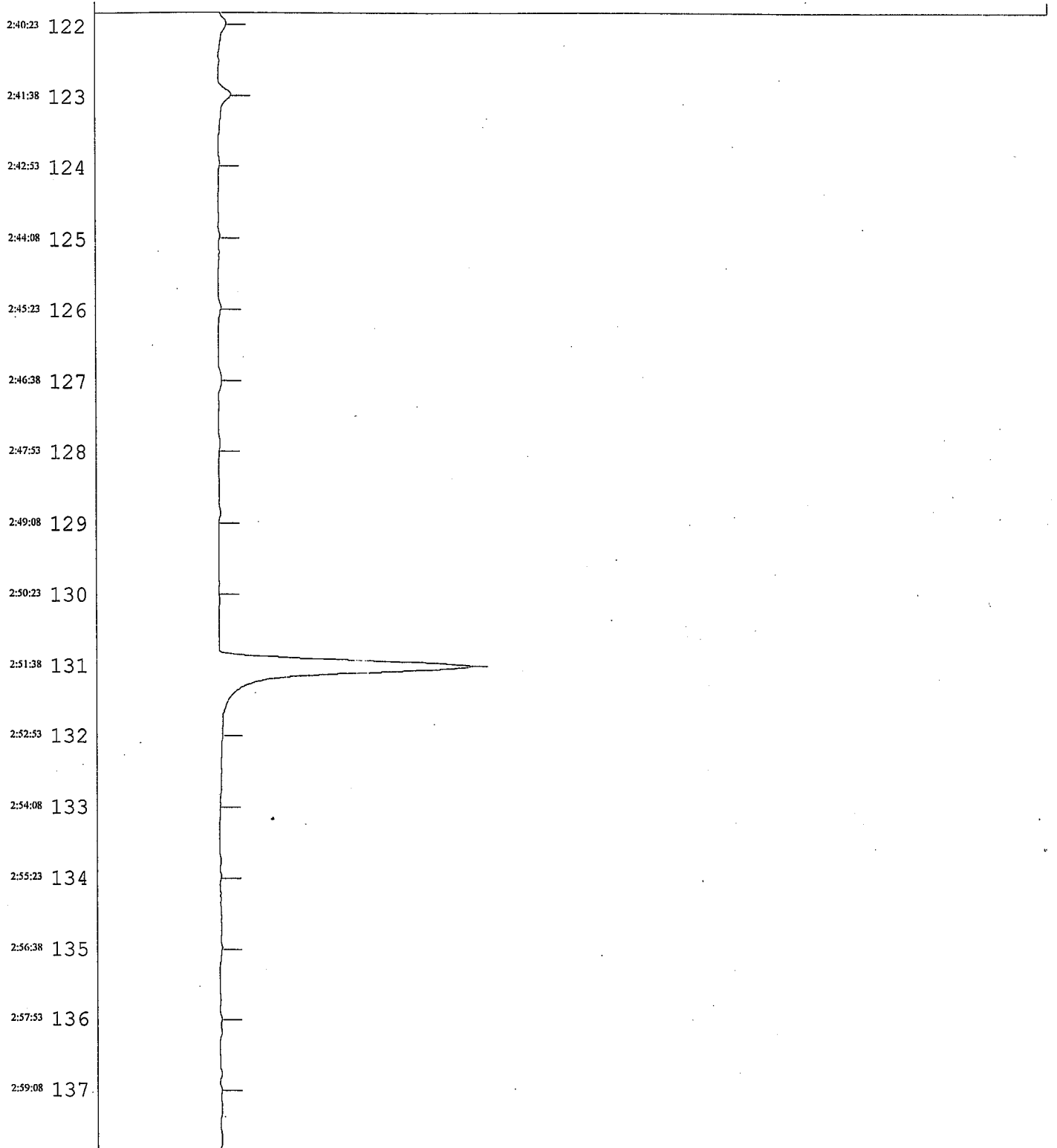
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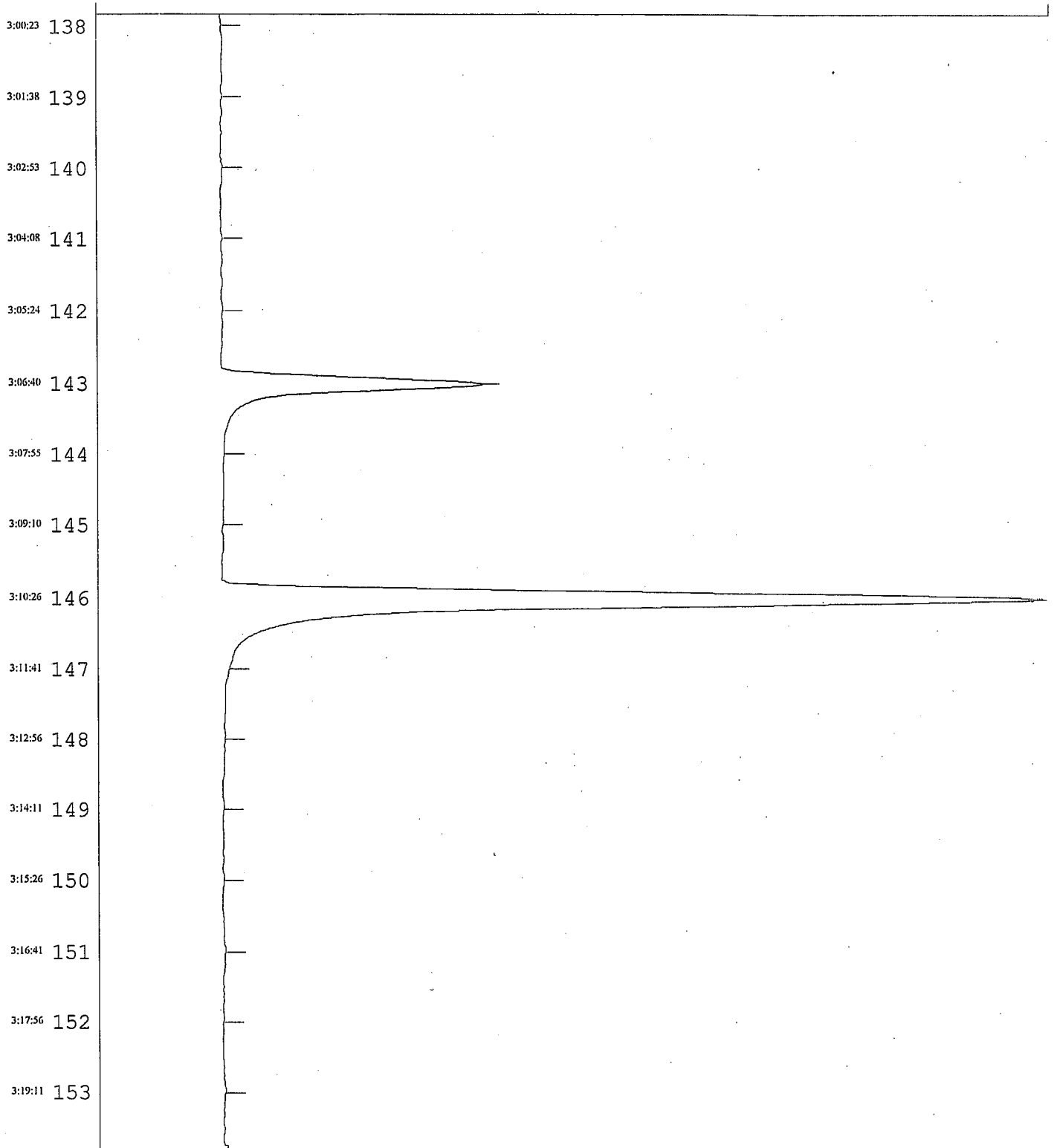
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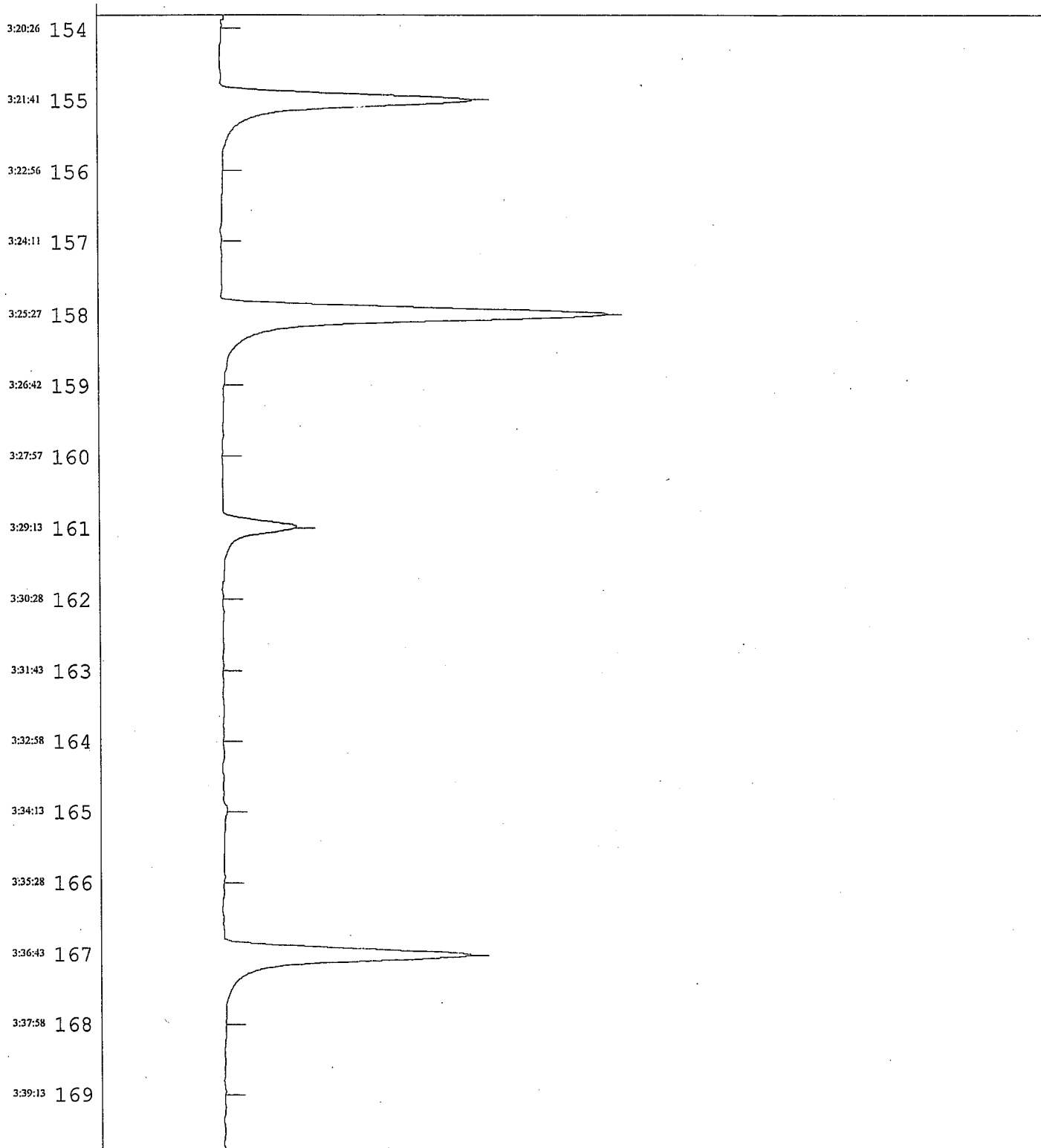
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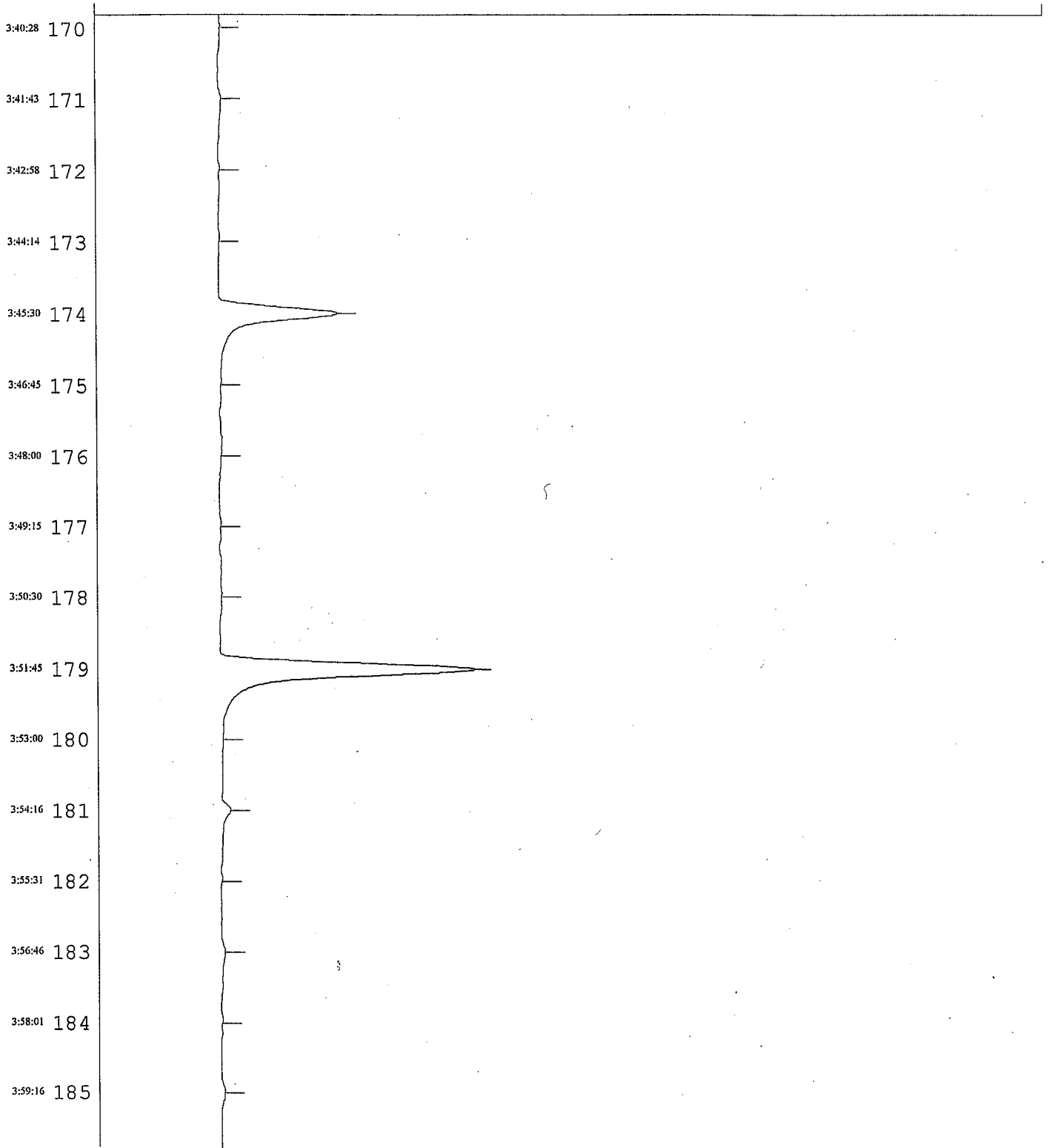
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Page:13

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