



16.1.9.3 BIOANALYTICAL REPORTS

Determination of Total 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) and N'-Nitrosonornicotine (NNN) in Human Urine Samples by LC-MS/MS (Study AA99071-04)



621 Rose Street
Lincoln, NE 68502 USA
www.celerion.com
Tel: 402-476-2811
Toll Free: 800-776-1716
Fax: 402-939-0428

Determination of Total 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) and N'-Nitrosonornicotine (NNN) in Human Urine Samples from "A Randomized, Controlled, Open-label, 3-Arm Parallel Group, Single-Center Study to Demonstrate Reductions in Exposure to Selected Smoke Constituents in Smoking, Healthy Subjects Switching to the Tobacco Heating System 2.2 (THS 2.2) or Smoking Abstinence, Compared to Continuing to Use Conventional Cigarettes, for 5 Days in Confinement" by LC-MS/MS

Study: AA99071-04

Bioanalytical Final Report

Philip Morris Products S.A.
Quai Jeanrenaud 5
2000 Neuchâtel, Switzerland

Protocol ZRHR-REXC-03-EU

Report Date: 11-Mar-2015

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Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

STUDY LOCATION

TEST FACILITY

Celerion
621 Rose Street
Lincoln, NE 68502 USA
Phone: 402-476-4719
Fax: 402-939-0428

Role	Name, Title	E-mail Address
Bioanalytical Principal Investigator	Kirk Newland, B.S.	Kirk.Newland@celerion.com
Deputy Bioanalytical Principal Investigator	Erica Nachi, B.S.	Erica.Nachi@celerion.com
Test Facility Manager	Rafiqul Islam, M.S.	Rafiqul.Islam@celerion.com
Quality Assurance Manager	Crystal Bickford, B.A.	Crystal.Bickford@celerion.com

SPONSOR

Philip Morris Products S.A.
Quai Jeanrenaud 5
2000 Neuchâtel, Switzerland
Phone: +41 58 242 2625

Role	Name, Title	E-mail Address
Manager Clinical Science	Christelle Haziza, Ph.D.	Christelle.Haziza@pmi.com

CLINICAL CENTRAL LABORATORY

Covance CCLS
Rue Moïse Marcinhes 7
CH-1216 Meyrin, Geneva Switzerland
Phone: +41 58 822 7732
Fax: +41 58 822 6999

Role	Name, Title	E-mail Address
Project Manager	Nathalie Mathieux, Ph.D.	Nathalie.Mathieux@covance.com



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APPROVAL SIGNATURES

TEST SITE

Celerion:

Bioanalytical Principal Investigator

Kirk Newland, B.S.
Technical Director, Tobacco Sciences

11-Mar-2015

Date

Management

Rafiqul Islam, M.S.
Senior Director, Bioanalytical Services

11-Mar-2015

Date

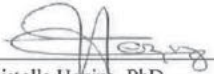


3-JPMA, HBMA, and CEMA in Human Urine
Celerion Study AA99071-03

SPONSOR

Philip Morris Products, S.A.:

Manager Clinical Science



Christelle Haziza, PhD

16 03 2015

Date



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STATEMENT OF COMPLIANCE

The bioanalytical phase of the study was performed according to applicable GLP requirements and in compliance with Standard Operating Procedures (SOPs) in effect in the bioanalytical laboratory of Celerion, Lincoln, Nebraska. The SOPs are written based on the principles and requirements described in United States Food and Drug Administration Title 21 Code of Federal Regulations (CFR) Part 58, the Guidance for Industry – Bioanalytical Method Validation (CDER, May 2001), and Guideline on Bioanalytical Method Validation (European Medicines Agency [EMA/CHMP/EWP/192217/2009], Effective February 2012).

This production study was conducted in accordance with the guidelines documented in the bioanalytical study plan. To ensure the integrity of the reported data, the bioanalytical laboratory verified all results. The Quality Assurance unit of Celerion, Lincoln, Nebraska, audited the study. A Quality Assurance statement was then issued and is included within this document.

The data summaries, results, and conclusions in this bioanalytical report have been reviewed and were found to be consistent and scientifically rational. All deviations from the protocol and/or significant deviations from SOPs documented in this report have been reviewed and are scientifically valid.

I accept responsibility for the scientific integrity of the data included within this bioanalytical report.

Kirk Newland, B.S.
Technical Director, Tobacco Sciences

11-Mar-2015

Date



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QUALITY ASSURANCE STATEMENT

Phase Audited	Audit Date(s)	Date Reported to Study Director/ Bioanalytical Principal Investigator	Date Audit Report Signed by Management
Bioanalytical Study Plan	06-Sep-2013	06-Sep-2013	09-Sep-2013
Critical Phase Inspection	08-Nov-2013	08-Nov-2013	11-Nov-2013
Database EDT File	06, 07, 08-Jan-2014 01-Apr-2014	08-Jan-2014 01-Apr-2014	10-Jan-2014 17-Jun-2014
Bioanalytical Report (Final Draft)	16, 17-Jun-2014	17-Jun-2014	03-Sep-2014
Bioanalytical Report (Final)	10-Mar-2015	10-Mar-2015	10-Mar-2015

Celerion Quality Assurance audited various phases of this study as shown above. This statement confirms that the methods, procedures, and results as presented in this report accurately reflect the raw data of the study.

Jennifer Ortiz Torres, B.S., ASQ-CQA
Quality Assurance Auditor

12 Mar 2015

Date



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1. INTRODUCTION

The purpose of this bioanalytical study (hereafter referred to as study) was to determine the concentration of total 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) and N'-nitrosonornicotine (NNN) in human urine samples by LC-MS/MS method. The study samples were collected in the clinical study ZRHR-REXC-03-EU, entitled, "A Randomized, Controlled, Open-label, 3-Arm Parallel Group, Single-Center Study to Demonstrate Reductions in Exposure to Selected Smoke Constituents in Smoking, Healthy Subjects Switching to the Tobacco Heating System 2.2 (THS 2.2) or Smoking Abstinence, Compared to Continuing to Use Conventional Cigarettes, for 5 Days in Confinement" [3]. Sample analysis was conducted between 15-Nov-2013 and 31-Dec-2013.

This report provides the results and supporting documentation from the analysis of study samples and includes an evaluation of assay performance.

2. EXPERIMENTAL

2.1. Test Item

The test items are defined in the clinical study protocol [3].

2.2. Reference Items and Internal Standards

	Analyte	Internal Standard (IS)
ID	4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL)	d ₄ -NNAL
Source	(b) (4)	(b) (4)
Lot No.	AC0105005*	AC0105006
Purity / Concentration	99.9% / 946 µg/mL*	99.9% / 1020 µg/mL
Celerion Assigned Correction Factor	1.0000	1.0000
Expiry Date	22-Nov-2013*	18-May-2014
Storage Conditions	Refrigerated (5 °C), protected from light	Refrigerated (5 °C), protected from light

*Recertified with new expiry date of 17-May-2014 with purity/concentration of 99.2% (939 µg/mL)

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	Analyte	Internal Standard (IS)
ID	(±)-N'-Nitrososornicotine (NNN)	(±)-N'-Nitrososornicotine-2,4,5,6-d ₄ (pyridine-d ₄) (d ₄ -NNN)
Source	(b) (4)	(b) (4)
Lot No.	AC0105007*	AC0105008 ⁺ / E222P14
Purity / Concentration	99.8% / 998 µg/mL*	99.97% / 920 µg/mL ⁺ / 99.2% (purity)
Celerion Assigned Correction Factor	1.0000	1.0000 ⁺ / 0.9761
Expiry Date	04-Dec-2013*	18-May-2014 ⁺ / 01-Jul-2014
Storage Conditions	Refrigerated (5 °C), protected from light	Refrigerated (5 °C), protected from light / Ambient Temperature, protected from light, desiccant

*Recertified with new expiry date of 19-May-2014 with purity/concentration of 99.98% (1000 µg/mL)

⁺Current internal standard reference material has been recertified during the study execution.

The certificate(s) of analysis for the reference items and internal standards are presented in [Attachment 6](#).

Reference items and internal standards are retained under the conditions that are specified until they become expired. They will then be removed from the active library or stored for an additional period for the testing of long-term stability.

2.3. Biological Matrix

Human urine was collected in-house at Celerion, Lincoln, Nebraska. Human urine stored at -20°C may be stored for a period less than 24 months prior to use. Human urine, free of significant interference, was used to prepare quality control (QC) samples and for dilution of samples above the analytical range. Ultrapure water was used to prepare calibration standards and as control matrix.

2.4. Test System

2.4.1. Procedure and Instruments

Procedure and Instrumentation	
Extraction Method	Solid-phase extraction
Chromatography system	Separate injections performed on Perkin Elmer Series 200 Micropump HPLC (NNAL) and Waters ACQUITY UPLC® Binary Solvent Manager (NNN) [^]
MS/MS system	Separate injections performed on AB SCIEX API 4000™ (NNAL) and AB SCIEX Triple Quad™ 6500 (NNN) [^]
Regression Type	Weighted linear regression curve (1/concentration ²)
Quantitation Method	Peak area ratio
Assay Volume	2.00 mL

[^] = Qualified systems



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2.4.2. Computer Application Software

Software	
LC-MS/MS software	Applied Biosystems Analyst® 1.5.1 (NNAL) and 1.6 (for NNN)^
LIMS	Thermo Electron Corporation Watson™ 7.3 Bioanalytical LIMS 7.3^
LIMS application	Inspector Version 1.1.1^
Laboratory Documentation System	Labnotes™ Web Client 1.21^
Office applications	Microsoft® Office 2007 Package

^ = Validated systems

2.5. Calibration Standards, Quality Control Samples and Dilution Quality Control Samples

Non-zero calibration standards were prepared fresh daily at the concentration levels of 5.00, 10.0, 20.0, 50.0, 100, 200, 400, 800, and 1000 pg/mL of total NNAL and 0.200, 0.400, 0.800, 2.00, 4.00, 8.00, 16.0, 32.0, and 40.0 pg/mL of total NNN from calibration standard spiking solutions which were prepared in bulk on 08-Nov-2013, aliquoted and stored at -20°C for a period less than 98 days prior to use. The calibration standard spiking solutions were prepared at 40x concentrations. To achieve the required standard concentration, 0.2 mL of standard spiking solution is added to 2.00 mL of ultrapure water.

Quality control (QC) samples at the concentration levels of 15.0 pg/mL, 70.0 pg/mL and 750 pg/mL of total NNAL and of 0.600 pg/mL, 2.80 pg/mL and 30.0 pg/mL of total NNN and dilution quality control (DQC) samples at the concentration levels of 2000 pg/mL of total NNAL and of 80.0 pg/mL of total NNN were prepared in bulk on 12-Nov-2013 and 03-Dec-2013, aliquoted and stored at -20°C. Quality control samples aliquotted into brown polypropylene tubes were stored with the clinical samples after receipt at the bioanalytical laboratory and were analyzed within the validated stability period of 296 days.

Standard calibrators and quality control samples were prepared from separate stock solutions.

2.6. Study Samples

2.6.1. Sample Source and Date of Receipt

Study samples were collected between 11-Jul-2013 and 18-Sep-2013 and were received frozen on dry ice between 22-Jul-2013 and 18-Oct-2013 from Covance Central Laboratory Services, Geneva, Switzerland.

2.6.2. Sample Identification

Study samples were identified based on the subject screening number and time point documented on the sample label.



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2.6.3. Sample Storage and Stability

Study samples were stored from sample collection in brown polypropylene tubes to the end of sample analysis at a nominal temperature of -20°C for a duration not exceeding 296 days.

Study samples were analyzed without exceeding long-term, short-term, freeze-thaw, or post-preparative stability. The following evaluations have been conducted:

Stability Summary [5]	Total NNAL
Long-term Stability	318 days (LLOQ QC) and 296 days (dilution QC) in brown polypropylene tubes at -20 C
Short-term Stability	25 hours (LLOQ QC) and 24 hours (dilution QC) in brown polypropylene tubes at ambient temperature under UV-shielded light
Cumulative Short-term Stability	52 hours (LLOQ QC) and 53 hours (dilution QC) in brown polypropylene tubes at ambient temperature under UV-shielded light (total of all thaw cycles)
Freeze-thaw Stability	6 freeze (-20 C)-thaw (ambient temperature) cycles in brown polypropylene tubes under UV-shielded light
Post-preparative Stability	126 hours in a polypropylene 96 well plate at 5 C
Processed Sample Integrity	126 hours in a polypropylene 96 well plate at 5 C
Sample Shipping Stability	4 days in brown polypropylene tubes at -80 C

Stability Summary [5]	Total NNN
Long-term Stability	318 days (LLOQ QC) and 296 days (dilution QC) in brown polypropylene tubes at -20 C
Short-term Stability	24 hours in brown polypropylene tubes at ambient temperature under UV-shielded light
Cumulative Short-term Stability	53 hours in brown polypropylene tubes at ambient temperature under UV-shielded light (total of all thaw cycles)
Freeze-thaw Stability	6 freeze (-20 C)-thaw (ambient temperature) cycles in brown polypropylene tubes under UV-shielded light
Post-preparative Stability	179 hours in a polypropylene 96 well plate at 5 C
Processed Sample Integrity	160 hours in a polypropylene 96 well plate at 5 C
Sample Shipping Stability	4 days in brown polypropylene tubes at -80 C

2.6.4. Sample Summary

The Sponsor's protocol specifies 160 subjects with 7 sampling times for the 24-hour urine collections [3]. In study AA99071, a single subject discontinued from the clinical phase after randomization. The samples from this subject were analyzed and the results reported. Additional information regarding the subject discontinuance is provided in [Section 8.2](#).



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	No. of Samples
Specified in protocol/received	1120/1135
Analysis not required (subject discontinued from enrollment)	18
Duplicates received	3405
Total number of study samples analyzed	1117

Following analysis, the study samples were kept frozen at -20°C. After submission of the final bioanalytical report the study samples will be further stored under the same conditions for up to 1 month on-site. Then, upon agreement with the Sponsor, the study samples will be destroyed after the completion of the clinical study report and Sponsor notification.

3. SAMPLE ANALYSIS

3.1. Analytical Method

The determination of total NNAL and NNN in human urine samples was carried out over a calibration range of 5.00 pg/mL to 1000 pg/mL (NNAL), and 0.200 pg/mL to 40.0 pg/mL (NNN). The analytical procedure was performed at Celerion, Lincoln, Nebraska and is documented in the Method Validation Report for Celerion Study ZZ34313-03 [5]. The analytical method is documented in BAM SOP ZZ34313-03 [6]. See [Attachment 7](#).

An aliquot of human urine containing the analyte and internal standard was extracted using a solid phase extraction procedure. The extracted samples were analyzed by an HPLC equipped with an AB SCIEX API 4000™ and AB SCIEX Triple Quad™ 6500 triple quadrupole mass spectrometers using an ESI source. Positive ions were monitored in the multiple reaction monitoring (MRM) mode. Quantitation was determined using a weighted linear regression analysis ($1/\text{concentration}^2$) of peak area ratios of the analyte and internal standard.

Though listed as a standard, the control blank sample with internal standard (Standard A) was not used to plot the calibration curve.

3.2. Acceptance Criteria

3.2.1. Analytical Run Acceptance Criteria

An analytical run is acceptable if all of the following criteria are met:

- at least 75% of the non-zero calibration standards were within $\pm 15.0\%$ ($\pm 20.0\%$ for the lower limit of quantification (LLOQ) calibration standard) of their nominal concentration,
- at least two-thirds of the QC samples and at least 50% at each concentration level were within $\pm 15.0\%$ of their nominal concentration,
- at least 50% of the standard zero samples are free of interference at the retention time of the analyte(s) of interest,



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- at least 50% of the blank samples are free of interference both at the retention time of the analyte(s) of interest and at the retention time of the IS,
- at least two-thirds of all blank and standard zero samples fulfilled the above described interference criteria.

Interference at the retention time of the analyte of interest is defined as a response greater than 20% of the mean analyte response of the LLOQ calibration standard(s).

Interference at the retention time of the IS is defined as a response greater than 5% of the mean IS response of the LLOQ calibration standard(s).

Individual data of QC samples (including DQCs) that were out of their acceptance criteria are flagged appropriately in the study file and in the bioanalytical report. QCs will be excluded from statistics only for analytical reasons (see [Attachment 5](#)).

3.2.2. Acceptance Criteria for System Suitability Testing

The system suitability testing performed with each analytical run is designed to assess the sensitivity, reproducibility of response (absence of response drift based on interpolated concentrations), and carry-over.

- Sensitivity assessed at the start and end of each analytical run is performed by evaluating the signal-to-noise ratio (SNR) of extracted system suitability samples spiked at the lower limit of quantitation. The SNR must be greater than 5:1 unless otherwise specified in the method.
- System stability (reproducibility of response) is performed by replicate injections at the start (5) and the end (2) of the analytical run with pooled high concentration system suitability samples. The percent coefficient of variation (% CV) of the calculated concentration must be less than or equal to 6%. The mean of the calculated concentration of the last 2 replicates or middle replicates (if applicable) of high concentration system suitability samples must be within 15% difference of the mean of the calculated concentration of the first 5 high concentration system suitability samples.
- The carryover percentage is assessed at the beginning and end of each analytical run. This test is performed by injecting a blank (reconstitution solution) sample immediately after a high concentration system suitability sample. The area counts of the analyte in the blank injection are divided by the analyte area counts in the high concentration system suitability sample and the result is multiplied by 100.

$$\% \text{ carryover} = \left(\frac{\text{area (blank sample)}}{\text{area (high sys suit)}} \right) * 100$$

Analyte	Carryover criteria (needs to be less than)
NNAL	0.1%
NNN	0.1%



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3.2.3. Acceptance Criteria for Sample Dilution

The accuracy of study sample dilution is verified by the DQC samples. At least 50% of the DQC samples must be within $\pm 15.0\%$ of their nominal concentration for the respective dilution factor to be accepted.

3.2.4. Acceptance Criteria for ISR

The % difference was calculated for each pair of original and repeat analyses as follows:

$$\% \text{ difference} = 100 * \frac{|\text{repeat value} - \text{original value}|}{(\text{repeat value} + \text{original value}) / 2}$$

If the % difference was less than or equal to 20%, a pair of results was considered a passing match. Any pair with a % difference of more than 67% (indicating that the repeat value is either less than half or more than twice the original concentration) was considered an event and was investigated. The analytical method will be considered reproducible if at least 67% of the result pairs match. If less than 67% of the pairs match, an event investigation was initiated.

4. RESULTS

Due to rounding procedures, recalculations using the results presented in this report may differ slightly from the reported statistics.

A summary of analytical runs performed is presented in [Table 1](#).

4.1. Quality Control and Dilution Quality Control Sample Performance

Between-analytical run precision and accuracy results for QC samples prepared at 15.0, 70.0 and 750 pg/mL for total NNAL and 0.600, 2.80, and 30.0 pg/mL for total NNN are summarized in [Table 2](#) and [Table 3](#), respectively. The accuracy of sample dilution was verified by the performance of dilution QC samples. Results for dilution QC samples are summarized in [Table 2](#) and [Table 3](#) for total NNAL and NNN, respectively.

4.2. Calibration Standard Performance

Back-calculated calibration curve standard concentrations are provided in [Table 4](#) and [Table 5](#) for total NNAL and NNN, respectively.

4.3. Standard Curve Parameters

Standard curve parameters from 20 and 21 successful analytical runs are provided in [Table 6](#) and [Table 7](#) for total NNAL and NNN, respectively. A representative calibration curve is illustrated in [Figure 1](#) and [Figure 2](#) for total NNAL and NNN, respectively.



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4.4. Study Sample Concentrations

Study sample concentrations are provided in [Table 8](#) and [Table 9](#) for total NNAL and NNN, respectively. The column “Split” refers to the “for analysis” or “back-up” sample collected.

Study samples, if any, with no significant peak at the mass transition and retention time of total NNAL and NNN, respectively, or with peak area ratios below that of the LLOQ standard, are reported as being below the limit of quantitation (BLQ).

4.5. Reassays

4.5.1. Reassays for Analytical Reasons

Study samples needing re-analysis according to [section 3.2.1](#) for total NNAL and NNN are identified in [Table 10](#) and [Table 11](#), respectively.

4.5.2. Reassays for Non-analytical Reasons (Value Requiring Confirmation, VRC)

After initial analysis, study samples that were identified by the Bioanalytical Principal Investigator for re-assay due to non-analytical reasons were re-assayed if sufficient sample volume remained. These samples are identified in [Table 12](#) for total NNN.

4.5.3. Sponsor Selected Reassays

There were no Sponsor selected reassays.

4.5.4. Incurred Sample Reproducibility

The method for the determination of total NNAL and NNN was considered reproducible, 98.3% out of 116 repeat analyses for total NNAL and 78.4% out of 111 repeat analyses for total NNN met acceptance criteria as defined in [section 3.2.4](#). Results are presented in [Table 13](#) and [Table 14](#).

5. CHROMATOGRAMS

Representative chromatograms are provided in [Attachment 8](#).

6. DEVIATIONS

6.1. DEV-LNK-14-0016 from CGSOP.0002 Good Documentation Practices, Section 2.1, was initiated as the reference for the standard prep on an extraction form for Analytical Run 40/41 was not completed. The extraction analyst checked the documentation for the analytical runs extracted before and after Analytical Run 40/41 to verify the standard prep reference used, added the documentation to the extraction form and added a comment stating the standard reference was added with a time/date stamp indicating when the reference was added. There was no impact as there was high certainty by the analyst that the same standard prep was used as they are located in the same place in the freezer and the standards quantitated well.



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7. EVENTS

7.1. Event Observation EO-LNK-AA99071-04-13-0577 was initiated due to the STD C and STD D samples quantitating with a high bias (160% and 60% respectively) on Analytical Run 4 (NNN). These same two standards were acceptable for NNAL on Analytical Run 3. Test injections and the original data was confirmed. Analytical Run 4 failed to meet acceptance criteria and was therefore rejected in Watson. The analytical run was reassayed for NNN only.

7.2. Event Observation EO-LNK-AA99071-04-13-0605 was initiated due to the initial partial ISR testing for NNAL and NNN on Analytical Runs 35/36 not meeting acceptance for NNN only. The total NNAL ISR testing results were successful with 92% of the pairs matching the original results within 20% difference. The total NNN results were not successful however as only 64% of the reassayed samples matched the original result within 20% difference. Only 1 sample was significantly varied to be an outlier requiring possible VRC testing (Subject 38, Day 4 by ~74% difference). Other than that sample, only 4 other samples quantitated outside of 24% difference.

A review of the ISR sample order was completed. No issues with the sample order were noted. A review of the internal standard response and analytical run acceptance criteria was completed. No issues were noted.

A review of the chromatography was performed. It was observed that in the most recent analytical runs (24, 26, and 36) that the peak shape for NNN had become broad. ER-LNK-AA99071-03-13-0154 describes the testing plan description. It was suspected that the analytical column used for ISR testing had begun to lose the capability to resolve NNN consistently. To determine if this had an impact on the assay variability observed with the ISR testing Analytical Run 36 was reinjected with a column known to provide consistently sharp resolution. Evaluation of the reinjected ISR test samples did not confirm the hypothesis that the ISR variability was related to the peak width differences observed throughout the study. This factor appears to have no significant impact on the method quantitation.

A full set of ISR test samples were completed and included with the original ISR testing results. The overall passing rate was acceptable and no further investigation will be required.

7.3. Event Observation EO-LNK-AA99071-04-13-0631 was initiated because the following samples failed ISR testing for NNN only at greater than 67%:

Subject 38, Day 3/4
Subject 149, Day 3/4



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Additionally the following samples failed ISR testing for NNN only at greater than 48% and were also investigated:

Subject 148, Day 5/6
Subject 234, Day 2/3
Subject 63, Day -1/0

Event Resolution ER-LNK-AA99071-04-13-0166 was initiated following the verification of the sample order of the ISR samples. The samples listed above were selected for VRC testing to be run in triplicate if volume allowed using the standard VRC criteria. Aliquoting issues were suspected as the cause of the ISR failures for NNN only. Some minor contamination was also suspected due to the low pg/mL concentrations.

The VRC results confirmed the original results for Subjects 38 and 234 and the original data will be reported for NNN. For Subjects 63, 148, and 149, the VRC results confirmed the ISR results. They did not confirm the original measured concentrations for NNN. The mean of the VRC results will be reported for Subject 63, Day -1/0, Subject 148, Day 5/6, and Subject 149, Day 3/4.

8. ANALYTICAL NOTES

8.1. The following analytical runs were not included in the data set.

<u>Run ID</u>	<u>Analyte</u>	<u>Reason for Non-inclusion</u>
4	NNN	Analytical Run 4 was reassayed as Analytical Run 37 due to 2 of 2 QC As not meeting acceptance criteria.
42	NNN	This analytical run was a RI of Analytical Run 36 to compare the original ISR data with improved chromatography. There was not a significant difference, therefore, it did not appear the low ISR results were due to the broader peak shape. As a result, Analytical Run 36 will be accepted and Analytical Run 42 rejected.

8.2. During the course of analysis of study AA99077 (ZRHR-REXC-04-JP), it was determined that incomplete documentation of subject consent for further analysis of bioanalytical samples after subject discontinuation existed. A review of the possible impacted studies included ZRHR-REXC-03-EU (AA99071). One subject, 0083, discontinued from the clinical phase post-randomization. Consent for analysis was later confirmed by the Principal Investigator. The results from Subject 0083 were included with the final deliverables for this study.



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9. ARCHIVES

At a minimum the following records will be retained:

- Study Plan Bioanalysis (and all amendments, if applicable)
- Raw data
- Study related correspondence
- Bioanalytical report (and all amendments, if applicable)

These documents will be kept in the archives of Celerion for at least ten (10) years, taken from the date of Bioanalytical Principal Investigator's signature on the final bioanalytical report. After this time the Sponsor will be contacted to decide if the records should be retained for a further defined time at Celerion, returned to the Sponsor, or disposed of. Study data and documentation are archived at the Celerion Lincoln facility for 90 days, after which the records may be transferred to:

Iron Mountain
1601 Leavenworth
Omaha, Nebraska 68102

10. CONCLUSION

In this bioanalytical study the concentration of total NNAL and NNN was determined in a total of 1117 human urine samples collected in the Philip Morris International Research and Development clinical study ZRHR-REXC-03-EU using a validated LC-MS/MS method.

The overall performance of the LC-MS/MS method met acceptance criteria and the results obtained were of the required integrity and quality. These data can be used for further interpretation.

11. REFERENCES

- [1] Guidance for Industry – Bioanalytical Method Validation: US Department of Health and Human Services Food and Drug Administration Center for Drug Evaluation and Research (CDER), Center for Veterinary Medicine (CVM) May 2001
- [2] OECD Principles on Good Laboratory Practice (as revised in 1997), ENV/MC/CHEM(98)17, OECD Series on Principles of Good Laboratory Practice and Compliance Monitoring, No. 1, OECD Publishing, Paris, France (2003).
- [3] Protocol ZRHR-REXC-03-EU: "A Randomized, Controlled, Open-label, 3-Arm Parallel Group, Single-Center Study to Demonstrate Reductions in Exposure to Selected Smoke Constituents in Smoking, Healthy Subjects Switching to the Tobacco Heating System 2.2 (THS 2.2) or Smoking Abstinence, Compared to Continuing to Use Conventional Cigarettes, for 5 Days in Confinement"



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- [4] Study Plan Bioanalysis: Determination of Total 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) and N'-Nitrosonornicotine (NNN) in Human Urine Samples from "A Randomized, Controlled, Open-label, 3-Arm Parallel Group, Single-Center Study to Demonstrate Reductions in Exposure to Selected Smoke Constituents in Smoking, Healthy Subjects Switching to the Tobacco Heating System 2.2 (THS 2.2) or Smoking Abstinence, Compared to Continuing to Use Conventional Cigarettes, for 5 Days in Confinement" by LC-MS/MS, Celerion Study AA99071-04
 - [5] Validation of an LC-MS/MS Method for the Determination Total NNAL and Total NNN in Human Urine, Celerion Study ZZ34313-03
 - [6] Bioanalytical Method SOP for the Determination of Total NNAL and Total NNN in Human Urine, Celerion Study ZZ34313-03



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RESULT TABLES

Table 1 Summary of Analytical Runs Performed

Analyte Name	Run ID	Regression Status	Extraction Date	Assay Date	Description	Comment
NNAL	1	Accepted	15-Nov-2013	16-Nov-2013	SUB 1,4,8,10,11,13-16 PD 1 (NNAL)	OK
NNAL	3	Accepted	18-Nov-2013	19-Nov-2013	SUB 17,20-23,25,28-30 PD 1 (NNAL)	OK
NNAL	5	Accepted	19-Nov-2013	20-Nov-2013	SUB 31,34,35,37-39,42,44,49 PD 1 (NNAL)	OK
NNAL	7	Accepted	20-Nov-2013	22-Nov-2013	SUB 51-53,55,57,60,62-64 PD 1 (NNAL)	OK
NNAL	9	Accepted	21-Nov-2013	23-Nov-2013	SUB 66,67,69,71,72,74,76,80,83 PD 1 (NNAL)	OK
NNAL	11	Accepted	24-Nov-2013	25-Nov-2013	SUB 85-88,90,93,104-106 PD 1 (NNAL)	OK
NNAL	13	Accepted	25-Nov-2013	26-Nov-2013	SUB 107,110,112,114,117,118,121-123 PD 1 (NNAL)	OK
NNAL	15	Accepted	26-Nov-2013	27-Nov-2013	SUB 126-130,133,134,136,137 PD 1 (NNAL)	OK
NNAL	17	Accepted	26-Nov-2013	27-Nov-2013	SUB 139,140,145,147-150,152,153 PD 1 (NNAL)	OK
NNAL	19	Accepted	02-Dec-2013	03-Dec-2013	SUB 155,156,160,162,167,169,170,177,181 PD 1 (NNAL)	OK
NNAL	21	Accepted	02-Dec-2013	04-Dec-2013	SUB 183,185,187,189-193, 195 PD 1 (NNAL)	OK
NNAL	23	Accepted	04-Dec-2013	05-Dec-2013	SUB 196-198,200,202-204,206,210 PD 1 (NNAL)	OK
NNAL	25	Accepted	05-Dec-2013	06-Dec-2013	SUB 216,218,220,224,228-230,232,234 PD 1 (NNAL)	OK
NNAL	27	Accepted	08-Dec-2013	09-Dec-2013	SUB 240,241,244,249,251,252,255,256,262 PD 1 (NNAL)	OK
NNAL	29	Accepted	08-Dec-2013	10-Dec-2013	SUB 264-266,272,273,276-279 PD 1 (NNAL)	OK
NNAL	31	Accepted	10-Dec-2013	11-Dec-2013	SUB 281-283,285,287,289,291,292,296 PD 1 (NNAL)	OK
NNAL	33	Accepted	11-Dec-2013	12-Dec-2013	SUB 298,300,301,306-308,313,315,316 PD 1 (NNAL)	OK
NNAL	35	Accepted	04-Dec-2013	05-Dec-2013	SUB 317,318,320-322 PD 1 (NNAL) + ISRs	OK
NNAL	38	Accepted	15-Dec-2013	16-Dec-2013	SUBS 325, 328 PD 1 (NNAL) + REASSAYS	OK
NNAL	40	Accepted	10-Dec-2013	12-Dec-2013	ISRs (NNAL)	OK
NNAL	43	Accepted	18-Dec-2013	19-Dec-2013	REASSAYS (NNAL) + ISRs	OK
NNN	2	Accepted	15-Nov-2013	17-Nov-2013	SUB 1,4,8,10,11,13-16 PD 1 (NNN)	OK
NNN	4	Rejected	18-Nov-2013	20-Nov-2013	SUB 17,20-23,25,28-30 PD 1 (NNN)	std/qc fail acceptance
NNN	6	Accepted	19-Nov-2013	21-Nov-2013	SUB 31,34,35,37-39,42,44,49 PD 1 (NNN)	OK



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Analyte Name	Run ID	Regression Status	Extraction Date	Assay Date	Description	Comment
NNN	8	Accepted	20-Nov-2013	21-Nov-2013	SUB 51-53,55,57,60,62-64 PD 1 (NNN)	OK
NNN	10	Accepted	21-Nov-2013	22-Nov-2013	SUB 66,67,69,71,72,74,76,80,83 PD 1 (NNN)	OK
NNN	12	Accepted	24-Nov-2013	26-Nov-2013	SUB 85-88,90,93,104-106 PD 1 (NNN)	OK
NNN	14	Accepted	25-Nov-2013	27-Nov-2013	SUB 107,110,112,114,117,118,121-123 PD 1 (NNN)	OK
NNN	16	Accepted	26-Nov-2013	29-Nov-2013	SUB 126-130,133,134,136,137 PD 1 (NNN)	OK
NNN	18	Accepted	26-Nov-2013	30-Nov-2013	SUB 139,140,145,147-150,152,153 PD 1 (NNN)	OK
NNN	20	Accepted	02-Dec-2013	04-Dec-2013	SUB155,156,160,162,167,169,170,177,181 PD 1 (NNN)	OK
NNN	22	Accepted	02-Dec-2013	05-Dec-2013	SUB 183,185,187,189-193, 195 PD 1 (NNN)	OK
NNN	24	Accepted	04-Dec-2013	06-Dec-2013	SUB 196-198,200,202-204,206,210 PD 1 (NNN)	OK
NNN	26	Accepted	05-Dec-2013	07-Dec-2013	SUB 216,218,220,224,228-230,232,234 PD 1 (NNN)	OK
NNN	28	Accepted	08-Dec-2013	10-Dec-2013	SUB 240,241,244,249,251,252,255,256,262 PD 1 (NNN)	OK
NNN	30	Accepted	08-Dec-2013	11-Dec-2013	SUB 264-266,272,273,276-279 PD 1 (NNN)	OK
NNN	32	Accepted	10-Dec-2013	12-Dec-2013	SUB 281-283,285,287,289,291,292,296 PD 1 (NNN)	OK
NNN	34	Accepted	11-Dec-2013	13-Dec-2013	SUB 298,300,301,306-308,313,315,316 PD 1 (NNN)	OK
NNN	36	Accepted	04-Dec-2013	05-Dec-2013	SUB 317,318,320-322 PD 1(NNN) + ISRs	OK
NNN	37	Accepted	12-Dec-2013	14-Dec-2013	RR FAILED RUN 4 (NNN)	OK
NNN	39	Accepted	15-Dec-2013	16-Dec-2013	SUBS 325, 328 PD 1 (NNN) + REASSAYS	OK
NNN	41	Accepted	10-Dec-2013	11-Dec-2013	ISRs (NNN)	OK
NNN	42	Rejected	04-Dec-2013	09-Dec-2013	RI of RUN_036,SUB 317,318,320-322 PD 1(NNN) + ISRs	re-injection confirmed original data
NNN	44	Accepted	18-Dec-2013	19-Dec-2013	REASSAYS (NNN) + ISRs	OK
NNN	45	Accepted	30-Dec-2013	31-Dec-2013	VRCs (NNN ONLY)	OK

"Regression Status" reflects the status of the run with respect to run acceptance criteria.



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Table 2 Quality Control and Dilution Quality Control Sample Data (Between-Analytical Run Precision and Accuracy) for Total NNAL

Assay Date	Run ID	QC A 15.0 pg/mL	QC B 70.0 pg/mL	QC C 750 pg/mL	QC D DF10 2000 pg/mL	QC D DF100 2000 pg/mL
16-Nov-2013	1	14.9	68.0	766		
		13.7	65.9	738		
19-Nov-2013	3	13.4	65.6	746		
		15.9	60.2	756		
20-Nov-2013	5	14.3	68.3	749		
		14.3	65.1	759		
22-Nov-2013	7	14.0	66.4	727		
		13.9	64.1	713		
23-Nov-2013	9	14.3	67.8	762		
		15.0	67.6	765		
25-Nov-2013	11	13.8	64.7	715		
		14.8	63.9	715		
26-Nov-2013	13	13.9	67.9	771		
		13.9	66.1	730		
27-Nov-2013	15	15.0	61.1	702		
		14.2	68.0	763		
27-Nov-2013	17	13.9	67.2	776		
		14.4	68.4	736		
03-Dec-2013	19	14.6	66.2	761		
		15.3	66.0	757		
04-Dec-2013	21	14.2	60.1	726		
		13.6	63.1	736		
05-Dec-2013	23	14.1	65.4	740		
		14.1	64.4	766		
05-Dec-2013	35	14.1	63.0	728		
		13.7	64.0	755		
06-Dec-2013	25	15.0	67.4	747		
		14.7	67.7	737		
09-Dec-2013	27	14.9	64.5	737		
		14.6	67.5	723		
10-Dec-2013	29	13.7	63.5	702		
		13.4	63.1	700		
11-Dec-2013	31	14.4	65.7	750		
		14.8	65.7	739		
12-Dec-2013	33	15.2	69.1	745		
		14.4	68.3	716		
16-Dec-2013	38	15.1	69.4	753	*1600	*1550
		15.2	65.8	740	*1600	*1630



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Assay Date	Run ID	QC A 15.0 pg/mL	QC B 70.0 pg/mL	QC C 750 pg/mL	QC D DF10 2000 pg/mL	QC D DF100 2000 pg/mL
19-Dec-2013	43	15.5 15.6	67.0 69.2	704 746	*1520 1870 1960 1950	*1630 1860 1880 2020
Mean		14.4	65.8	740	1930	1920
S.D.		0.630	2.36	20.6	49.3	87.2
%CV		4.4	3.6	2.8	2.6	4.5
%Theoretical		96.0	94.0	98.7	96.5	96.0
%Bias		-4.0	-6.0	-1.3	-3.5	-4.0
n		40	40	40	3	3

Reason Deactivated
* DFNR



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Table 3 Quality Control and Dilution Quality Control Sample Data (Between-Analytical Run Precision and Accuracy) for Total NNN

Assay Date	Run ID	QC A 0.600 pg/mL	QC B 2.80 pg/mL	QC C 30.0 pg/mL	QC D DF10 80.0 pg/mL	QC D DF100 80.0 pg/mL
17-Nov-2013	2	0.609	2.90	32.5		
		0.578	2.87	32.3		
21-Nov-2013	6	0.620	2.87	32.7		
		0.650	2.85	31.9		
21-Nov-2013	8	0.561	2.72	31.7		
		0.567	2.69	30.6		
22-Nov-2013	10	0.587	2.94	33.2		
		0.623	2.91	33.0		
26-Nov-2013	12	0.586	2.81	31.4		
		0.673	2.79	30.7		
27-Nov-2013	14	0.621	2.82	33.3		
		0.654	2.80	32.9		
29-Nov-2013	16	0.579	2.62	30.0		
		0.587	2.75	32.6		
30-Nov-2013	18	0.597	2.78	31.9		
		0.606	2.78	31.6		
04-Dec-2013	20	0.600	2.86	31.8		
		0.657	2.88	31.6		
05-Dec-2013	22	0.594	2.65	31.7		
		0.620	2.86	31.3		
05-Dec-2013	36	0.602	2.81	31.1		
		0.572	2.75	31.8		
06-Dec-2013	24	0.604	2.66	30.8		
		0.641	2.81	30.9		
07-Dec-2013	26	0.623	2.83	31.9		
		0.598	2.78	31.4		
10-Dec-2013	28	0.641	2.91	31.3		
		0.639	2.89	30.4		
11-Dec-2013	30	0.575	2.79	31.1		
		0.611	2.84	31.4		
12-Dec-2013	32	0.587	2.83	31.9		
		0.571	2.77	31.5		
13-Dec-2013	34	0.661	2.97	32.2		
		0.628	2.94	31.5		
14-Dec-2013	37	0.596	2.78	31.0		
		0.572	2.77	31.2		
16-Dec-2013	39	0.636	3.02	32.7	88.1	83.2
		0.619	3.02	32.6	86.9	88.6
					~92.3	91.1



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Assay Date	Run ID	QC A 0.600 pg/mL	QC B 2.80 pg/mL	QC C 30.0 pg/mL	QC D DF10 80.0 pg/mL	QC D DF100 80.0 pg/mL
19-Dec-2013	44	0.629	2.93	31.0	83.4	83.4
		0.652	2.94	32.1	84.9	85.5
					84.2	88.5
31-Dec-2013	45	0.601	2.74	29.7		
		0.609	2.82	29.6		
Mean		0.610	2.83	31.6	86.6	86.7
S.D.		0.0288	0.0921	0.885	3.28	3.19
%CV		4.7	3.3	2.8	3.8	3.7
%Theoretical		101.7	101.1	105.3	108.3	108.4
%Bias		1.7	1.1	5.3	8.3	8.4
n		42	42	42	6	6

~ > 15%Bias



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Table 4 Back-calculated Calibration Standard Concentrations for Total NNAL

Assay Date	Run ID	STD B 5.00 pg/mL	STD C 10.0 pg/mL	STD D 20.0 pg/mL	STD E 50.0 pg/mL	STD F 100 pg/mL	STD G 200 pg/mL	STD H 400 pg/mL	STD I 800 pg/mL	STD J 1000 pg/mL
16-Nov-2013	1	5.07	9.97	19.6	46.8	97.1	194	427	788	1080
19-Nov-2013	3	4.92	10.3	20.4	48.4	99.5	200	384	805	1030
20-Nov-2013	5	5.08	9.77	19.8	50.1	96.8	200	407	801	1030
22-Nov-2013	7	5.04	9.83	20.3	49.2	95.9	206	401	806	1020
23-Nov-2013	9	4.87	10.4	21.0	47.0	101	204	395	797	980
25-Nov-2013	11	5.05	10.0	19.4	46.5	104	198	405	824	1010
26-Nov-2013	13	5.01	9.89	20.4	49.6	97.8	204	392	803	1010
27-Nov-2013	15	4.99	10.0	20.2	49.6	98.6	207	385	824	986
27-Nov-2013	17	4.96	10.1	20.4	49.7	99.6	197	383	832	1010
03-Dec-2013	19	4.93	10.3	19.9	50.0	98.2	204	405	783	994
04-Dec-2013	21	5.06	9.93	19.5	49.2	99.4	196	402	841	1000
05-Dec-2013	23	4.96	10.0	20.8	48.1	101	198	390	828	991
05-Dec-2013	35	5.20	9.36	19.5	49.4	97.2	211	387	817	1040



Total NNAL and Total NNN in Human Urine
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Assay Date	Run ID	STD B 5.00 pg/mL	STD C 10.0 pg/mL	STD D 20.0 pg/mL	STD E 50.0 pg/mL	STD F 100 pg/mL	STD G 200 pg/mL	STD H 400 pg/mL	STD I 800 pg/mL	STD J 1000 pg/mL
06-Dec-2013	25	4.98	10.0	20.2	49.9	98.3	203	392	831	973
09-Dec-2013	27	4.98	10.0	20.5	48.3	96.9	207	399	808	999
10-Dec-2013	29	5.11	9.38	20.7	49.8	99.4	211	394	794	982
11-Dec-2013	31	4.99	*10.2	20.3	49.1	98.8	201	399	825	982
12-Dec-2013	33	5.07	9.52	21.1	48.9	98.1	199	400	806	1020
16-Dec-2013	38	4.93	10.3	20.2	49.4	96.8	202	418	843	916
19-Dec-2013	43	5.09	9.49	21.0	47.0	103	199	416	782	996
Mean		5.01	9.92	20.3	48.8	98.9	202	399	812	1000
S.D.		0.0786	0.308	0.517	1.15	2.10	4.73	11.8	18.5	32.4
%CV		1.6	3.1	2.5	2.4	2.1	2.3	3.0	2.3	3.2
%Bias		0.2	-0.8	1.5	-2.4	-1.1	1.0	-0.3	1.5	0.0
n		20	19	20	20	20	20	20	20	20

Reason Deactivated

* ISP



Total NNAL and Total NNN in Human Urine
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Table 5 Back-calculated Calibration Standard Concentrations for Total NNN

Assay Date	Run ID	STD B 0.200 pg/mL	STD C 0.400 pg/mL	STD D 0.800 pg/mL	STD E 2.00 pg/mL	STD F 4.00 pg/mL	STD G 8.00 pg/mL	STD H 16.0 pg/mL	STD I 32.0 pg/mL	STD J 40.0 pg/mL
17-Nov-2013	2	0.199	0.413	0.784	1.89	4.07	7.87	16.2	32.4	40.8
21-Nov-2013	6	0.201	0.390	0.844	1.91	3.96	8.07	16.0	32.4	40.0
21-Nov-2013	8	0.207	0.357	0.866	1.94	3.88	8.00	16.2	33.0	40.2
22-Nov-2013	10	0.195	0.419	0.821	1.94	3.95	7.93	16.0	32.3	39.8
26-Nov-2013	12	0.197	0.420	0.785	1.93	4.02	8.04	15.8	32.4	40.4
27-Nov-2013	14	0.203	0.391	0.801	1.95	3.94	8.11	16.1	32.5	40.3
29-Nov-2013	16	0.203	0.393	0.789	1.96	3.93	8.14	16.1	32.8	40.1
30-Nov-2013	18	0.199	0.412	0.781	1.99	3.92	7.97	15.8	32.8	40.7
04-Dec-2013	20	0.202	0.384	0.831	1.99	3.89	8.23	15.9	32.6	39.3
05-Dec-2013	22	0.203	0.391	0.797	1.96	4.03	7.98	16.3	32.7	39.4
05-Dec-2013	36	0.205	0.386	0.788	1.98	3.88	8.21	16.1	32.3	41.0
06-Dec-2013	24	0.204	0.379	0.832	1.93	4.01	8.06	16.0	33.2	39.2
07-Dec-2013	26	0.202	0.385	0.829	1.94	3.93	8.12	16.1	32.5	39.9



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Assay Date	Run ID	STD B 0.200 pg/mL	STD C 0.400 pg/mL	STD D 0.800 pg/mL	STD E 2.00 pg/mL	STD F 4.00 pg/mL	STD G 8.00 pg/mL	STD H 16.0 pg/mL	STD I 32.0 pg/mL	STD J 40.0 pg/mL
10-Dec-2013	28	0.199	*0.525	0.818	1.96	4.02	8.00	15.9	32.4	39.6
11-Dec-2013	30	0.200	0.394	0.822	1.99	3.94	8.33	15.7	32.5	38.6
12-Dec-2013	32	0.201	**0.406	0.796	1.96	3.97	8.03	16.0	32.9	39.8
13-Dec-2013	34	0.199	0.401	0.823	1.92	3.95	7.92	16.0	32.1	41.1
14-Dec-2013	37	0.202	0.390	0.817	2.00	3.91	8.14	15.8	32.6	39.8
16-Dec-2013	39	0.203	0.394	0.783	1.95	3.89	8.03	17.0	32.6	39.6
19-Dec-2013	44	0.198	0.409	0.808	1.96	4.00	8.06	15.9	32.5	39.2
31-Dec-2013	45	0.199	*0.484	0.828	1.96	4.00	8.25	15.9	32.5	38.2
Mean		0.201	0.395	0.812	1.95	3.96	8.07	16.0	32.6	39.9
S.D.		0.00285	0.0156	0.0231	0.0281	0.0544	0.117	0.267	0.257	0.741
%CV		1.4	3.9	2.8	1.4	1.4	1.4	1.7	0.8	1.9
%Bias		0.5	-1.3	1.5	-2.5	-1.0	0.9	0.0	1.9	-0.3
n		21	18	21	21	21	21	21	21	21

Reasons Deactivated

* Rejected

** ISP



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Table 6 Standard Curve Parameters for Total NNAL

Assay Date	Run ID	Slope	Intercept	R-Squared
16-Nov-2013	1	0.0564807775	-0.0105292768	0.9972
19-Nov-2013	3	0.0553050656	0.000808180116	0.9991
20-Nov-2013	5	0.0545607452	0.000235000902	0.9995
22-Nov-2013	7	0.0531052353	-0.00303227678	0.9994
23-Nov-2013	9	0.0543396199	0.00404861057	0.9985
25-Nov-2013	11	0.0545159242	0.0143471562	0.9986
26-Nov-2013	13	0.0541514821	0.0147334561	0.9997
27-Nov-2013	15	0.0533618404	0.00132415219	0.9993
27-Nov-2013	17	0.0532447204	0.00692754270	0.9993
03-Dec-2013	19	0.0543980287	0.0176054419	0.9995
04-Dec-2013	21	0.0569248847	-0.00914353250	0.9993
05-Dec-2013	23	0.0575019659	-0.0132515954	0.9991
05-Dec-2013	35	0.0580471774	0.00797195904	0.9978
06-Dec-2013	25	0.0569054209	-0.0168778314	0.9995
09-Dec-2013	27	0.0582938632	-0.0157336038	0.9993
10-Dec-2013	29	0.0589365654	-0.0104620646	0.9985
11-Dec-2013	31	0.0566253596	-0.00117163133	0.9996
12-Dec-2013	33	0.0556798762	-0.00614566814	0.9989
16-Dec-2013	38	0.0643647407	-0.0353327410	0.9977
19-Dec-2013	43	0.0643575207	-0.0429299132	0.9980
Mean		0.0565550407	-0.00483043176	0.9989
S.D.		0.00318562373	0.0154719702	0.0007
%CV		5.6	-320.3	0.1
n		20	20	20



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Table 7 Standard Curve Parameters for Total NNN

Assay Date	Run ID	Slope	Intercept	R-Squared
17-Nov-2013	2	0.0357569554	0.00251785834	0.9991
21-Nov-2013	6	0.0360743062	0.00101280822	0.9990
21-Nov-2013	8	0.0354922777	0.00200039390	0.9963
22-Nov-2013	10	0.0358010327	0.000499085222	0.9992
26-Nov-2013	12	0.0363697817	0.000493980374	0.9992
27-Nov-2013	14	0.0364679252	0.000373274369	0.9997
29-Nov-2013	16	0.0351986326	0.000789105259	0.9996
30-Nov-2013	18	0.0349493154	0.000468953685	0.9995
04-Dec-2013	20	0.0352934152	0.000980290676	0.9991
05-Dec-2013	22	0.0358810791	0.000971796091	0.9996
05-Dec-2013	36	0.0380962788	0.00120439352	0.9993
06-Dec-2013	24	0.0382620354	0.0000554502788	0.9987
07-Dec-2013	26	0.0367245692	0.000427081647	0.9993
10-Dec-2013	28	0.0367514916	0.000740572735	0.9998
11-Dec-2013	30	0.0372077323	0.000283815625	0.9993
12-Dec-2013	32	0.0365721039	0.000537176056	0.9998
13-Dec-2013	34	0.0370854728	0.000201422198	0.9995
14-Dec-2013	37	0.0364506942	0.000950530055	0.9996
16-Dec-2013	39	0.0368480032	0.00148539927	0.9988
19-Dec-2013	44	0.0369741852	0.000138315781	0.9997
31-Dec-2013	45	0.0397994811	0.000308864709	0.9992
Mean		0.0365741319	0.000782884191	0.9992
S.D.		0.00113858333	0.000620278856	0.0007
%CV		3.1	79.2	0.1
n		21	21	21



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Table 8 Study Sample Concentrations for Total NNAL

Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000001	1	0008	-1	0	152	1	OK		NNAL
05111480000002	1	0008	0	1	131	1	OK		NNAL
05111480000003	1	0008	1	2	86.8	1	OK		NNAL
05111480000004	1	0008	2	3	45.2	1	OK		NNAL
05111480000005	1	0008	3	4	53.7	1	OK		NNAL
05111480000006	1	0008	4	5	60.5	1	OK		NNAL
05111480000007	1	0008	5	6	43.7	1	OK		NNAL
05111480000008	1	0010	-1	0	68.5	1	OK		NNAL
05111480000009	1	0010	0	1	26.3	1	OK		NNAL
05111480000010	1	0010	1	2	33.3	1	OK		NNAL
05111480000011	1	0010	2	3	19.8	1	OK		NNAL
05111480000012	1	0010	3	4	17.7	1	OK		NNAL
05111480000013	1	0010	4	5	20.2	1	OK		NNAL
05111480000014	1	0010	5	6	17.4	1	OK		NNAL
05111480000015	1	0011	-1	0	72.0	1	OK		NNAL
05111480000016	1	0011	0	1	91.5	1	OK		NNAL
05111480000017	1	0011	1	2	53.6	1	OK		NNAL
05111480000018	1	0011	2	3	30.9	1	OK		NNAL
05111480000019	1	0011	3	4	30.0	1	OK		NNAL
05111480000020	1	0011	4	5	36.1	1	OK		NNAL
05111480000021	1	0011	5	6	30.4	1	OK		NNAL
05111480000022	1	0014	-1	0	149	1	OK		NNAL
05111480000023	1	0014	0	1	199	1	OK		NNAL
05111480000024	1	0014	1	2	94.3	1	OK		NNAL
05111480000025	1	0014	2	3	78.7	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000026	1	0014	3	4	59.1	1	OK		NNAL
05111480000027	1	0014	4	5	57.2	1	OK		NNAL
05111480000028	1	0014	5	6	68.5	1	OK		NNAL
05111480000029	1	0015	-1	0	50.9	1	OK		NNAL
05111480000030	1	0015	0	1	33.1	1	OK		NNAL
05111480000031	1	0015	1	2	20.1	1	OK		NNAL
05111480000032	1	0015	2	3	14.5	1	OK		NNAL
05111480000033	1	0015	3	4	8.43	1	OK		NNAL
05111480000034	1	0015	4	5	10.5	1	OK		NNAL
05111480000035	1	0015	5	6	8.00	1	OK		NNAL
05111480000036	1	0016	-1	0	129	1	OK		NNAL
05111480000037	1	0016	0	1	52.4	1	OK		NNAL
05111480000038	1	0016	1	2	48.7	1	OK		NNAL
05111480000039	1	0016	2	3	37.9	1	OK		NNAL
05111480000040	1	0016	3	4	38.2	1	OK		NNAL
05111480000041	1	0016	4	5	52.8	1	OK		NNAL
05111480000042	1	0016	5	6	47.6	1	OK		NNAL
05111480000043	3	0017	-1	0	35.8	1	OK		NNAL
05111480000044	3	0017	0	1	33.6	1	OK		NNAL
05111480000045	3	0017	1	2	36.5	1	OK		NNAL
05111480000046	3	0017	2	3	28.5	1	OK		NNAL
05111480000047	3	0017	3	4	13.9	1	OK		NNAL
05111480000048	3	0017	4	5	19.6	1	OK		NNAL
05111480000049	3	0017	5	6	18.1	1	OK		NNAL
05111480000050	3	0020	-1	0	70.2	1	OK		NNAL
05111480000051	3	0020	0	1	72.0	1	OK		NNAL
05111480000052	3	0020	1	2	40.1	1	OK		NNAL
05111480000053	3	0020	2	3	38.0	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000054	3	0020	3	4	27.8	1	OK		NNAL
05111480000055	3	0020	4	5	30.7	1	OK		NNAL
05111480000056	3	0020	5	6	10.7	1	OK		NNAL
05111480000057	3	0022	-1	0	140	1	OK		NNAL
05111480000058	3	0022	0	1	141	1	OK		NNAL
05111480000059	3	0022	1	2	58.1	1	OK		NNAL
05111480000060	3	0022	2	3	47.9	1	OK		NNAL
05111480000061	3	0022	3	4	55.6	1	OK		NNAL
05111480000062	3	0022	4	5	62.6	1	OK		NNAL
05111480000063	3	0022	5	6	49.6	1	OK		NNAL
05111480000064	3	0023	-1	0	115	1	OK		NNAL
05111480000065	3	0023	0	1	89.9	1	OK		NNAL
05111480000066	3	0023	1	2	60.5	1	OK		NNAL
05111480000067	3	0023	2	3	60.3	1	OK		NNAL
05111480000068	3	0023	3	4	68.7	1	OK		NNAL
05111480000069	3	0023	4	5	53.8	1	OK		NNAL
05111480000070	3	0023	5	6	57.3	1	OK		NNAL
05111480000071	5	0049	-1	0	47.8	1	OK		NNAL
05111480000072	5	0049	0	1	13.3	1	OK		NNAL
05111480000073	5	0049	1	2	36.7	1	OK		NNAL
05111480000074	5	0049	2	3	19.9	1	OK		NNAL
05111480000075	5	0049	3	4	26.0	1	OK		NNAL
05111480000076	5	0049	4	5	27.0	1	OK		NNAL
05111480000077	5	0049	5	6	15.1	1	OK		NNAL
05111480000078	1	0001	-1	0	33.8	1	OK		NNAL
05111480000079	1	0001	0	1	42.9	1	OK		NNAL
05111480000080	1	0001	1	2	33.0	1	OK		NNAL
05111480000081	1	0001	2	3	25.5	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000082	1	0001	3	4	23.9	1	OK		NNAL
05111480000083	1	0001	4	5	18.0	1	OK		NNAL
05111480000084	1	0001	5	6	19.8	1	OK		NNAL
05111480000085	1	0004	-1	0	67.0	1	OK		NNAL
05111480000086	1	0004	0	1	64.2	1	OK		NNAL
05111480000087	1	0004	1	2	48.8	1	OK		NNAL
05111480000088	1	0004	2	3	36.0	1	OK		NNAL
05111480000089	1	0004	3	4	37.0	1	OK		NNAL
05111480000090	1	0004	4	5	29.1	1	OK		NNAL
05111480000091	1	0004	5	6	19.0	1	OK		NNAL
05111480000092	1	0013	-1	0	91.7	1	OK		NNAL
05111480000093	1	0013	0	1	116	1	OK		NNAL
05111480000094	1	0013	1	2	51.2	1	OK		NNAL
05111480000095	1	0013	2	3	36.1	1	OK		NNAL
05111480000096	1	0013	3	4	32.1	1	OK		NNAL
05111480000097	1	0013	4	5	21.4	1	OK		NNAL
05111480000098	1	0013	5	6	25.0	1	OK		NNAL
05111480000099	3	0021	-1	0	56.9	1	OK		NNAL
05111480000100	3	0021	0	1	77.2	1	OK		NNAL
05111480000101	3	0021	1	2	56.3	1	OK		NNAL
05111480000102	3	0021	2	3	103	1	OK		NNAL
05111480000103	3	0021	3	4	26.0	1	OK		NNAL
05111480000104	3	0021	4	5	20.1	1	OK		NNAL
05111480000105	3	0021	5	6	24.4	1	OK		NNAL
05111480000106	5	0037	-1	0	153	1	OK		NNAL
05111480000107	5	0037	0	1	137	1	OK		NNAL
05111480000108	5	0037	1	2	120	1	OK		NNAL
05111480000109	5	0037	2	3	106	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000110	5	0037	3	4	118	1	OK		NNAL
05111480000111	5	0037	4	5	112	1	OK		NNAL
05111480000112	5	0037	5	6	116	1	OK		NNAL
05111480000113	7	0051	-1	0	78.0	1	OK		NNAL
05111480000114	7	0051	0	1	72.0	1	OK		NNAL
05111480000115	7	0051	1	2	33.6	1	OK		NNAL
05111480000116	7	0051	2	3	19.8	1	OK		NNAL
05111480000117	7	0051	3	4	16.4	1	OK		NNAL
05111480000118	7	0051	4	5	12.6	1	OK		NNAL
05111480000119	7	0051	5	6	13.1	1	OK		NNAL
05111480000120	7	0063	-1	0	218	1	OK		NNAL
05111480000121	7	0063	0	1	122	1	OK		NNAL
05111480000122	7	0063	1	2	86.8	1	OK		NNAL
05111480000123	7	0063	2	3	44.7	1	OK		NNAL
05111480000124	7	0063	3	4	56.8	1	OK		NNAL
05111480000125	7	0063	4	5	37.9	1	OK		NNAL
05111480000126	7	0063	5	6	38.3	1	OK		NNAL
05111480000127	9	0066	-1	0	20.4	1	OK		NNAL
05111480000128	9	0066	0	1	30.0	1	OK		NNAL
05111480000129	9	0066	1	2	12.6	1	OK		NNAL
05111480000130	9	0066	2	3	11.7	1	OK		NNAL
05111480000131	9	0066	3	4	10.3	1	OK		NNAL
05111480000132	9	0066	4	5	6.45	1	OK		NNAL
05111480000133	9	0066	5	6	5.38	1	OK		NNAL
05111480000134	9	0067	-1	0	33.4	1	OK		NNAL
05111480000135	9	0067	0	1	50.7	1	OK		NNAL
05111480000136	9	0067	1	2	39.5	1	OK		NNAL
05111480000137	9	0067	2	3	38.6	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000138	9	0067	3	4	30.6	1	OK		NNAL
05111480000139	9	0067	4	5	29.0	1	OK		NNAL
05111480000140	9	0067	5	6	27.9	1	OK		NNAL
05111480000141	9	0069	-1	0	66.8	1	OK		NNAL
05111480000142	9	0069	0	1	75.3	1	OK		NNAL
05111480000143	9	0069	1	2	68.2	1	OK		NNAL
05111480000144	9	0069	2	3	37.6	1	OK		NNAL
05111480000145	9	0069	3	4	33.5	1	OK		NNAL
05111480000146	9	0069	4	5	28.8	1	OK		NNAL
05111480000147	9	0069	5	6	26.9	1	OK		NNAL
05111480000148	9	0071	-1	0	95.3	1	OK		NNAL
05111480000149	9	0071	0	1	81.1	1	OK		NNAL
05111480000150	9	0071	1	2	60.3	1	OK		NNAL
05111480000151	9	0071	2	3	40.5	1	OK		NNAL
05111480000152	9	0071	3	4	27.6	1	OK		NNAL
05111480000153	9	0071	4	5	21.5	1	OK		NNAL
05111480000154	9	0071	5	6	32.8	1	OK		NNAL
05111480000155	9	0072	-1	0	64.8	1	OK		NNAL
05111480000156	9	0072	0	1	55.0	1	OK		NNAL
05111480000157	9	0072	1	2	49.6	1	OK		NNAL
05111480000158	9	0072	2	3	63.1	1	OK		NNAL
05111480000159	9	0072	3	4	89.7	1	OK		NNAL
05111480000160	9	0072	4	5	60.0	1	OK		NNAL
05111480000161	9	0072	5	6	53.4	1	OK		NNAL
05111480000162	9	0074	-1	0	228	1	OK		NNAL
05111480000163	9	0074	0	1	188	1	OK		NNAL
05111480000164	9	0074	1	2	125	1	OK		NNAL
05111480000165	9	0074	2	3	86.3	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000166	9	0074	3	4	73.2	1	OK		NNAL
05111480000167	9	0074	4	5	46.1	1	OK		NNAL
05111480000168	9	0074	5	6	45.7	1	OK		NNAL
05111480000169	9	0076	-1	0	41.7	1	OK		NNAL
05111480000170	9	0076	0	1	32.0	1	OK		NNAL
05111480000171	9	0076	1	2	49.1	1	OK		NNAL
05111480000172	9	0076	2	3	28.8	1	OK		NNAL
05111480000173	9	0076	3	4	36.3	1	OK		NNAL
05111480000174	9	0076	4	5	10.4	1	OK		NNAL
05111480000175	9	0076	5	6	21.1	1	OK		NNAL
05111480000176	9	0080	-1	0	156	1	OK		NNAL
05111480000177	9	0080	0	1	118	1	OK		NNAL
05111480000178	9	0080	1	2	115	1	OK		NNAL
05111480000179	9	0080	2	3	129	1	OK		NNAL
05111480000180	9	0080	3	4	44.4	1	OK		NNAL
05111480000181	9	0080	4	5	68.6	1	OK		NNAL
05111480000182	9	0080	5	6	76.1	1	OK		NNAL
05111480000183	9	0083	-1	0	86.6	1	OK		NNAL
05111480000184	9	0083	0	1	74.2	1	OK		NNAL
05111480000185	9	0083	1	2	48.0	1	OK		NNAL
05111480000186	9	0083	2	3	31.5	1	OK		NNAL
05111480000187	9	0083	3	4	31.9	1	OK		NNAL
05111480000188	9	0083	4	5	25.9	1	OK		NNAL
05111480000189	9	0083	5	6	21.4	1	OK		NNAL
05111480000190	11	0085	-1	0	40.2	1	OK		NNAL
05111480000191	11	0085	0	1	42.5	1	OK		NNAL
05111480000192	11	0085	1	2	30.0	1	OK		NNAL
05111480000193	11	0085	2	3	23.1	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000197	11	0086	-1	0	138	1	OK		NNAL
05111480000198	11	0086	0	1	133	1	OK		NNAL
05111480000199	11	0086	1	2	113	1	OK		NNAL
05111480000200	11	0086	2	3	72.3	1	OK		NNAL
05111480000201	11	0086	3	4	74.9	1	OK		NNAL
05111480000202	11	0086	4	5	64.4	1	OK		NNAL
05111480000203	11	0086	5	6	81.0	1	OK		NNAL
05111480000204	11	0087	-1	0	239	1	OK		NNAL
05111480000205	11	0087	0	1	208	1	OK		NNAL
05111480000206	11	0087	1	2	213	1	OK		NNAL
05111480000207	11	0087	2	3	195	1	OK		NNAL
05111480000208	11	0087	3	4	205	1	OK		NNAL
05111480000209	11	0087	4	5	131	1	OK		NNAL
05111480000210	11	0087	5	6	76.5	1	OK		NNAL
05111480000211	11	0088	-1	0	80.3	1	OK		NNAL
05111480000212	38	0088	0	1	61.7	1	OK		NNAL
05111480000213	11	0088	1	2	74.1	1	OK		NNAL
05111480000214	11	0088	2	3	38.1	1	OK		NNAL
05111480000215	11	0088	3	4	38.7	1	OK		NNAL
05111480000216	11	0088	4	5	21.8	1	OK		NNAL
05111480000217	11	0088	5	6	20.4	1	OK		NNAL
05111480000218	11	0090	-1	0	41.8	1	OK		NNAL
05111480000219	11	0090	0	1	47.8	1	OK		NNAL
05111480000220	11	0090	1	2	47.9	1	OK		NNAL
05111480000221	11	0090	2	3	35.3	1	OK		NNAL
05111480000222	11	0090	3	4	40.8	1	OK		NNAL
05111480000223	11	0090	4	5	25.8	1	OK		NNAL
05111480000224	11	0090	5	6	28.3	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000225	11	0093	-1	0	82.0	1	OK		NNAL
05111480000226	11	0093	0	1	80.6	1	OK		NNAL
05111480000227	11	0093	1	2	46.3	1	OK		NNAL
05111480000228	11	0093	2	3	33.8	1	OK		NNAL
05111480000229	11	0093	3	4	30.7	1	OK		NNAL
05111480000230	11	0093	4	5	24.1	1	OK		NNAL
05111480000231	11	0093	5	6	19.3	1	OK		NNAL
05111480000232	11	0104	-1	0	11.2	1	OK		NNAL
05111480000233	11	0104	0	1	16.3	1	OK		NNAL
05111480000234	11	0104	1	2	7.99	1	OK		NNAL
05111480000235	11	0104	2	3	BLQ<(5.00)	1	OK		NNAL
05111480000236	11	0104	3	4	BLQ<(5.00)	1	OK		NNAL
05111480000237	11	0104	4	5	BLQ<(5.00)	1	OK		NNAL
05111480000238	11	0104	5	6	BLQ<(5.00)	1	OK		NNAL
05111480000239	11	0105	-1	0	168	1	OK		NNAL
05111480000240	11	0105	0	1	173	1	OK		NNAL
05111480000241	11	0105	1	2	226	1	OK		NNAL
05111480000242	11	0105	2	3	189	1	OK		NNAL
05111480000243	11	0105	3	4	149	1	OK		NNAL
05111480000244	11	0105	4	5	106	1	OK		NNAL
05111480000245	11	0105	5	6	81.7	1	OK		NNAL
05111480000246	11	0106	-1	0	27.7	1	OK		NNAL
05111480000247	11	0106	0	1	32.6	1	OK		NNAL
05111480000248	11	0106	1	2	16.1	1	OK		NNAL
05111480000249	11	0106	2	3	14.1	1	OK		NNAL
05111480000250	11	0106	3	4	14.1	1	OK		NNAL
05111480000251	11	0106	4	5	8.80	1	OK		NNAL
05111480000252	11	0106	5	6	7.61	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000253	13	0107	-1	0	150	1	OK		NNAL
05111480000254	13	0107	0	1	80.4	1	OK		NNAL
05111480000255	13	0107	1	2	69.4	1	OK		NNAL
05111480000256	13	0107	2	3	53.6	1	OK		NNAL
05111480000257	13	0107	3	4	116	1	OK		NNAL
05111480000258	13	0107	4	5	47.3	1	OK		NNAL
05111480000259	13	0107	5	6	27.9	1	OK		NNAL
05111480000260	13	0110	-1	0	98.6	1	OK		NNAL
05111480000261	13	0110	0	1	107	1	OK		NNAL
05111480000262	13	0110	1	2	88.0	1	OK		NNAL
05111480000263	13	0110	2	3	84.0	1	OK		NNAL
05111480000264	13	0110	3	4	69.1	1	OK		NNAL
05111480000265	13	0110	4	5	46.9	1	OK		NNAL
05111480000266	13	0110	5	6	42.2	1	OK		NNAL
05111480000267	13	0112	-1	0	116	1	OK		NNAL
05111480000268	13	0112	0	1	96.8	1	OK		NNAL
05111480000269	13	0112	1	2	86.5	1	OK		NNAL
05111480000270	13	0112	2	3	56.5	1	OK		NNAL
05111480000271	13	0112	3	4	70.9	1	OK		NNAL
05111480000272	13	0112	4	5	50.3	1	OK		NNAL
05111480000273	13	0112	5	6	58.6	1	OK		NNAL
05111480000274	13	0114	-1	0	22.6	1	OK		NNAL
05111480000275	13	0114	0	1	37.9	1	OK		NNAL
05111480000276	13	0114	1	2	29.2	1	OK		NNAL
05111480000277	13	0114	2	3	12.6	1	OK		NNAL
05111480000278	13	0114	3	4	10.3	1	OK		NNAL
05111480000279	13	0114	4	5	6.82	1	OK		NNAL
05111480000280	13	0114	5	6	7.45	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000281	13	0117	-1	0	34.9	1	OK		NNAL
05111480000282	13	0117	0	1	42.8	1	OK		NNAL
05111480000283	13	0117	1	2	48.4	1	OK		NNAL
05111480000284	13	0117	2	3	50.4	1	OK		NNAL
05111480000285	13	0117	3	4	37.4	1	OK		NNAL
05111480000286	13	0117	4	5	33.0	1	OK		NNAL
05111480000287	13	0117	5	6	22.6	1	OK		NNAL
05111480000288	13	0118	-1	0	133	1	OK		NNAL
05111480000289	13	0118	0	1	147	1	OK		NNAL
05111480000290	13	0118	1	2	146	1	OK		NNAL
05111480000291	13	0118	2	3	144	1	OK		NNAL
05111480000292	13	0118	3	4	184	1	OK		NNAL
05111480000293	13	0118	4	5	125	1	OK		NNAL
05111480000294	13	0118	5	6	142	1	OK		NNAL
05111480000295	13	0121	-1	0	18.9	1	OK		NNAL
05111480000296	13	0121	0	1	23.6	1	OK		NNAL
05111480000297	13	0121	1	2	16.0	1	OK		NNAL
05111480000298	13	0121	2	3	16.5	1	OK		NNAL
05111480000299	13	0121	3	4	16.8	1	OK		NNAL
05111480000300	13	0121	4	5	13.4	1	OK		NNAL
05111480000301	13	0121	5	6	11.5	1	OK		NNAL
05111480000302	13	0122	-1	0	45.5	1	OK		NNAL
05111480000303	13	0122	0	1	30.5	1	OK		NNAL
05111480000304	13	0122	1	2	20.6	1	OK		NNAL
05111480000305	13	0122	2	3	18.3	1	OK		NNAL
05111480000306	13	0122	3	4	12.6	1	OK		NNAL
05111480000307	13	0122	4	5	12.6	1	OK		NNAL
05111480000308	13	0122	5	6	9.17	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000309	13	0123	-1	0	15.3	1	OK		NNAL
05111480000310	13	0123	0	1	20.3	1	OK		NNAL
05111480000311	13	0123	1	2	18.4	1	OK		NNAL
05111480000312	13	0123	2	3	11.9	1	OK		NNAL
05111480000313	13	0123	3	4	15.2	1	OK		NNAL
05111480000314	13	0123	4	5	10.2	1	OK		NNAL
05111480000315	13	0123	5	6	9.06	1	OK		NNAL
05111480000316	43	0181	-1	0	215	1	OK		NNAL
05111480000317	19	0181	0	1	162	1	OK		NNAL
05111480000318	19	0181	1	2	106	1	OK		NNAL
05111480000319	19	0181	2	3	51.7	1	OK		NNAL
05111480000320	19	0181	3	4	73.3	1	OK		NNAL
05111480000321	19	0181	4	5	53.9	1	OK		NNAL
05111480000322	19	0181	5	6	38.7	1	OK		NNAL
05111480000323	21	0189	-1	0	67.5	1	OK		NNAL
05111480000324	21	0189	0	1	59.4	1	OK		NNAL
05111480000325	21	0189	1	2	38.7	1	OK		NNAL
05111480000326	21	0189	2	3	33.9	1	OK		NNAL
05111480000327	21	0189	3	4	30.0	1	OK		NNAL
05111480000328	21	0189	4	5	33.9	1	OK		NNAL
05111480000329	21	0189	5	6	30.4	1	OK		NNAL
05111480000330	23	0206	-1	0	124	1	OK		NNAL
05111480000331	23	0206	0	1	178	1	OK		NNAL
05111480000332	23	0206	1	2	126	1	OK		NNAL
05111480000333	23	0206	2	3	91.8	1	OK		NNAL
05111480000334	23	0206	3	4	87.3	1	OK		NNAL
05111480000335	23	0206	4	5	84.4	1	OK		NNAL
05111480000336	23	0206	5	6	69.4	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000337	23	0210	-1	0	69.1	1	OK		NNAL
05111480000338	23	0210	0	1	55.0	1	OK		NNAL
05111480000339	23	0210	1	2	44.9	1	OK		NNAL
05111480000340	23	0210	2	3	37.4	1	OK		NNAL
05111480000341	23	0210	3	4	38.1	1	OK		NNAL
05111480000342	23	0210	4	5	42.8	1	OK		NNAL
05111480000343	23	0210	5	6	13.3	1	OK		NNAL
05111480000344	25	0216	-1	0	88.7	1	OK		NNAL
05111480000345	25	0216	0	1	97.2	1	OK		NNAL
05111480000346	25	0216	1	2	70.0	1	OK		NNAL
05111480000347	25	0216	2	3	52.8	1	OK		NNAL
05111480000348	25	0216	3	4	52.5	1	OK		NNAL
05111480000349	25	0216	4	5	45.0	1	OK		NNAL
05111480000350	25	0216	5	6	29.1	1	OK		NNAL
05111480000351	25	0218	-1	0	42.0	1	OK		NNAL
05111480000352	25	0218	0	1	44.0	1	OK		NNAL
05111480000353	25	0218	1	2	26.6	1	OK		NNAL
05111480000354	25	0218	2	3	26.5	1	OK		NNAL
05111480000355	25	0218	3	4	28.5	1	OK		NNAL
05111480000356	25	0218	4	5	16.9	1	OK		NNAL
05111480000357	25	0218	5	6	14.9	1	OK		NNAL
05111480000358	25	0220	-1	0	26.7	1	OK		NNAL
05111480000359	25	0220	0	1	33.6	1	OK		NNAL
05111480000360	25	0220	1	2	15.3	1	OK		NNAL
05111480000361	25	0220	2	3	15.7	1	OK		NNAL
05111480000362	25	0220	3	4	12.5	1	OK		NNAL
05111480000363	25	0220	4	5	9.15	1	OK		NNAL
05111480000364	25	0220	5	6	BLQ<(5.00)	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000365	25	0224	-1	0	100	1	OK		NNAL
05111480000366	25	0224	0	1	134	1	OK		NNAL
05111480000367	25	0224	1	2	109	1	OK		NNAL
05111480000368	25	0224	2	3	104	1	OK		NNAL
05111480000369	25	0224	3	4	111	1	OK		NNAL
05111480000370	25	0224	4	5	112	1	OK		NNAL
05111480000371	25	0224	5	6	77.3	1	OK		NNAL
05111480000372	25	0228	-1	0	49.1	1	OK		NNAL
05111480000373	25	0228	0	1	80.8	1	OK		NNAL
05111480000374	25	0228	1	2	39.6	1	OK		NNAL
05111480000375	25	0228	2	3	23.7	1	OK		NNAL
05111480000376	25	0228	3	4	30.6	1	OK		NNAL
05111480000377	25	0228	4	5	26.3	1	OK		NNAL
05111480000378	25	0228	5	6	13.4	1	OK		NNAL
05111480000379	25	0229	-1	0	73.3	1	OK		NNAL
05111480000380	25	0229	0	1	74.4	1	OK		NNAL
05111480000381	25	0229	1	2	106	1	OK		NNAL
05111480000382	25	0229	2	3	102	1	OK		NNAL
05111480000383	25	0229	3	4	122	1	OK		NNAL
05111480000384	25	0229	4	5	128	1	OK		NNAL
05111480000385	25	0229	5	6	71.6	1	OK		NNAL
05111480000386	25	0230	-1	0	50.3	1	OK		NNAL
05111480000387	25	0230	0	1	93.3	1	OK		NNAL
05111480000388	25	0230	1	2	64.2	1	OK		NNAL
05111480000389	25	0230	2	3	56.2	1	OK		NNAL
05111480000390	25	0230	3	4	60.5	1	OK		NNAL
05111480000391	25	0230	4	5	57.4	1	OK		NNAL
05111480000392	25	0230	5	6	39.5	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000393	25	0232	-1	0	58.0	1	OK		NNAL
05111480000394	25	0232	0	1	52.3	1	OK		NNAL
05111480000395	25	0232	1	2	32.9	1	OK		NNAL
05111480000396	25	0232	2	3	22.8	1	OK		NNAL
05111480000397	25	0232	3	4	33.5	1	OK		NNAL
05111480000398	25	0232	4	5	25.4	1	OK		NNAL
05111480000399	25	0232	5	6	13.8	1	OK		NNAL
05111480000400	25	0234	-1	0	52.8	1	OK		NNAL
05111480000401	25	0234	0	1	74.9	1	OK		NNAL
05111480000402	25	0234	1	2	37.8	1	OK		NNAL
05111480000403	25	0234	2	3	28.8	1	OK		NNAL
05111480000404	25	0234	3	4	32.1	1	OK		NNAL
05111480000405	25	0234	4	5	26.8	1	OK		NNAL
05111480000406	25	0234	5	6	14.7	1	OK		NNAL
05111480000407	27	0240	-1	0	149	1	OK		NNAL
05111480000408	27	0240	0	1	131	1	OK		NNAL
05111480000409	27	0240	1	2	92.4	1	OK		NNAL
05111480000410	27	0240	2	3	56.1	1	OK		NNAL
05111480000411	27	0240	3	4	61.6	1	OK		NNAL
05111480000412	27	0240	4	5	64.0	1	OK		NNAL
05111480000413	27	0240	5	6	43.9	1	OK		NNAL
05111480000414	27	0241	-1	0	119	1	OK		NNAL
05111480000415	27	0241	0	1	141	1	OK		NNAL
05111480000416	27	0241	1	2	61.3	1	OK		NNAL
05111480000417	27	0241	2	3	37.6	1	OK		NNAL
05111480000418	27	0241	3	4	35.6	1	OK		NNAL
05111480000419	27	0241	4	5	34.5	1	OK		NNAL
05111480000420	27	0241	5	6	24.6	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000421		0242	-1	0	.	1	Other	Analysis not required	NNAL
05111480000422		0242	0	1	.	1	Other	Analysis not required	NNAL
05111480000428	27	0244	-1	0	152	1	OK		NNAL
05111480000429	27	0244	0	1	138	1	OK		NNAL
05111480000430	27	0244	1	2	78.4	1	OK		NNAL
05111480000431	27	0244	2	3	63.2	1	OK		NNAL
05111480000432	27	0244	3	4	59.3	1	OK		NNAL
05111480000433	27	0244	4	5	60.7	1	OK		NNAL
05111480000434	27	0244	5	6	33.4	1	OK		NNAL
05111480000435		0245	-1	0	.	1	Other	Analysis not required	NNAL
05111480000436		0245	0	1	.	1	Other	Analysis not required	NNAL
05111480000442		0247	-1	0	.	1	Other	Analysis not required	NNAL
05111480000443		0247	0	1	.	1	Other	Analysis not required	NNAL
05111480000449	27	0249	-1	0	194	1	OK		NNAL
05111480000450	27	0249	0	1	162	1	OK		NNAL
05111480000451	27	0249	1	2	115	1	OK		NNAL
05111480000452	27	0249	2	3	91.8	1	OK		NNAL
05111480000453	27	0249	3	4	118	1	OK		NNAL
05111480000454	27	0249	4	5	71.6	1	OK		NNAL
05111480000455	27	0249	5	6	72.8	1	OK		NNAL
05111480000456	27	0251	-1	0	28.6	1	OK		NNAL
05111480000457	27	0251	0	1	27.1	1	OK		NNAL
05111480000458	27	0251	1	2	18.0	1	OK		NNAL
05111480000459	27	0251	2	3	11.5	1	OK		NNAL
05111480000460	27	0251	3	4	11.2	1	OK		NNAL
05111480000461	27	0251	4	5	10.7	1	OK		NNAL
05111480000462	27	0251	5	6	5.91	1	OK		NNAL
05111480000463	27	0252	-1	0	80.0	1	OK		NNAL



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000464	27	0252	0	1	67.8	1	OK		NNAL
05111480000465	27	0252	1	2	47.1	1	OK		NNAL
05111480000466	27	0252	2	3	37.5	1	OK		NNAL
05111480000467	27	0252	3	4	32.5	1	OK		NNAL
05111480000468	27	0252	4	5	27.8	1	OK		NNAL
05111480000469	27	0252	5	6	22.7	1	OK		NNAL
05111480000470	27	0255	-1	0	71.4	1	OK		NNAL
05111480000471	27	0255	0	1	63.3	1	OK		NNAL
05111480000472	27	0255	1	2	40.5	1	OK		NNAL
05111480000473	27	0255	2	3	42.5	1	OK		NNAL
05111480000474	27	0255	3	4	38.8	1	OK		NNAL
05111480000475	27	0255	4	5	47.5	1	OK		NNAL
05111480000476	27	0255	5	6	30.8	1	OK		NNAL
05111480000477	27	0256	-1	0	30.1	1	OK		NNAL
05111480000478	27	0256	0	1	32.2	1	OK		NNAL
05111480000479	27	0256	1	2	22.2	1	OK		NNAL
05111480000480	27	0256	2	3	19.3	1	OK		NNAL
05111480000481	27	0256	3	4	20.3	1	OK		NNAL
05111480000482	27	0256	4	5	15.8	1	OK		NNAL
05111480000483	27	0256	5	6	13.4	1	OK		NNAL
05111480000484	27	0262	-1	0	88.4	1	OK		NNAL
05111480000485	27	0262	0	1	96.1	1	OK		NNAL
05111480000486	27	0262	1	2	74.8	1	OK		NNAL
05111480000487	27	0262	2	3	77.7	1	OK		NNAL
05111480000488	27	0262	3	4	97.5	1	OK		NNAL
05111480000489	27	0262	4	5	89.9	1	OK		NNAL
05111480000490	27	0262	5	6	38.8	1	OK		NNAL
05111480000491	29	0264	-1	0	17.4	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000492	29	0264	0	1	22.0	1	OK		NNAL
05111480000493	29	0264	1	2	20.8	1	OK		NNAL
05111480000494	29	0264	2	3	14.6	1	OK		NNAL
05111480000495	29	0264	3	4	20.3	1	OK		NNAL
05111480000496	29	0264	4	5	13.5	1	OK		NNAL
05111480000497	29	0264	5	6	6.76	1	OK		NNAL
05111480000498	29	0265	-1	0	164	1	OK		NNAL
05111480000499	29	0265	0	1	211	1	OK		NNAL
05111480000500	29	0265	1	2	135	1	OK		NNAL
05111480000501	29	0265	2	3	83.7	1	OK		NNAL
05111480000502	29	0265	3	4	88.4	1	OK		NNAL
05111480000503	29	0265	4	5	77.7	1	OK		NNAL
05111480000504	29	0265	5	6	57.8	1	OK		NNAL
05111480000505	29	0266	-1	0	57.4	1	OK		NNAL
05111480000506	29	0266	0	1	51.8	1	OK		NNAL
05111480000507	29	0266	1	2	32.5	1	OK		NNAL
05111480000508	29	0266	2	3	13.7	1	OK		NNAL
05111480000509	29	0266	3	4	12.5	1	OK		NNAL
05111480000510	29	0266	4	5	12.5	1	OK		NNAL
05111480000511	29	0266	5	6	9.67	1	OK		NNAL
05111480000512		0269	-1	0	.	1	Other	Analysis not required	NNAL
05111480000513		0269	0	1	.	1	Other	Analysis not required	NNAL
05111480000519	29	0272	-1	0	183	1	OK		NNAL
05111480000520	29	0272	0	1	172	1	OK		NNAL
05111480000521	29	0272	1	2	127	1	OK		NNAL
05111480000522	29	0272	2	3	136	1	OK		NNAL
05111480000523	29	0272	3	4	143	1	OK		NNAL
05111480000524	29	0272	4	5	74.1	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000525	29	0272	5	6	88.8	1	OK		NNAL
05111480000526	29	0273	-1	0	105	1	OK		NNAL
05111480000527	29	0273	0	1	106	1	OK		NNAL
05111480000528	29	0273	1	2	73.8	1	OK		NNAL
05111480000529	29	0273	2	3	52.9	1	OK		NNAL
05111480000530	29	0273	3	4	52.1	1	OK		NNAL
05111480000531	29	0273	4	5	39.0	1	OK		NNAL
05111480000532	29	0273	5	6	36.9	1	OK		NNAL
05111480000533	29	0276	-1	0	13.6	1	OK		NNAL
05111480000534	29	0276	0	1	19.8	1	OK		NNAL
05111480000535	29	0276	1	2	13.3	1	OK		NNAL
05111480000536	29	0276	2	3	9.52	1	OK		NNAL
05111480000537	29	0276	3	4	12.1	1	OK		NNAL
05111480000538	29	0276	4	5	10.9	1	OK		NNAL
05111480000539	29	0276	5	6	12.0	1	OK		NNAL
05111480000540	29	0277	-1	0	42.3	1	OK		NNAL
05111480000541	29	0277	0	1	38.5	1	OK		NNAL
05111480000542	29	0277	1	2	31.6	1	OK		NNAL
05111480000543	29	0277	2	3	23.9	1	OK		NNAL
05111480000544	29	0277	3	4	21.3	1	OK		NNAL
05111480000545	29	0277	4	5	14.4	1	OK		NNAL
05111480000546	29	0277	5	6	14.2	1	OK		NNAL
05111480000547	29	0278	-1	0	68.0	1	OK		NNAL
05111480000548	29	0278	0	1	63.0	1	OK		NNAL
05111480000549	29	0278	1	2	86.9	1	OK		NNAL
05111480000550	29	0278	2	3	69.7	1	OK		NNAL
05111480000551	29	0278	3	4	68.7	1	OK		NNAL
05111480000552	29	0278	4	5	55.8	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000553	29	0278	5	6	39.7	1	OK		NNAL
05111480000554	29	0279	-1	0	124	1	OK		NNAL
05111480000555	29	0279	0	1	79.4	1	OK		NNAL
05111480000556	29	0279	1	2	74.7	1	OK		NNAL
05111480000557	29	0279	2	3	49.0	1	OK		NNAL
05111480000558	29	0279	3	4	67.2	1	OK		NNAL
05111480000559	29	0279	4	5	38.9	1	OK		NNAL
05111480000560	29	0279	5	6	38.6	1	OK		NNAL
05111480000561	31	0281	-1	0	258	1	OK		NNAL
05111480000562	31	0281	0	1	206	1	OK		NNAL
05111480000563	31	0281	1	2	138	1	OK		NNAL
05111480000564	31	0281	2	3	89.9	1	OK		NNAL
05111480000565	31	0281	3	4	117	1	OK		NNAL
05111480000566	31	0281	4	5	68.3	1	OK		NNAL
05111480000567	31	0281	5	6	84.5	1	OK		NNAL
05111480000568	31	0282	-1	0	92.2	1	OK		NNAL
05111480000569	31	0282	0	1	120	1	OK		NNAL
05111480000570	31	0282	1	2	73.4	1	OK		NNAL
05111480000571	31	0282	2	3	54.5	1	OK		NNAL
05111480000572	31	0282	3	4	56.0	1	OK		NNAL
05111480000573	31	0282	4	5	43.7	1	OK		NNAL
05111480000574	31	0282	5	6	30.6	1	OK		NNAL
05111480000575	31	0283	-1	0	31.3	1	OK		NNAL
05111480000576	31	0283	0	1	33.0	1	OK		NNAL
05111480000577	31	0283	1	2	30.9	1	OK		NNAL
05111480000578	31	0283	2	3	31.9	1	OK		NNAL
05111480000579	31	0283	3	4	29.4	1	OK		NNAL
05111480000580	31	0283	4	5	24.7	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000581	31	0283	5	6	14.8	1	OK		NNAL
05111480000582	31	0285	-1	0	117	1	OK		NNAL
05111480000583	31	0285	0	1	170	1	OK		NNAL
05111480000584	31	0285	1	2	156	1	OK		NNAL
05111480000585	31	0285	2	3	176	1	OK		NNAL
05111480000586	31	0285	3	4	155	1	OK		NNAL
05111480000587	31	0285	4	5	97.5	1	OK		NNAL
05111480000588	31	0285	5	6	178	1	OK		NNAL
05111480000589	31	0287	-1	0	93.0	1	OK		NNAL
05111480000590	31	0287	0	1	79.0	1	OK		NNAL
05111480000591	31	0287	1	2	93.4	1	OK		NNAL
05111480000592	31	0287	2	3	46.0	1	OK		NNAL
05111480000593	31	0287	3	4	64.9	1	OK		NNAL
05111480000594	31	0287	4	5	48.8	1	OK		NNAL
05111480000595	31	0287	5	6	46.1	1	OK		NNAL
05111480000596	31	0289	-1	0	195	1	OK		NNAL
05111480000597	31	0289	0	1	169	1	OK		NNAL
05111480000598	31	0289	1	2	153	1	OK		NNAL
05111480000599	31	0289	2	3	98.2	1	OK		NNAL
05111480000600	31	0289	3	4	86.3	1	OK		NNAL
05111480000601	31	0289	4	5	60.1	1	OK		NNAL
05111480000602	31	0289	5	6	50.6	1	OK		NNAL
05111480000603	31	0291	-1	0	147	1	OK		NNAL
05111480000604	31	0291	0	1	106	1	OK		NNAL
05111480000605	31	0291	1	2	65.6	1	OK		NNAL
05111480000606	31	0291	2	3	65.1	1	OK		NNAL
05111480000607	31	0291	3	4	63.9	1	OK		NNAL
05111480000608	31	0291	4	5	70.0	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000609	31	0291	5	6	32.1	1	OK		NNAL
05111480000610	31	0292	-1	0	62.4	1	OK		NNAL
05111480000611	31	0292	0	1	91.1	1	OK		NNAL
05111480000612	31	0292	1	2	95.2	1	OK		NNAL
05111480000613	31	0292	2	3	31.3	1	OK		NNAL
05111480000614	31	0292	3	4	42.9	1	OK		NNAL
05111480000615	31	0292	4	5	21.7	1	OK		NNAL
05111480000616	31	0292	5	6	20.8	1	OK		NNAL
05111480000617	31	0296	-1	0	141	1	OK		NNAL
05111480000618	31	0296	0	1	137	1	OK		NNAL
05111480000619	31	0296	1	2	93.0	1	OK		NNAL
05111480000620	31	0296	2	3	106	1	OK		NNAL
05111480000621	31	0296	3	4	74.2	1	OK		NNAL
05111480000622	31	0296	4	5	74.5	1	OK		NNAL
05111480000623	31	0296	5	6	62.8	1	OK		NNAL
05111480000624	33	0298	-1	0	65.7	1	OK		NNAL
05111480000625	33	0298	0	1	79.2	1	OK		NNAL
05111480000626	33	0298	1	2	97.9	1	OK		NNAL
05111480000627	33	0298	2	3	68.1	1	OK		NNAL
05111480000628	33	0298	3	4	68.1	1	OK		NNAL
05111480000629	33	0298	4	5	54.8	1	OK		NNAL
05111480000630	33	0298	5	6	73.5	1	OK		NNAL
05111480000631		0299	-1	0	.	1	Other	Analysis not required	NNAL
05111480000632		0299	0	1	.	1	Other	Analysis not required	NNAL
05111480000638	33	0300	-1	0	6.17	1	OK		NNAL
05111480000639	33	0300	0	1	5.15	1	OK		NNAL
05111480000640	33	0300	1	2	BLQ<(5.00)	1	OK		NNAL
05111480000641	33	0300	2	3	BLQ<(5.00)	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000642	33	0300	3	4	BLQ<(5.00)	1	OK		NNAL
05111480000643	33	0300	4	5	BLQ<(5.00)	1	OK		NNAL
05111480000644	33	0300	5	6	BLQ<(5.00)	1	OK		NNAL
05111480000645	33	0301	-1	0	59.2	1	OK		NNAL
05111480000646	33	0301	0	1	81.0	1	OK		NNAL
05111480000647	33	0301	1	2	36.3	1	OK		NNAL
05111480000648	33	0301	2	3	25.1	1	OK		NNAL
05111480000649	33	0301	3	4	34.0	1	OK		NNAL
05111480000650	33	0301	4	5	24.0	1	OK		NNAL
05111480000651	33	0301	5	6	19.7	1	OK		NNAL
05111480000652	33	0306	-1	0	108	1	OK		NNAL
05111480000653	33	0306	0	1	102	1	OK		NNAL
05111480000654	33	0306	1	2	56.8	1	OK		NNAL
05111480000655	33	0306	2	3	41.0	1	OK		NNAL
05111480000656	33	0306	3	4	42.3	1	OK		NNAL
05111480000657	33	0306	4	5	32.2	1	OK		NNAL
05111480000658	33	0306	5	6	37.3	1	OK		NNAL
05111480000659	33	0307	-1	0	319	1	OK		NNAL
05111480000660	33	0307	0	1	286	1	OK		NNAL
05111480000661	33	0307	1	2	208	1	OK		NNAL
05111480000662	33	0307	2	3	156	1	OK		NNAL
05111480000663	33	0307	3	4	191	1	OK		NNAL
05111480000664	33	0307	4	5	118	1	OK		NNAL
05111480000665	33	0307	5	6	110	1	OK		NNAL
05111480000666	33	0308	-1	0	115	1	OK		NNAL
05111480000667	33	0308	0	1	154	1	OK		NNAL
05111480000668	33	0308	1	2	70.4	1	OK		NNAL
05111480000669	33	0308	2	3	52.5	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000670	33	0308	3	4	48.7	1	OK		NNAL
05111480000671	33	0308	4	5	40.9	1	OK		NNAL
05111480000672	33	0308	5	6	36.6	1	OK		NNAL
05111480000673		0309	-1	0	.	1	Other	Analysis not required	NNAL
05111480000674		0309	0	1	.	1	Other	Analysis not required	NNAL
05111480000680		0312	-1	0	.	1	Other	Analysis not required	NNAL
05111480000681		0312	0	1	.	1	Other	Analysis not required	NNAL
05111480000687	33	0313	-1	0	80.5	1	OK		NNAL
05111480000688	33	0313	0	1	78.1	1	OK		NNAL
05111480000689	33	0313	1	2	92.8	1	OK		NNAL
05111480000690	33	0313	2	3	68.7	1	OK		NNAL
05111480000691	33	0313	3	4	87.7	1	OK		NNAL
05111480000692	33	0313	4	5	73.2	1	OK		NNAL
05111480000693	33	0313	5	6	57.3	1	OK		NNAL
05111480000694	3	0025	-1	0	55.8	1	OK		NNAL
05111480000695	3	0025	0	1	73.3	1	OK		NNAL
05111480000696	3	0025	1	2	55.1	1	OK		NNAL
05111480000697	3	0025	2	3	47.4	1	OK		NNAL
05111480000698	3	0025	3	4	40.0	1	OK		NNAL
05111480000699	3	0025	4	5	46.7	1	OK		NNAL
05111480000700	3	0025	5	6	29.5	1	OK		NNAL
05111480000701	3	0028	-1	0	85.2	1	OK		NNAL
05111480000702	3	0028	0	1	107	1	OK		NNAL
05111480000703	3	0028	1	2	34.3	1	OK		NNAL
05111480000704	3	0028	2	3	61.8	1	OK		NNAL
05111480000705	3	0028	3	4	36.3	1	OK		NNAL
05111480000706	3	0028	4	5	46.8	1	OK		NNAL
05111480000707	3	0028	5	6	28.4	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000708	3	0029	-1	0	117	1	OK		NNAL
05111480000709	3	0029	0	1	38.9	1	OK		NNAL
05111480000710	3	0029	1	2	82.5	1	OK		NNAL
05111480000711	3	0029	2	3	93.0	1	OK		NNAL
05111480000712	3	0029	3	4	66.2	1	OK		NNAL
05111480000713	3	0029	4	5	35.3	1	OK		NNAL
05111480000714	3	0029	5	6	70.8	1	OK		NNAL
05111480000715	3	0030	-1	0	68.4	1	OK		NNAL
05111480000716	3	0030	0	1	55.2	1	OK		NNAL
05111480000717	3	0030	1	2	36.3	1	OK		NNAL
05111480000718	3	0030	2	3	16.4	1	OK		NNAL
05111480000719	3	0030	3	4	20.0	1	OK		NNAL
05111480000720	3	0030	4	5	23.4	1	OK		NNAL
05111480000721	3	0030	5	6	18.0	1	OK		NNAL
05111480000722	5	0031	-1	0	116	1	OK		NNAL
05111480000723	5	0031	0	1	164	1	OK		NNAL
05111480000724	5	0031	1	2	76.9	1	OK		NNAL
05111480000725	5	0031	2	3	51.8	1	OK		NNAL
05111480000726	5	0031	3	4	46.6	1	OK		NNAL
05111480000727	5	0031	4	5	36.6	1	OK		NNAL
05111480000728	5	0031	5	6	35.2	1	OK		NNAL
05111480000729	5	0034	-1	0	62.2	1	OK		NNAL
05111480000730	5	0034	0	1	55.5	1	OK		NNAL
05111480000731	5	0034	1	2	46.6	1	OK		NNAL
05111480000732	5	0034	2	3	36.9	1	OK		NNAL
05111480000733	5	0034	3	4	41.6	1	OK		NNAL
05111480000734	5	0034	4	5	50.3	1	OK		NNAL
05111480000735	5	0034	5	6	16.8	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000736	5	0035	-1	0	62.4	1	OK		NNAL
05111480000737	5	0035	0	1	58.1	1	OK		NNAL
05111480000738	5	0035	1	2	52.2	1	OK		NNAL
05111480000739	5	0035	2	3	48.6	1	OK		NNAL
05111480000740	5	0035	3	4	43.2	1	OK		NNAL
05111480000741	5	0035	4	5	50.1	1	OK		NNAL
05111480000742	5	0035	5	6	68.5	1	OK		NNAL
05111480000743	5	0038	-1	0	251	1	OK		NNAL
05111480000744	5	0038	0	1	170	1	OK		NNAL
05111480000745	5	0038	1	2	116	1	OK		NNAL
05111480000746	5	0038	2	3	74.0	1	OK		NNAL
05111480000747	5	0038	3	4	89.8	1	OK		NNAL
05111480000748	5	0038	4	5	96.6	1	OK		NNAL
05111480000749	5	0038	5	6	84.6	1	OK		NNAL
05111480000750	5	0039	-1	0	53.0	1	OK		NNAL
05111480000751	5	0039	0	1	51.6	1	OK		NNAL
05111480000752	5	0039	1	2	43.6	1	OK		NNAL
05111480000753	5	0039	2	3	13.2	1	OK		NNAL
05111480000754	5	0039	3	4	17.7	1	OK		NNAL
05111480000755	5	0039	4	5	17.0	1	OK		NNAL
05111480000756	5	0039	5	6	12.5	1	OK		NNAL
05111480000757	5	0044	-1	0	24.5	1	OK		NNAL
05111480000758	5	0044	0	1	31.9	1	OK		NNAL
05111480000759	5	0044	1	2	25.1	1	OK		NNAL
05111480000760	5	0044	2	3	17.5	1	OK		NNAL
05111480000761	5	0044	3	4	14.0	1	OK		NNAL
05111480000762	5	0044	4	5	12.4	1	OK		NNAL
05111480000763	5	0044	5	6	10.8	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000764	7	0052	-1	0	340	1	OK		NNAL
05111480000765	7	0052	0	1	317	1	OK		NNAL
05111480000766	7	0052	1	2	249	1	OK		NNAL
05111480000767	7	0052	2	3	225	1	OK		NNAL
05111480000768	7	0052	3	4	119	1	OK		NNAL
05111480000769	7	0052	4	5	126	1	OK		NNAL
05111480000770	7	0052	5	6	135	1	OK		NNAL
05111480000771	7	0053	-1	0	125	1	OK		NNAL
05111480000772	7	0053	0	1	108	1	OK		NNAL
05111480000773	7	0053	1	2	111	1	OK		NNAL
05111480000774	7	0053	2	3	96.0	1	OK		NNAL
05111480000775	7	0053	3	4	101	1	OK		NNAL
05111480000776	7	0053	4	5	72.3	1	OK		NNAL
05111480000777	7	0053	5	6	103	1	OK		NNAL
05111480000778	7	0055	-1	0	160	1	OK		NNAL
05111480000779	7	0055	0	1	145	1	OK		NNAL
05111480000780	7	0055	1	2	138	1	OK		NNAL
05111480000781	7	0055	2	3	127	1	OK		NNAL
05111480000782	7	0055	3	4	84.9	1	OK		NNAL
05111480000783	7	0055	4	5	131	1	OK		NNAL
05111480000784	7	0055	5	6	145	1	OK		NNAL
05111480000785	7	0057	-1	0	101	1	OK		NNAL
05111480000786	7	0057	0	1	107	1	OK		NNAL
05111480000787	7	0057	1	2	88.5	1	OK		NNAL
05111480000788	7	0057	2	3	46.3	1	OK		NNAL
05111480000789	7	0057	3	4	61.6	1	OK		NNAL
05111480000790	7	0057	4	5	54.0	1	OK		NNAL
05111480000791	7	0057	5	6	42.7	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000792	7	0060	-1	0	144	1	OK		NNAL
05111480000793	7	0060	0	1	113	1	OK		NNAL
05111480000794	7	0060	1	2	88.7	1	OK		NNAL
05111480000795	7	0060	2	3	62.4	1	OK		NNAL
05111480000796	7	0060	3	4	55.9	1	OK		NNAL
05111480000797	7	0060	4	5	50.7	1	OK		NNAL
05111480000798	7	0060	5	6	42.8	1	OK		NNAL
05111480000799	7	0062	-1	0	54.9	1	OK		NNAL
05111480000800	7	0062	0	1	60.4	1	OK		NNAL
05111480000801	7	0062	1	2	33.1	1	OK		NNAL
05111480000802	7	0062	2	3	25.7	1	OK		NNAL
05111480000803	7	0062	3	4	19.4	1	OK		NNAL
05111480000804	7	0062	4	5	30.1	1	OK		NNAL
05111480000805	7	0062	5	6	19.7	1	OK		NNAL
05111480000806	7	0064	-1	0	23.9	1	OK		NNAL
05111480000807	7	0064	0	1	32.9	1	OK		NNAL
05111480000808	7	0064	1	2	19.1	1	OK		NNAL
05111480000809	7	0064	2	3	16.9	1	OK		NNAL
05111480000810	7	0064	3	4	21.1	1	OK		NNAL
05111480000811	7	0064	4	5	16.5	1	OK		NNAL
05111480000812	7	0064	5	6	26.7	1	OK		NNAL
05111480000820	15	0126	-1	0	46.1	1	OK		NNAL
05111480000821	15	0126	0	1	36.3	1	OK		NNAL
05111480000822	15	0126	1	2	35.0	1	OK		NNAL
05111480000823	15	0126	2	3	30.9	1	OK		NNAL
05111480000824	15	0126	3	4	35.2	1	OK		NNAL
05111480000825	15	0126	4	5	25.7	1	OK		NNAL
05111480000826	15	0126	5	6	24.5	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000827	15	0127	-1	0	216	1	OK		NNAL
05111480000828	15	0127	0	1	78.9	1	OK		NNAL
05111480000829	15	0127	1	2	48.4	1	OK		NNAL
05111480000830	15	0127	2	3	45.1	1	OK		NNAL
05111480000831	15	0127	3	4	44.7	1	OK		NNAL
05111480000832	15	0127	4	5	46.8	1	OK		NNAL
05111480000833	15	0127	5	6	50.2	1	OK		NNAL
05111480000834	15	0128	-1	0	413	1	OK		NNAL
05111480000835	15	0128	0	1	261	1	OK		NNAL
05111480000836	15	0128	1	2	158	1	OK		NNAL
05111480000837	15	0128	2	3	82.1	1	OK		NNAL
05111480000838	15	0128	3	4	97.3	1	OK		NNAL
05111480000839	15	0128	4	5	75.7	1	OK		NNAL
05111480000840	15	0128	5	6	77.0	1	OK		NNAL
05111480000841	15	0129	-1	0	35.1	1	OK		NNAL
05111480000842	15	0129	0	1	33.1	1	OK		NNAL
05111480000843	15	0129	1	2	20.5	1	OK		NNAL
05111480000844	15	0129	2	3	15.1	1	OK		NNAL
05111480000845	15	0129	3	4	14.8	1	OK		NNAL
05111480000846	15	0129	4	5	27.3	1	OK		NNAL
05111480000847	15	0129	5	6	9.02	1	OK		NNAL
05111480000848	15	0130	-1	0	119	1	OK		NNAL
05111480000849	15	0130	0	1	106	1	OK		NNAL
05111480000850	15	0130	1	2	51.4	1	OK		NNAL
05111480000851	15	0130	2	3	44.4	1	OK		NNAL
05111480000852	15	0130	3	4	59.0	1	OK		NNAL
05111480000853	15	0130	4	5	47.0	1	OK		NNAL
05111480000854	15	0130	5	6	27.1	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000855	15	0133	-1	0	107	1	OK		NNAL
05111480000856	15	0133	0	1	141	1	OK		NNAL
05111480000857	15	0133	1	2	124	1	OK		NNAL
05111480000858	15	0133	2	3	36.0	1	OK		NNAL
05111480000859	15	0133	3	4	45.5	1	OK		NNAL
05111480000860	15	0133	4	5	37.0	1	OK		NNAL
05111480000861	15	0133	5	6	48.2	1	OK		NNAL
05111480000862	15	0134	-1	0	189	1	OK		NNAL
05111480000863	15	0134	0	1	172	1	OK		NNAL
05111480000864	15	0134	1	2	115	1	OK		NNAL
05111480000865	15	0134	2	3	65.6	1	OK		NNAL
05111480000866	15	0134	3	4	88.8	1	OK		NNAL
05111480000867	15	0134	4	5	77.3	1	OK		NNAL
05111480000868	15	0134	5	6	74.1	1	OK		NNAL
05111480000869	15	0136	-1	0	145	1	OK		NNAL
05111480000870	15	0136	0	1	134	1	OK		NNAL
05111480000871	15	0136	1	2	131	1	OK		NNAL
05111480000872	15	0136	2	3	89.7	1	OK		NNAL
05111480000873	15	0136	3	4	97.4	1	OK		NNAL
05111480000874	15	0136	4	5	50.1	1	OK		NNAL
05111480000875	15	0136	5	6	46.9	1	OK		NNAL
05111480000876	15	0137	-1	0	86.8	1	OK		NNAL
05111480000877	15	0137	0	1	66.5	1	OK		NNAL
05111480000878	15	0137	1	2	64.4	1	OK		NNAL
05111480000879	15	0137	2	3	43.0	1	OK		NNAL
05111480000880	15	0137	3	4	44.6	1	OK		NNAL
05111480000881	15	0137	4	5	33.1	1	OK		NNAL
05111480000882	15	0137	5	6	27.5	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000883	17	0139	-1	0	170	1	OK		NNAL
05111480000884	17	0139	0	1	165	1	OK		NNAL
05111480000885	17	0139	1	2	122	1	OK		NNAL
05111480000886	17	0139	2	3	112	1	OK		NNAL
05111480000887	17	0139	3	4	131	1	OK		NNAL
05111480000888	17	0139	4	5	102	1	OK		NNAL
05111480000889	17	0139	5	6	103	1	OK		NNAL
05111480000890	17	0140	-1	0	29.2	1	OK		NNAL
05111480000891	17	0140	0	1	29.6	1	OK		NNAL
05111480000892	17	0140	1	2	27.2	1	OK		NNAL
05111480000893	17	0140	2	3	30.1	1	OK		NNAL
05111480000894	17	0140	3	4	29.0	1	OK		NNAL
05111480000895	17	0140	4	5	24.3	1	OK		NNAL
05111480000896	17	0140	5	6	16.4	1	OK		NNAL
05111480000897	17	0145	-1	0	119	1	OK		NNAL
05111480000898	17	0145	0	1	97.6	1	OK		NNAL
05111480000899	17	0145	1	2	85.7	1	OK		NNAL
05111480000900	17	0145	2	3	44.9	1	OK		NNAL
05111480000901	17	0145	3	4	32.5	1	OK		NNAL
05111480000902	17	0145	4	5	27.9	1	OK		NNAL
05111480000903	17	0145	5	6	24.4	1	OK		NNAL
05111480000904	17	0147	-1	0	157	1	OK		NNAL
05111480000905	17	0147	0	1	124	1	OK		NNAL
05111480000906	17	0147	1	2	102	1	OK		NNAL
05111480000907	17	0147	2	3	63.6	1	OK		NNAL
05111480000908	17	0147	3	4	62.7	1	OK		NNAL
05111480000909	17	0147	4	5	68.8	1	OK		NNAL
05111480000910	17	0147	5	6	38.3	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000911	17	0148	-1	0	307	1	OK		NNAL
05111480000912	17	0148	0	1	237	1	OK		NNAL
05111480000913	17	0148	1	2	247	1	OK		NNAL
05111480000914	17	0148	2	3	169	1	OK		NNAL
05111480000915	17	0148	3	4	194	1	OK		NNAL
05111480000916	17	0148	4	5	156	1	OK		NNAL
05111480000917	17	0148	5	6	160	1	OK		NNAL
05111480000918	17	0149	-1	0	118	1	OK		NNAL
05111480000919	17	0149	0	1	80.8	1	OK		NNAL
05111480000920	17	0149	1	2	55.2	1	OK		NNAL
05111480000921	17	0149	2	3	48.2	1	OK		NNAL
05111480000922	17	0149	3	4	51.0	1	OK		NNAL
05111480000923	17	0149	4	5	36.4	1	OK		NNAL
05111480000924	17	0149	5	6	29.4	1	OK		NNAL
05111480000925	17	0150	-1	0	292	1	OK		NNAL
05111480000926	17	0150	0	1	233	1	OK		NNAL
05111480000927	17	0150	1	2	223	1	OK		NNAL
05111480000928	17	0150	2	3	142	1	OK		NNAL
05111480000929	17	0150	3	4	90.1	1	OK		NNAL
05111480000930	17	0150	4	5	87.9	1	OK		NNAL
05111480000931	17	0150	5	6	95.1	1	OK		NNAL
05111480000932	17	0152	-1	0	22.7	1	OK		NNAL
05111480000933	17	0152	0	1	16.9	1	OK		NNAL
05111480000934	17	0152	1	2	14.9	1	OK		NNAL
05111480000935	17	0152	2	3	15.4	1	OK		NNAL
05111480000936	17	0152	3	4	21.1	1	OK		NNAL
05111480000937	17	0152	4	5	15.7	1	OK		NNAL
05111480000938	17	0152	5	6	17.4	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000939	17	0153	-1	0	78.9	1	OK		NNAL
05111480000940	17	0153	0	1	73.1	1	OK		NNAL
05111480000941	17	0153	1	2	62.9	1	OK		NNAL
05111480000942	17	0153	2	3	46.3	1	OK		NNAL
05111480000943	17	0153	3	4	52.5	1	OK		NNAL
05111480000944	17	0153	4	5	38.0	1	OK		NNAL
05111480000945	17	0153	5	6	22.6	1	OK		NNAL
05111480000946	19	0155	-1	0	132	1	OK		NNAL
05111480000947	19	0155	0	1	106	1	OK		NNAL
05111480000948	19	0155	1	2	81.5	1	OK		NNAL
05111480000949	19	0155	2	3	75.0	1	OK		NNAL
05111480000950	19	0155	3	4	60.7	1	OK		NNAL
05111480000951	19	0155	4	5	46.4	1	OK		NNAL
05111480000952	19	0155	5	6	35.6	1	OK		NNAL
05111480000953	19	0156	-1	0	229	1	OK		NNAL
05111480000954	19	0156	0	1	252	1	OK		NNAL
05111480000955	19	0156	1	2	233	1	OK		NNAL
05111480000956	19	0156	2	3	260	1	OK		NNAL
05111480000957	19	0156	3	4	238	1	OK		NNAL
05111480000958	19	0156	4	5	276	1	OK		NNAL
05111480000959	19	0156	5	6	183	1	OK		NNAL
05111480000960	19	0160	-1	0	104	1	OK		NNAL
05111480000961	19	0160	0	1	106	1	OK		NNAL
05111480000962	19	0160	1	2	85.4	1	OK		NNAL
05111480000963	19	0160	2	3	72.2	1	OK		NNAL
05111480000964	19	0160	3	4	79.9	1	OK		NNAL
05111480000965	19	0160	4	5	69.1	1	OK		NNAL
05111480000966	19	0160	5	6	71.0	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000967	19	0162	-1	0	101	1	OK		NNAL
05111480000968	19	0162	0	1	107	1	OK		NNAL
05111480000969	19	0162	1	2	71.5	1	OK		NNAL
05111480000970	19	0162	2	3	66.4	1	OK		NNAL
05111480000971	19	0162	3	4	74.0	1	OK		NNAL
05111480000972	19	0162	4	5	43.4	1	OK		NNAL
05111480000973	19	0162	5	6	42.1	1	OK		NNAL
05111480000974	19	0167	-1	0	84.6	1	OK		NNAL
05111480000975	19	0167	0	1	68.5	1	OK		NNAL
05111480000976	19	0167	1	2	68.9	1	OK		NNAL
05111480000977	19	0167	2	3	49.1	1	OK		NNAL
05111480000978	19	0167	3	4	46.9	1	OK		NNAL
05111480000979	19	0167	4	5	37.2	1	OK		NNAL
05111480000980	19	0167	5	6	30.9	1	OK		NNAL
05111480000981	19	0169	-1	0	25.2	1	OK		NNAL
05111480000982	19	0169	0	1	17.4	1	OK		NNAL
05111480000983	19	0169	1	2	25.8	1	OK		NNAL
05111480000984	19	0169	2	3	11.7	1	OK		NNAL
05111480000985	19	0169	3	4	11.6	1	OK		NNAL
05111480000986	19	0169	4	5	5.13	1	OK		NNAL
05111480000987	19	0169	5	6	5.92	1	OK		NNAL
05111480000988	19	0170	-1	0	57.9	1	OK		NNAL
05111480000989	19	0170	0	1	36.3	1	OK		NNAL
05111480000990	19	0170	1	2	23.7	1	OK		NNAL
05111480000991	19	0170	2	3	21.5	1	OK		NNAL
05111480000992	19	0170	3	4	16.5	1	OK		NNAL
05111480000993	19	0170	4	5	15.7	1	OK		NNAL
05111480000994	19	0170	5	6	15.1	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000995	38	0177	-1	0	163	1	OK		NNAL
05111480000996	19	0177	0	1	162	1	OK		NNAL
05111480000997	19	0177	1	2	101	1	OK		NNAL
05111480000998	19	0177	2	3	88.3	1	OK		NNAL
05111480000999	19	0177	3	4	92.7	1	OK		NNAL
05111480001000	19	0177	4	5	69.1	1	OK		NNAL
05111480001001	19	0177	5	6	77.4	1	OK		NNAL
05111480001002	21	0183	-1	0	147	1	OK		NNAL
05111480001003	21	0183	0	1	127	1	OK		NNAL
05111480001004	21	0183	1	2	69.2	1	OK		NNAL
05111480001005	21	0183	2	3	69.9	1	OK		NNAL
05111480001006	21	0183	3	4	53.3	1	OK		NNAL
05111480001007	21	0183	4	5	45.1	1	OK		NNAL
05111480001008	21	0183	5	6	51.3	1	OK		NNAL
05111480001009	21	0185	-1	0	244	1	OK		NNAL
05111480001010	21	0185	0	1	136	1	OK		NNAL
05111480001011	21	0185	1	2	130	1	OK		NNAL
05111480001012	21	0185	2	3	86.2	1	OK		NNAL
05111480001013	21	0185	3	4	76.3	1	OK		NNAL
05111480001014	21	0185	4	5	21.5	1	OK		NNAL
05111480001015	21	0185	5	6	58.9	1	OK		NNAL
05111480001016	21	0187	-1	0	75.8	1	OK		NNAL
05111480001017	21	0187	0	1	60.2	1	OK		NNAL
05111480001018	21	0187	1	2	59.7	1	OK		NNAL
05111480001019	21	0187	2	3	87.9	1	OK		NNAL
05111480001020	21	0187	3	4	114	1	OK		NNAL
05111480001021	21	0187	4	5	65.3	1	OK		NNAL
05111480001022	21	0187	5	6	51.4	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480001023	21	0190	-1	0	90.9	1	OK		NNAL
05111480001024	21	0190	0	1	72.3	1	OK		NNAL
05111480001025	21	0190	1	2	66.4	1	OK		NNAL
05111480001026	21	0190	2	3	37.7	1	OK		NNAL
05111480001027	21	0190	3	4	37.9	1	OK		NNAL
05111480001028	21	0190	4	5	31.9	1	OK		NNAL
05111480001029	21	0190	5	6	31.8	1	OK		NNAL
05111480001030	21	0191	-1	0	37.2	1	OK		NNAL
05111480001031	21	0191	0	1	31.2	1	OK		NNAL
05111480001032	21	0191	1	2	38.4	1	OK		NNAL
05111480001033	21	0191	2	3	38.3	1	OK		NNAL
05111480001034	21	0191	3	4	39.7	1	OK		NNAL
05111480001035	21	0191	4	5	29.2	1	OK		NNAL
05111480001036	21	0191	5	6	21.1	1	OK		NNAL
05111480001037	21	0192	-1	0	147	1	OK		NNAL
05111480001038	21	0192	0	1	138	1	OK		NNAL
05111480001039	21	0192	1	2	62.8	1	OK		NNAL
05111480001040	21	0192	2	3	67.3	1	OK		NNAL
05111480001041	21	0192	3	4	67.6	1	OK		NNAL
05111480001042	21	0192	4	5	37.9	1	OK		NNAL
05111480001043	21	0192	5	6	50.8	1	OK		NNAL
05111480001044		0211	-1	0	.	1	Other	Analysis not required	NNAL
05111480001045		0211	0	1	.	1	Other	Analysis not required	NNAL
05111480001051	21	0193	-1	0	92.0	1	OK		NNAL
05111480001052	21	0193	0	1	143	1	OK		NNAL
05111480001053	21	0193	1	2	57.4	1	OK		NNAL
05111480001054	21	0193	2	3	40.5	1	OK		NNAL
05111480001055	21	0193	3	4	48.1	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480001056	21	0193	4	5	40.0	1	OK		NNAL
05111480001057	21	0193	5	6	30.3	1	OK		NNAL
05111480001058	21	0195	-1	0	42.1	1	OK		NNAL
05111480001059	21	0195	0	1	54.7	1	OK		NNAL
05111480001060	21	0195	1	2	23.0	1	OK		NNAL
05111480001061	21	0195	2	3	14.8	1	OK		NNAL
05111480001062	21	0195	3	4	13.1	1	OK		NNAL
05111480001063	21	0195	4	5	13.9	1	OK		NNAL
05111480001064	21	0195	5	6	BLQ<(5.00)	1	OK		NNAL
05111480001065	23	0196	-1	0	22.2	1	OK		NNAL
05111480001066	23	0196	0	1	24.7	1	OK		NNAL
05111480001067	23	0196	1	2	15.3	1	OK		NNAL
05111480001068	23	0196	2	3	7.49	1	OK		NNAL
05111480001069	23	0196	3	4	8.66	1	OK		NNAL
05111480001070	23	0196	4	5	7.84	1	OK		NNAL
05111480001071	23	0196	5	6	BLQ<(5.00)	1	OK		NNAL
05111480001072	23	0197	-1	0	78.4	1	OK		NNAL
05111480001073	23	0197	0	1	160	1	OK		NNAL
05111480001074	23	0197	1	2	72.3	1	OK		NNAL
05111480001075	23	0197	2	3	44.1	1	OK		NNAL
05111480001076	23	0197	3	4	24.8	1	OK		NNAL
05111480001077	23	0197	4	5	30.7	1	OK		NNAL
05111480001078	23	0197	5	6	22.0	1	OK		NNAL
05111480001079	23	0198	-1	0	71.6	1	OK		NNAL
05111480001080	23	0198	0	1	137	1	OK		NNAL
05111480001081	23	0198	1	2	89.6	1	OK		NNAL
05111480001082	23	0198	2	3	128	1	OK		NNAL
05111480001083	23	0198	3	4	111	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480001084	23	0198	4	5	121	1	OK		NNAL
05111480001085	23	0198	5	6	90.6	1	OK		NNAL
05111480001086	23	0200	-1	0	34.9	1	OK		NNAL
05111480001087	23	0200	0	1	45.5	1	OK		NNAL
05111480001088	23	0200	1	2	43.2	1	OK		NNAL
05111480001089	23	0200	2	3	38.5	1	OK		NNAL
05111480001090	23	0200	3	4	43.6	1	OK		NNAL
05111480001091	23	0200	4	5	44.7	1	OK		NNAL
05111480001092	23	0200	5	6	24.2	1	OK		NNAL
05111480001093	23	0202	-1	0	51.0	1	OK		NNAL
05111480001094	23	0202	0	1	65.6	1	OK		NNAL
05111480001095	23	0202	1	2	54.9	1	OK		NNAL
05111480001096	23	0202	2	3	43.4	1	OK		NNAL
05111480001097	23	0202	3	4	41.6	1	OK		NNAL
05111480001098	23	0202	4	5	30.8	1	OK		NNAL
05111480001099	23	0202	5	6	14.8	1	OK		NNAL
05111480001100	23	0203	-1	0	67.1	1	OK		NNAL
05111480001101	23	0203	0	1	65.4	1	OK		NNAL
05111480001102	23	0203	1	2	41.2	1	OK		NNAL
05111480001103	23	0203	2	3	38.4	1	OK		NNAL
05111480001104	23	0203	3	4	32.6	1	OK		NNAL
05111480001105	23	0203	4	5	27.0	1	OK		NNAL
05111480001106	23	0203	5	6	18.1	1	OK		NNAL
05111480001107	23	0204	-1	0	10.7	1	OK		NNAL
05111480001108	23	0204	0	1	18.5	1	OK		NNAL
05111480001109	23	0204	1	2	20.6	1	OK		NNAL
05111480001110	23	0204	2	3	16.6	1	OK		NNAL
05111480001111	23	0204	3	4	21.7	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480001112	23	0204	4	5	21.8	1	OK		NNAL
05111480001113	23	0204	5	6	18.2	1	OK		NNAL
05111480001114	5	0042	-1	0	78.3	1	OK		NNAL
05111480001115	5	0042	0	1	105	1	OK		NNAL
05111480001116	5	0042	1	2	98.6	1	OK		NNAL
05111480001117	5	0042	2	3	29.6	1	OK		NNAL
05111480001118	5	0042	3	4	153	1	OK		NNAL
05111480001119	5	0042	4	5	62.1	1	OK		NNAL
05111480001120	5	0042	5	6	91.9	1	OK		NNAL
05111480001541		0242	-1	0	.	2	Other	Analysis not required	NNAL
05111480001542		0242	0	1	.	2	Other	Analysis not required	NNAL
05111480001555		0245	-1	0	.	2	Other	Analysis not required	NNAL
05111480001556		0245	0	1	.	2	Other	Analysis not required	NNAL
05111480001562		0247	-1	0	.	2	Other	Analysis not required	NNAL
05111480001563		0247	0	1	.	2	Other	Analysis not required	NNAL
05111480001632		0269	-1	0	.	2	Other	Analysis not required	NNAL
05111480001633		0269	0	1	.	2	Other	Analysis not required	NNAL
05111480001751		0299	-1	0	.	2	Other	Analysis not required	NNAL
05111480001752		0299	0	1	.	2	Other	Analysis not required	NNAL
05111480001793		0309	-1	0	.	2	Other	Analysis not required	NNAL
05111480001794		0309	0	1	.	2	Other	Analysis not required	NNAL
05111480001800		0312	-1	0	.	2	Other	Analysis not required	NNAL
05111480001801		0312	0	1	.	2	Other	Analysis not required	NNAL
05111480002164		0211	-1	0	.	2	Other	Analysis not required	NNAL
05111480002165		0211	0	1	.	2	Other	Analysis not required	NNAL
05111480003081		0242	-1	0	.	4	Other	Analysis not required	NNAL
05111480003082		0242	0	1	.	4	Other	Analysis not required	NNAL
05111480003088		0242	-1	0	.	3	Other	Analysis not required	NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480003089		0242	0	1	.	3	Other	Analysis not required	NNAL
05111480003109		0245	-1	0	.	4	Other	Analysis not required	NNAL
05111480003110		0245	0	1	.	4	Other	Analysis not required	NNAL
05111480003116		0245	-1	0	.	3	Other	Analysis not required	NNAL
05111480003117		0245	0	1	.	3	Other	Analysis not required	NNAL
05111480003123		0247	-1	0	.	4	Other	Analysis not required	NNAL
05111480003124		0247	0	1	.	4	Other	Analysis not required	NNAL
05111480003130		0247	-1	0	.	3	Other	Analysis not required	NNAL
05111480003131		0247	0	1	.	3	Other	Analysis not required	NNAL
05111480003263		0269	-1	0	.	4	Other	Analysis not required	NNAL
05111480003264		0269	0	1	.	4	Other	Analysis not required	NNAL
05111480003270		0269	-1	0	.	3	Other	Analysis not required	NNAL
05111480003271		0269	0	1	.	3	Other	Analysis not required	NNAL
05111480003501		0299	-1	0	.	4	Other	Analysis not required	NNAL
05111480003502		0299	0	1	.	4	Other	Analysis not required	NNAL
05111480003508		0299	-1	0	.	3	Other	Analysis not required	NNAL
05111480003509		0299	0	1	.	3	Other	Analysis not required	NNAL
05111480003585		0309	-1	0	.	4	Other	Analysis not required	NNAL
05111480003586		0309	0	1	.	4	Other	Analysis not required	NNAL
05111480003592		0309	-1	0	.	3	Other	Analysis not required	NNAL
05111480003593		0309	0	1	.	3	Other	Analysis not required	NNAL
05111480003599		0312	-1	0	.	4	Other	Analysis not required	NNAL
05111480003600		0312	0	1	.	4	Other	Analysis not required	NNAL
05111480003606		0312	-1	0	.	3	Other	Analysis not required	NNAL
05111480003607		0312	0	1	.	3	Other	Analysis not required	NNAL
05111480004327		0211	-1	0	.	4	Other	Analysis not required	NNAL
05111480004328		0211	0	1	.	4	Other	Analysis not required	NNAL
05111480004334		0211	-1	0	.	3	Other	Analysis not required	NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480004335		0211	0	1	.	3	Other	Analysis not required	NNAL
05111480004502	33	0315	-1	0	124	1	OK		NNAL
05111480004503	33	0315	0	1	117	1	OK		NNAL
05111480004504	33	0315	1	2	78.4	1	OK		NNAL
05111480004505	33	0315	2	3	84.2	1	OK		NNAL
05111480004506	33	0315	3	4	76.8	1	OK		NNAL
05111480004507	33	0315	4	5	56.8	1	OK		NNAL
05111480004508	33	0315	5	6	65.6	1	OK		NNAL
05111480004530	33	0316	-1	0	16.3	1	OK		NNAL
05111480004531	33	0316	0	1	16.1	1	OK		NNAL
05111480004532	33	0316	1	2	14.6	1	OK		NNAL
05111480004533	33	0316	2	3	8.95	1	OK		NNAL
05111480004534	33	0316	3	4	10.3	1	OK		NNAL
05111480004535	33	0316	4	5	6.25	1	OK		NNAL
05111480004536	33	0316	5	6	BLQ<(5.00)	1	OK		NNAL
05111480004558	35	0317	-1	0	112	1	OK		NNAL
05111480004559	35	0317	0	1	111	1	OK		NNAL
05111480004560	35	0317	1	2	95.0	1	OK		NNAL
05111480004561	35	0317	2	3	71.6	1	OK		NNAL
05111480004562	35	0317	3	4	61.6	1	OK		NNAL
05111480004563	35	0317	4	5	55.1	1	OK		NNAL
05111480004564	35	0317	5	6	44.0	1	OK		NNAL
05111480004586	35	0318	-1	0	74.0	1	OK		NNAL
05111480004587	35	0318	0	1	73.2	1	OK		NNAL
05111480004588	35	0318	1	2	81.3	1	OK		NNAL
05111480004589	35	0318	2	3	88.7	1	OK		NNAL
05111480004590	35	0318	3	4	82.7	1	OK		NNAL
05111480004591	35	0318	4	5	84.2	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480004592	35	0318	5	6	104	1	OK		NNAL
05111480004614	35	0320	-1	0	223	1	OK		NNAL
05111480004615	35	0320	0	1	221	1	OK		NNAL
05111480004616	35	0320	1	2	108	1	OK		NNAL
05111480004617	35	0320	2	3	77.3	1	OK		NNAL
05111480004618	35	0320	3	4	81.3	1	OK		NNAL
05111480004619	35	0320	4	5	65.7	1	OK		NNAL
05111480004620	35	0320	5	6	54.3	1	OK		NNAL
05111480004642	35	0321	-1	0	83.6	1	OK		NNAL
05111480004643	35	0321	0	1	80.6	1	OK		NNAL
05111480004644	35	0321	1	2	61.1	1	OK		NNAL
05111480004645	35	0321	2	3	55.2	1	OK		NNAL
05111480004646	35	0321	3	4	61.0	1	OK		NNAL
05111480004647	35	0321	4	5	46.3	1	OK		NNAL
05111480004648	35	0321	5	6	55.4	1	OK		NNAL
05111480004670	35	0322	-1	0	41.9	1	OK		NNAL
05111480004671	35	0322	0	1	50.4	1	OK		NNAL
05111480004672	35	0322	1	2	40.2	1	OK		NNAL
05111480004673	35	0322	2	3	35.1	1	OK		NNAL
05111480004674	35	0322	3	4	30.9	1	OK		NNAL
05111480004675	35	0322	4	5	26.4	1	OK		NNAL
05111480004676	35	0322	5	6	24.2	1	OK		NNAL
05111480004698	38	0325	-1	0	170	1	OK		NNAL
05111480004699	38	0325	0	1	144	1	OK		NNAL
05111480004700	38	0325	1	2	163	1	OK		NNAL
05111480004701	38	0325	2	3	81.4	1	OK		NNAL
05111480004702	38	0325	3	4	72.3	1	OK		NNAL
05111480004703	38	0325	4	5	42.5	1	OK		NNAL



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480004704	38	0325	5	6	52.0	1	OK		NNAL
05111480004726	38	0328	-1	0	35.3	1	OK		NNAL
05111480004727	38	0328	0	1	46.3	1	OK		NNAL
05111480004728	38	0328	1	2	31.8	1	OK		NNAL
05111480004729	38	0328	2	3	38.4	1	OK		NNAL
05111480004730	38	0328	3	4	44.1	1	OK		NNAL
05111480004731	38	0328	4	5	36.4	1	OK		NNAL
05111480004732	38	0328	5	6	36.1	1	OK		NNAL
05111480004733		0288	-1	0	.	4	Other	Analysis not required	NNAL
05111480004734		0288	0	1	.	4	Other	Analysis not required	NNAL
05111480004740		0288	-1	0	.	3	Other	Analysis not required	NNAL
05111480004741		0288	0	1	.	3	Other	Analysis not required	NNAL
05111480004747		0288	-1	0	.	2	Other	Analysis not required	NNAL
05111480004748		0288	0	1	.	2	Other	Analysis not required	NNAL
05111480004754		0288	-1	0	.	1	Other	Analysis not required	NNAL
05111480004755		0288	0	1	.	1	Other	Analysis not required	NNAL



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Table 9 Study Sample Concentrations for Total NNN

Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000001	2	0008	-1	0	2.47	1	OK		NNN
05111480000002	2	0008	0	1	2.57	1	OK		NNN
05111480000003	2	0008	1	2	1.36	1	OK		NNN
05111480000004	2	0008	2	3	0.789	1	OK		NNN
05111480000005	2	0008	3	4	1.47	1	OK		NNN
05111480000006	2	0008	4	5	0.897	1	OK		NNN
05111480000007	2	0008	5	6	0.800	1	OK		NNN
05111480000008	2	0010	-1	0	1.56	1	OK		NNN
05111480000009	2	0010	0	1	0.889	1	OK		NNN
05111480000010	2	0010	1	2	0.293	1	OK		NNN
05111480000011	2	0010	2	3	BLQ<(0 200)	1	OK		NNN
05111480000012	2	0010	3	4	BLQ<(0 200)	1	OK		NNN
05111480000013	2	0010	4	5	BLQ<(0 200)	1	OK		NNN
05111480000014	2	0010	5	6	BLQ<(0 200)	1	OK		NNN
05111480000015	2	0011	-1	0	2.83	1	OK		NNN
05111480000016	2	0011	0	1	2.88	1	OK		NNN
05111480000017	2	0011	1	2	0.719	1	OK		NNN
05111480000018	2	0011	2	3	0.418	1	OK		NNN
05111480000019	2	0011	3	4	0.536	1	OK		NNN
05111480000020	2	0011	4	5	0.456	1	OK		NNN
05111480000021	2	0011	5	6	0.813	1	OK		NNN
05111480000022	2	0014	-1	0	2.00	1	OK		NNN
05111480000023	2	0014	0	1	3.69	1	OK		NNN
05111480000024	2	0014	1	2	0.766	1	OK		NNN
05111480000025	2	0014	2	3	0.422	1	OK		NNN



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000026	2	0014	3	4	0.897	1	OK		NNN
05111480000027	2	0014	4	5	BLQ<(0 200)	1	OK		NNN
05111480000028	2	0014	5	6	1.93	1	OK		NNN
05111480000029	2	0015	-1	0	1.67	1	OK		NNN
05111480000030	2	0015	0	1	1.63	1	OK		NNN
05111480000031	2	0015	1	2	BLQ<(0 200)	1	OK		NNN
05111480000032	2	0015	2	3	BLQ<(0 200)	1	OK		NNN
05111480000033	2	0015	3	4	BLQ<(0 200)	1	OK		NNN
05111480000034	2	0015	4	5	BLQ<(0 200)	1	OK		NNN
05111480000035	2	0015	5	6	BLQ<(0 200)	1	OK		NNN
05111480000036	2	0016	-1	0	7.53	1	OK		NNN
05111480000037	2	0016	0	1	7.14	1	OK		NNN
05111480000038	2	0016	1	2	1.29	1	OK		NNN
05111480000039	2	0016	2	3	0.755	1	OK		NNN
05111480000040	2	0016	3	4	1.37	1	OK		NNN
05111480000041	2	0016	4	5	1.25	1	OK		NNN
05111480000042	2	0016	5	6	2.34	1	OK		NNN
05111480000043	37	0017	-1	0	2.62	1	OK		NNN
05111480000044	37	0017	0	1	4.04	1	OK		NNN
05111480000045	37	0017	1	2	0.588	1	OK		NNN
05111480000046	37	0017	2	3	BLQ<(0 200)	1	OK		NNN
05111480000047	37	0017	3	4	BLQ<(0 200)	1	OK		NNN
05111480000048	37	0017	4	5	BLQ<(0 200)	1	OK		NNN
05111480000049	37	0017	5	6	BLQ<(0 200)	1	OK		NNN
05111480000050	37	0020	-1	0	2.41	1	OK		NNN
05111480000051	37	0020	0	1	2.66	1	OK		NNN
05111480000052	37	0020	1	2	0.752	1	OK		NNN
05111480000053	37	0020	2	3	0.934	1	OK		NNN
05111480000054	37	0020	3	4	0.827	1	OK		NNN



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000055	37	0020	4	5	0.873	1	OK		NNN
05111480000056	37	0020	5	6	0.458	1	OK		NNN
05111480000057	37	0022	-1	0	1.94	1	OK		NNN
05111480000058	37	0022	0	1	2.24	1	OK		NNN
05111480000059	37	0022	1	2	0.422	1	OK		NNN
05111480000060	37	0022	2	3	0.382	1	OK		NNN
05111480000061	37	0022	3	4	0.691	1	OK		NNN
05111480000062	37	0022	4	5	0.488	1	OK		NNN
05111480000063	37	0022	5	6	0.748	1	OK		NNN
05111480000064	37	0023	-1	0	2.42	1	OK		NNN
05111480000065	37	0023	0	1	2.89	1	OK		NNN
05111480000066	37	0023	1	2	0.643	1	OK		NNN
05111480000067	37	0023	2	3	0.420	1	OK		NNN
05111480000068	37	0023	3	4	0.635	1	OK		NNN
05111480000069	37	0023	4	5	0.776	1	OK		NNN
05111480000070	37	0023	5	6	0.846	1	OK		NNN
05111480000071	6	0049	-1	0	2.47	1	OK		NNN
05111480000072	6	0049	0	1	1.92	1	OK		NNN
05111480000073	6	0049	1	2	0.774	1	OK		NNN
05111480000074	6	0049	2	3	BLQ<(0 200)	1	OK		NNN
05111480000075	6	0049	3	4	BLQ<(0 200)	1	OK		NNN
05111480000076	6	0049	4	5	BLQ<(0 200)	1	OK		NNN
05111480000077	6	0049	5	6	BLQ<(0 200)	1	OK		NNN
05111480000078	2	0001	-1	0	2.60	1	OK		NNN
05111480000079	2	0001	0	1	2.99	1	OK		NNN
05111480000080	2	0001	1	2	1.65	1	OK		NNN
05111480000081	2	0001	2	3	1.05	1	OK		NNN
05111480000082	2	0001	3	4	1.16	1	OK		NNN
05111480000083	2	0001	4	5	1.51	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000084	2	0001	5	6	2.38	1	OK		NNN
05111480000085	2	0004	-1	0	1.94	1	OK		NNN
05111480000086	2	0004	0	1	3.03	1	OK		NNN
05111480000087	2	0004	1	2	1.03	1	OK		NNN
05111480000088	2	0004	2	3	0.627	1	OK		NNN
05111480000089	2	0004	3	4	0.689	1	OK		NNN
05111480000090	2	0004	4	5	0.540	1	OK		NNN
05111480000091	2	0004	5	6	0.804	1	OK		NNN
05111480000092	2	0013	-1	0	6.49	1	OK		NNN
05111480000093	2	0013	0	1	13.9	1	OK		NNN
05111480000094	2	0013	1	2	1.31	1	OK		NNN
05111480000095	2	0013	2	3	BLQ<(0 200)	1	OK		NNN
05111480000096	2	0013	3	4	BLQ<(0 200)	1	OK		NNN
05111480000097	2	0013	4	5	BLQ<(0 200)	1	OK		NNN
05111480000098	2	0013	5	6	BLQ<(0 200)	1	OK		NNN
05111480000099	37	0021	-1	0	1.90	1	OK		NNN
05111480000100	37	0021	0	1	4.26	1	OK		NNN
05111480000101	37	0021	1	2	1.03	1	OK		NNN
05111480000102	37	0021	2	3	4.42	1	OK		NNN
05111480000103	37	0021	3	4	0.396	1	OK		NNN
05111480000104	37	0021	4	5	0.496	1	OK		NNN
05111480000105	37	0021	5	6	0.872	1	OK		NNN
05111480000106	6	0037	-1	0	4.46	1	OK		NNN
05111480000107	6	0037	0	1	4.67	1	OK		NNN
05111480000108	6	0037	1	2	4.35	1	OK		NNN
05111480000109	6	0037	2	3	3.99	1	OK		NNN
05111480000110	6	0037	3	4	4.66	1	OK		NNN
05111480000111	6	0037	4	5	4.04	1	OK		NNN
05111480000112	6	0037	5	6	5.39	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000113	8	0051	-1	0	3.15	1	OK		NNN
05111480000114	8	0051	0	1	2.87	1	OK		NNN
05111480000115	8	0051	1	2	BLQ<(0 200)	1	OK		NNN
05111480000116	8	0051	2	3	BLQ<(0 200)	1	OK		NNN
05111480000117	8	0051	3	4	BLQ<(0 200)	1	OK		NNN
05111480000118	8	0051	4	5	BLQ<(0 200)	1	OK		NNN
05111480000119	8	0051	5	6	BLQ<(0 200)	1	OK		NNN
05111480000120		0063	-1	0	1.94	1	OK		NNN
05111480000121	8	0063	0	1	2.09	1	OK		NNN
05111480000122	8	0063	1	2	BLQ<(0 200)	1	OK		NNN
05111480000123	8	0063	2	3	BLQ<(0 200)	1	OK		NNN
05111480000124	8	0063	3	4	BLQ<(0 200)	1	OK		NNN
05111480000125	8	0063	4	5	BLQ<(0 200)	1	OK		NNN
05111480000126	8	0063	5	6	BLQ<(0 200)	1	OK		NNN
05111480000127	10	0066	-1	0	1.16	1	OK		NNN
05111480000128	10	0066	0	1	1.97	1	OK		NNN
05111480000129	10	0066	1	2	0.338	1	OK		NNN
05111480000130	10	0066	2	3	0.298	1	OK		NNN
05111480000131	10	0066	3	4	0.731	1	OK		NNN
05111480000132	10	0066	4	5	0.212	1	OK		NNN
05111480000133	10	0066	5	6	0.315	1	OK		NNN
05111480000134	10	0067	-1	0	3.24	1	OK		NNN
05111480000135	10	0067	0	1	4.42	1	OK		NNN
05111480000136	10	0067	1	2	2.25	1	OK		NNN
05111480000137	10	0067	2	3	2.73	1	OK		NNN
05111480000138	10	0067	3	4	2.32	1	OK		NNN
05111480000139	10	0067	4	5	2.36	1	OK		NNN
05111480000140	10	0067	5	6	2.64	1	OK		NNN
05111480000141	10	0069	-1	0	5.33	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000142	10	0069	0	1	6.12	1	OK		NNN
05111480000143	10	0069	1	2	1.99	1	OK		NNN
05111480000144	10	0069	2	3	0.761	1	OK		NNN
05111480000145	10	0069	3	4	0.893	1	OK		NNN
05111480000146	10	0069	4	5	0.536	1	OK		NNN
05111480000147	10	0069	5	6	0.692	1	OK		NNN
05111480000148	10	0071	-1	0	6.60	1	OK		NNN
05111480000149	10	0071	0	1	6.51	1	OK		NNN
05111480000150	10	0071	1	2	1.38	1	OK		NNN
05111480000151	10	0071	2	3	BLQ<(0 200)	1	OK		NNN
05111480000152	10	0071	3	4	BLQ<(0 200)	1	OK		NNN
05111480000153	10	0071	4	5	BLQ<(0 200)	1	OK		NNN
05111480000154	10	0071	5	6	BLQ<(0 200)	1	OK		NNN
05111480000155	10	0072	-1	0	2.01	1	OK		NNN
05111480000156	10	0072	0	1	2.20	1	OK		NNN
05111480000157	10	0072	1	2	2.03	1	OK		NNN
05111480000158	10	0072	2	3	2.37	1	OK		NNN
05111480000159	10	0072	3	4	2.01	1	OK		NNN
05111480000160	10	0072	4	5	2.71	1	OK		NNN
05111480000161	10	0072	5	6	2.34	1	OK		NNN
05111480000162	10	0074	-1	0	5.86	1	OK		NNN
05111480000163	10	0074	0	1	7.23	1	OK		NNN
05111480000164	10	0074	1	2	1.87	1	OK		NNN
05111480000165	10	0074	2	3	1.28	1	OK		NNN
05111480000166	10	0074	3	4	1.21	1	OK		NNN
05111480000167	10	0074	4	5	0.794	1	OK		NNN
05111480000168	10	0074	5	6	1.11	1	OK		NNN
05111480000169	10	0076	-1	0	2.06	1	OK		NNN
05111480000170	10	0076	0	1	2.45	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000171	10	0076	1	2	0.779	1	OK		NNN
05111480000172	10	0076	2	3	BLQ<(0 200)	1	OK		NNN
05111480000173	10	0076	3	4	BLQ<(0 200)	1	OK		NNN
05111480000174	10	0076	4	5	BLQ<(0 200)	1	OK		NNN
05111480000175	10	0076	5	6	BLQ<(0 200)	1	OK		NNN
05111480000176	10	0080	-1	0	2.45	1	OK		NNN
05111480000177	10	0080	0	1	2.14	1	OK		NNN
05111480000178	10	0080	1	2	2.87	1	OK		NNN
05111480000179	10	0080	2	3	3.04	1	OK		NNN
05111480000180	10	0080	3	4	0.529	1	OK		NNN
05111480000181	10	0080	4	5	1.36	1	OK		NNN
05111480000182	10	0080	5	6	3.41	1	OK		NNN
05111480000183	10	0083	-1	0	2.98	1	OK		NNN
05111480000184	10	0083	0	1	3.33	1	OK		NNN
05111480000185	10	0083	1	2	0.718	1	OK		NNN
05111480000186	10	0083	2	3	0.514	1	OK		NNN
05111480000187	10	0083	3	4	0.484	1	OK		NNN
05111480000188	10	0083	4	5	0.425	1	OK		NNN
05111480000189	10	0083	5	6	0.665	1	OK		NNN
05111480000190	12	0085	-1	0	1.74	1	OK		NNN
05111480000191	12	0085	0	1	1.95	1	OK		NNN
05111480000192	12	0085	1	2	0.492	1	OK		NNN
05111480000193	12	0085	2	3	0.308	1	OK		NNN
05111480000197	12	0086	-1	0	5.82	1	OK		NNN
05111480000198	12	0086	0	1	7.85	1	OK		NNN
05111480000199	12	0086	1	2	1.12	1	OK		NNN
05111480000200	12	0086	2	3	BLQ<(0.200)	1	OK		NNN
05111480000201	12	0086	3	4	BLQ<(0 200)	1	OK		NNN
05111480000202	12	0086	4	5	BLQ<(0 200)	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000203	12	0086	5	6	BLQ<(0 200)	1	OK		NNN
05111480000204	12	0087	-1	0	2.87	1	OK		NNN
05111480000205	12	0087	0	1	2.90	1	OK		NNN
05111480000206	12	0087	1	2	2.45	1	OK		NNN
05111480000207	12	0087	2	3	2.04	1	OK		NNN
05111480000208	12	0087	3	4	2.07	1	OK		NNN
05111480000209	44	0087	4	5	450	1	OK		NNN
05111480000210	12	0087	5	6	3.02	1	OK		NNN
05111480000211	12	0088	-1	0	1.67	1	OK		NNN
05111480000212	39	0088	0	1	2.97	1	OK		NNN
05111480000213	12	0088	1	2	0.561	1	OK		NNN
05111480000214	12	0088	2	3	BLQ<(0 200)	1	OK		NNN
05111480000215	12	0088	3	4	0.203	1	OK		NNN
05111480000216	12	0088	4	5	0.242	1	OK		NNN
05111480000217	12	0088	5	6	0.409	1	OK		NNN
05111480000218	12	0090	-1	0	9.75	1	OK		NNN
05111480000219	12	0090	0	1	14.9	1	OK		NNN
05111480000220	12	0090	1	2	8.50	1	OK		NNN
05111480000221	12	0090	2	3	1.93	1	OK		NNN
05111480000222	12	0090	3	4	1.50	1	OK		NNN
05111480000223	12	0090	4	5	1.72	1	OK		NNN
05111480000224	12	0090	5	6	1.95	1	OK		NNN
05111480000225	12	0093	-1	0	3.02	1	OK		NNN
05111480000226	12	0093	0	1	4.63	1	OK		NNN
05111480000227	12	0093	1	2	1.62	1	OK		NNN
05111480000228	12	0093	2	3	1.37	1	OK		NNN
05111480000229	12	0093	3	4	1.12	1	OK		NNN
05111480000230	12	0093	4	5	0.896	1	OK		NNN
05111480000231	12	0093	5	6	1.28	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000232	12	0104	-1	0	0.417	1	OK		NNN
05111480000233	12	0104	0	1	0.643	1	OK		NNN
05111480000234	12	0104	1	2	BLQ<(0 200)	1	OK		NNN
05111480000235	12	0104	2	3	BLQ<(0 200)	1	OK		NNN
05111480000236	12	0104	3	4	BLQ<(0 200)	1	OK		NNN
05111480000237	12	0104	4	5	BLQ<(0 200)	1	OK		NNN
05111480000238	12	0104	5	6	BLQ<(0 200)	1	OK		NNN
05111480000239	12	0105	-1	0	2.61	1	OK		NNN
05111480000240	12	0105	0	1	2.89	1	OK		NNN
05111480000241	12	0105	1	2	3.54	1	OK		NNN
05111480000242	12	0105	2	3	3.50	1	OK		NNN
05111480000243	12	0105	3	4	2.61	1	OK		NNN
05111480000244	12	0105	4	5	2.88	1	OK		NNN
05111480000245	12	0105	5	6	5.44	1	OK		NNN
05111480000246	12	0106	-1	0	1.93	1	OK		NNN
05111480000247	12	0106	0	1	2.93	1	OK		NNN
05111480000248	12	0106	1	2	0.651	1	OK		NNN
05111480000249	12	0106	2	3	0.399	1	OK		NNN
05111480000250	12	0106	3	4	0.706	1	OK		NNN
05111480000251	12	0106	4	5	0.284	1	OK		NNN
05111480000252	12	0106	5	6	0.442	1	OK		NNN
05111480000253	14	0107	-1	0	15.6	1	OK		NNN
05111480000254	14	0107	0	1	10.8	1	OK		NNN
05111480000255	14	0107	1	2	2.83	1	OK		NNN
05111480000256	14	0107	2	3	0.801	1	OK		NNN
05111480000257	14	0107	3	4	2.00	1	OK		NNN
05111480000258	14	0107	4	5	0.797	1	OK		NNN
05111480000259	14	0107	5	6	0.542	1	OK		NNN
05111480000260	14	0110	-1	0	2.59	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000261	14	0110	0	1	4.63	1	OK		NNN
05111480000262	14	0110	1	2	0.598	1	OK		NNN
05111480000263	14	0110	2	3	0.637	1	OK		NNN
05111480000264	14	0110	3	4	0.389	1	OK		NNN
05111480000265	14	0110	4	5	0.312	1	OK		NNN
05111480000266	14	0110	5	6	0.423	1	OK		NNN
05111480000267	14	0112	-1	0	2.83	1	OK		NNN
05111480000268	14	0112	0	1	3.07	1	OK		NNN
05111480000269	14	0112	1	2	0.941	1	OK		NNN
05111480000270	14	0112	2	3	0.822	1	OK		NNN
05111480000271	14	0112	3	4	0.835	1	OK		NNN
05111480000272	14	0112	4	5	0.600	1	OK		NNN
05111480000273	14	0112	5	6	0.988	1	OK		NNN
05111480000274	14	0114	-1	0	1.47	1	OK		NNN
05111480000275	14	0114	0	1	2.59	1	OK		NNN
05111480000276	14	0114	1	2	0.429	1	OK		NNN
05111480000277	14	0114	2	3	BLQ<(0 200)	1	OK		NNN
05111480000278	14	0114	3	4	BLQ<(0 200)	1	OK		NNN
05111480000279	14	0114	4	5	BLQ<(0 200)	1	OK		NNN
05111480000280	14	0114	5	6	BLQ<(0 200)	1	OK		NNN
05111480000281	14	0117	-1	0	1.26	1	OK		NNN
05111480000282	14	0117	0	1	1.56	1	OK		NNN
05111480000283	14	0117	1	2	2.22	1	OK		NNN
05111480000284	14	0117	2	3	2.19	1	OK		NNN
05111480000285	14	0117	3	4	1.74	1	OK		NNN
05111480000286	14	0117	4	5	1.47	1	OK		NNN
05111480000287	14	0117	5	6	2.10	1	OK		NNN
05111480000288	14	0118	-1	0	6.28	1	OK		NNN
05111480000289	14	0118	0	1	8.26	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000290	14	0118	1	2	9.15	1	OK		NNN
05111480000291	14	0118	2	3	8.67	1	OK		NNN
05111480000292	14	0118	3	4	10.3	1	OK		NNN
05111480000293	14	0118	4	5	6.21	1	OK		NNN
05111480000294	14	0118	5	6	9.37	1	OK		NNN
05111480000295	14	0121	-1	0	2.15	1	OK		NNN
05111480000296	14	0121	0	1	2.93	1	OK		NNN
05111480000297	14	0121	1	2	1.65	1	OK		NNN
05111480000298	14	0121	2	3	2.07	1	OK		NNN
05111480000299	14	0121	3	4	1.15	1	OK		NNN
05111480000300	14	0121	4	5	0.962	1	OK		NNN
05111480000301	14	0121	5	6	1.58	1	OK		NNN
05111480000302	14	0122	-1	0	2.68	1	OK		NNN
05111480000303	14	0122	0	1	2.52	1	OK		NNN
05111480000304	14	0122	1	2	0.704	1	OK		NNN
05111480000305	14	0122	2	3	0.827	1	OK		NNN
05111480000306	14	0122	3	4	0.719	1	OK		NNN
05111480000307	14	0122	4	5	0.422	1	OK		NNN
05111480000308	14	0122	5	6	0.487	1	OK		NNN
05111480000309	14	0123	-1	0	1.21	1	OK		NNN
05111480000310	14	0123	0	1	1.97	1	OK		NNN
05111480000311	14	0123	1	2	0.309	1	OK		NNN
05111480000312	14	0123	2	3	BLQ<(0 200)	1	OK		NNN
05111480000313	14	0123	3	4	BLQ<(0 200)	1	OK		NNN
05111480000314	14	0123	4	5	BLQ<(0 200)	1	OK		NNN
05111480000315	14	0123	5	6	BLQ<(0 200)	1	OK		NNN
05111480000316	44	0181	-1	0	2.59	1	OK		NNN
05111480000317	20	0181	0	1	3.97	1	OK		NNN
05111480000318	20	0181	1	2	1.85	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000319	20	0181	2	3	1.08	1	OK		NNN
05111480000320	20	0181	3	4	1.01	1	OK		NNN
05111480000321	20	0181	4	5	0.547	1	OK		NNN
05111480000322	20	0181	5	6	1.62	1	OK		NNN
05111480000323	22	0189	-1	0	2.09	1	OK		NNN
05111480000324	22	0189	0	1	2.46	1	OK		NNN
05111480000325	22	0189	1	2	0.440	1	OK		NNN
05111480000326	22	0189	2	3	0.369	1	OK		NNN
05111480000327	22	0189	3	4	0.412	1	OK		NNN
05111480000328	22	0189	4	5	0.373	1	OK		NNN
05111480000329	22	0189	5	6	0.570	1	OK		NNN
05111480000330	24	0206	-1	0	4.42	1	OK		NNN
05111480000331	24	0206	0	1	9.62	1	OK		NNN
05111480000332	24	0206	1	2	1.36	1	OK		NNN
05111480000333	24	0206	2	3	0.774	1	OK		NNN
05111480000334	24	0206	3	4	0.770	1	OK		NNN
05111480000335	24	0206	4	5	0.619	1	OK		NNN
05111480000336	24	0206	5	6	1.20	1	OK		NNN
05111480000337	24	0210	-1	0	2.68	1	OK		NNN
05111480000338	24	0210	0	1	2.02	1	OK		NNN
05111480000339	24	0210	1	2	0.890	1	OK		NNN
05111480000340	24	0210	2	3	0.580	1	OK		NNN
05111480000341	24	0210	3	4	0.482	1	OK		NNN
05111480000342	24	0210	4	5	0.473	1	OK		NNN
05111480000343	24	0210	5	6	0.956	1	OK		NNN
05111480000344	39	0216	-1	0	85.9	1	OK		NNN
05111480000345	26	0216	0	1	18.0	1	OK		NNN
05111480000346	39	0216	1	2	223	1	OK		NNN
05111480000347	39	0216	2	3	82.9	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000348	39	0216	3	4	141	1	OK		NNN
05111480000349	39	0216	4	5	436	1	OK		NNN
05111480000350	26	0216	5	6	20.8	1	OK		NNN
05111480000351	26	0218	-1	0	0.788	1	OK		NNN
05111480000352	26	0218	0	1	0.930	1	OK		NNN
05111480000353	26	0218	1	2	BLQ<(0 200)	1	OK		NNN
05111480000354	26	0218	2	3	BLQ<(0 200)	1	OK		NNN
05111480000355	26	0218	3	4	BLQ<(0 200)	1	OK		NNN
05111480000356	26	0218	4	5	BLQ<(0 200)	1	OK		NNN
05111480000357	26	0218	5	6	BLQ<(0 200)	1	OK		NNN
05111480000358	26	0220	-1	0	1.12	1	OK		NNN
05111480000359	26	0220	0	1	1.65	1	OK		NNN
05111480000360	26	0220	1	2	0.236	1	OK		NNN
05111480000361	26	0220	2	3	BLQ<(0 200)	1	OK		NNN
05111480000362	26	0220	3	4	BLQ<(0 200)	1	OK		NNN
05111480000363	26	0220	4	5	BLQ<(0 200)	1	OK		NNN
05111480000364	26	0220	5	6	BLQ<(0 200)	1	OK		NNN
05111480000365	26	0224	-1	0	3.81	1	OK		NNN
05111480000366	26	0224	0	1	5.09	1	OK		NNN
05111480000367	26	0224	1	2	4.34	1	OK		NNN
05111480000368	26	0224	2	3	5.02	1	OK		NNN
05111480000369	26	0224	3	4	5.65	1	OK		NNN
05111480000370	26	0224	4	5	4.77	1	OK		NNN
05111480000371	26	0224	5	6	4.11	1	OK		NNN
05111480000372	26	0228	-1	0	2.27	1	OK		NNN
05111480000373	26	0228	0	1	4.10	1	OK		NNN
05111480000374	26	0228	1	2	1.13	1	OK		NNN
05111480000375	26	0228	2	3	0.809	1	OK		NNN
05111480000376	26	0228	3	4	0.933	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000377	26	0228	4	5	0.718	1	OK		NNN
05111480000378	26	0228	5	6	0.627	1	OK		NNN
05111480000379	26	0229	-1	0	3.06	1	OK		NNN
05111480000380	26	0229	0	1	3.23	1	OK		NNN
05111480000381	26	0229	1	2	4.01	1	OK		NNN
05111480000382	26	0229	2	3	4.21	1	OK		NNN
05111480000383	26	0229	3	4	4.22	1	OK		NNN
05111480000384	26	0229	4	5	4.23	1	OK		NNN
05111480000385	26	0229	5	6	2.37	1	OK		NNN
05111480000386	26	0230	-1	0	2.82	1	OK		NNN
05111480000387	26	0230	0	1	5.29	1	OK		NNN
05111480000388	26	0230	1	2	3.42	1	OK		NNN
05111480000389	26	0230	2	3	3.90	1	OK		NNN
05111480000390	26	0230	3	4	3.67	1	OK		NNN
05111480000391	26	0230	4	5	3.44	1	OK		NNN
05111480000392	26	0230	5	6	4.10	1	OK		NNN
05111480000393	26	0232	-1	0	0.551	1	OK		NNN
05111480000394	26	0232	0	1	0.881	1	OK		NNN
05111480000395	26	0232	1	2	0.210	1	OK		NNN
05111480000396	26	0232	2	3	0.212	1	OK		NNN
05111480000397	26	0232	3	4	0.231	1	OK		NNN
05111480000398	26	0232	4	5	BLQ<(0.200)	1	OK		NNN
05111480000399	26	0232	5	6	0.239	1	OK		NNN
05111480000400	26	0234	-1	0	1.73	1	OK		NNN
05111480000401	26	0234	0	1	3.46	1	OK		NNN
05111480000402	26	0234	1	2	0.763	1	OK		NNN
05111480000403	26	0234	2	3	0.763	1	OK		NNN
05111480000404	26	0234	3	4	0.802	1	OK		NNN
05111480000405	26	0234	4	5	0.511	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000406	26	0234	5	6	0.595	1	OK		NNN
05111480000407	28	0240	-1	0	2.75	1	OK		NNN
05111480000408	28	0240	0	1	4.04	1	OK		NNN
05111480000409	28	0240	1	2	0.678	1	OK		NNN
05111480000410	28	0240	2	3	BLQ<(0 200)	1	OK		NNN
05111480000411	28	0240	3	4	BLQ<(0 200)	1	OK		NNN
05111480000412	28	0240	4	5	BLQ<(0 200)	1	OK		NNN
05111480000413	28	0240	5	6	BLQ<(0 200)	1	OK		NNN
05111480000414	28	0241	-1	0	4.85	1	OK		NNN
05111480000415	28	0241	0	1	5.47	1	OK		NNN
05111480000416	28	0241	1	2	0.809	1	OK		NNN
05111480000417	28	0241	2	3	0.658	1	OK		NNN
05111480000418	28	0241	3	4	0.756	1	OK		NNN
05111480000419	28	0241	4	5	0.509	1	OK		NNN
05111480000420	28	0241	5	6	0.510	1	OK		NNN
05111480000421		0242	-1	0	.	1	Other	Analysis not required	NNN
05111480000422		0242	0	1	.	1	Other	Analysis not required	NNN
05111480000428	28	0244	-1	0	4.13	1	OK		NNN
05111480000429	28	0244	0	1	4.68	1	OK		NNN
05111480000430	28	0244	1	2	0.831	1	OK		NNN
05111480000431	28	0244	2	3	0.584	1	OK		NNN
05111480000432	28	0244	3	4	0.584	1	OK		NNN
05111480000433	28	0244	4	5	0.411	1	OK		NNN
05111480000434	28	0244	5	6	0.526	1	OK		NNN
05111480000435		0245	-1	0	.	1	Other	Analysis not required	NNN
05111480000436		0245	0	1	.	1	Other	Analysis not required	NNN
05111480000442		0247	-1	0	.	1	Other	Analysis not required	NNN
05111480000443		0247	0	1	.	1	Other	Analysis not required	NNN
05111480000449	28	0249	-1	0	5.42	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000450	28	0249	0	1	6.38	1	OK		NNN
05111480000451	28	0249	1	2	0.880	1	OK		NNN
05111480000452	28	0249	2	3	BLQ<(0 200)	1	OK		NNN
05111480000453	28	0249	3	4	BLQ<(0 200)	1	OK		NNN
05111480000454	28	0249	4	5	BLQ<(0 200)	1	OK		NNN
05111480000455	28	0249	5	6	BLQ<(0 200)	1	OK		NNN
05111480000456	28	0251	-1	0	1.62	1	OK		NNN
05111480000457	28	0251	0	1	1.65	1	OK		NNN
05111480000458	28	0251	1	2	BLQ<(0 200)	1	OK		NNN
05111480000459	28	0251	2	3	BLQ<(0 200)	1	OK		NNN
05111480000460	28	0251	3	4	BLQ<(0 200)	1	OK		NNN
05111480000461	28	0251	4	5	BLQ<(0 200)	1	OK		NNN
05111480000462	28	0251	5	6	BLQ<(0 200)	1	OK		NNN
05111480000463	28	0252	-1	0	1.01	1	OK		NNN
05111480000464	28	0252	0	1	1.23	1	OK		NNN
05111480000465	28	0252	1	2	BLQ<(0 200)	1	OK		NNN
05111480000466	28	0252	2	3	BLQ<(0 200)	1	OK		NNN
05111480000467	28	0252	3	4	BLQ<(0 200)	1	OK		NNN
05111480000468	28	0252	4	5	BLQ<(0 200)	1	OK		NNN
05111480000469	28	0252	5	6	BLQ<(0 200)	1	OK		NNN
05111480000470	28	0255	-1	0	0.957	1	OK		NNN
05111480000471	28	0255	0	1	1.60	1	OK		NNN
05111480000472	28	0255	1	2	0.250	1	OK		NNN
05111480000473	28	0255	2	3	0.371	1	OK		NNN
05111480000474	28	0255	3	4	0.362	1	OK		NNN
05111480000475	28	0255	4	5	0.254	1	OK		NNN
05111480000476	28	0255	5	6	0.474	1	OK		NNN
05111480000477	28	0256	-1	0	0.843	1	OK		NNN
05111480000478	28	0256	0	1	0.854	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000479	28	0256	1	2	0.533	1	OK		NNN
05111480000480	28	0256	2	3	0.302	1	OK		NNN
05111480000481	28	0256	3	4	0.618	1	OK		NNN
05111480000482	28	0256	4	5	0.334	1	OK		NNN
05111480000483	28	0256	5	6	0.926	1	OK		NNN
05111480000484	28	0262	-1	0	1.20	1	OK		NNN
05111480000485	28	0262	0	1	2.24	1	OK		NNN
05111480000486	28	0262	1	2	1.61	1	OK		NNN
05111480000487	28	0262	2	3	1.56	1	OK		NNN
05111480000488	28	0262	3	4	2.17	1	OK		NNN
05111480000489	28	0262	4	5	1.57	1	OK		NNN
05111480000490	28	0262	5	6	0.863	1	OK		NNN
05111480000491	30	0264	-1	0	1.35	1	OK		NNN
05111480000492	30	0264	0	1	1.48	1	OK		NNN
05111480000493	30	0264	1	2	0.896	1	OK		NNN
05111480000494	30	0264	2	3	0.761	1	OK		NNN
05111480000495	30	0264	3	4	0.897	1	OK		NNN
05111480000496	30	0264	4	5	BLQ<(0 200)	1	OK		NNN
05111480000497	30	0264	5	6	BLQ<(0 200)	1	OK		NNN
05111480000498	30	0265	-1	0	6.39	1	OK		NNN
05111480000499	30	0265	0	1	8.13	1	OK		NNN
05111480000500	30	0265	1	2	0.778	1	OK		NNN
05111480000501	30	0265	2	3	BLQ<(0 200)	1	OK		NNN
05111480000502	30	0265	3	4	BLQ<(0 200)	1	OK		NNN
05111480000503	30	0265	4	5	BLQ<(0 200)	1	OK		NNN
05111480000504	30	0265	5	6	BLQ<(0 200)	1	OK		NNN
05111480000505	30	0266	-1	0	2.46	1	OK		NNN
05111480000506	30	0266	0	1	2.47	1	OK		NNN
05111480000507	30	0266	1	2	0.357	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000508	30	0266	2	3	BLQ<(0 200)	1	OK		NNN
05111480000509	30	0266	3	4	BLQ<(0 200)	1	OK		NNN
05111480000510	30	0266	4	5	BLQ<(0 200)	1	OK		NNN
05111480000511	30	0266	5	6	BLQ<(0 200)	1	OK		NNN
05111480000512		0269	-1	0	.	1	Other	Analysis not required	NNN
05111480000513		0269	0	1	.	1	Other	Analysis not required	NNN
05111480000519	30	0272	-1	0	2.47	1	OK		NNN
05111480000520	30	0272	0	1	2.58	1	OK		NNN
05111480000521	30	0272	1	2	0.874	1	OK		NNN
05111480000522	30	0272	2	3	0.923	1	OK		NNN
05111480000523	30	0272	3	4	1.10	1	OK		NNN
05111480000524	30	0272	4	5	0.796	1	OK		NNN
05111480000525	30	0272	5	6	1.40	1	OK		NNN
05111480000526	30	0273	-1	0	2.89	1	OK		NNN
05111480000527	30	0273	0	1	5.01	1	OK		NNN
05111480000528	30	0273	1	2	0.458	1	OK		NNN
05111480000529	30	0273	2	3	BLQ<(0 200)	1	OK		NNN
05111480000530	30	0273	3	4	BLQ<(0 200)	1	OK		NNN
05111480000531	30	0273	4	5	BLQ<(0 200)	1	OK		NNN
05111480000532	30	0273	5	6	BLQ<(0 200)	1	OK		NNN
05111480000533	30	0276	-1	0	0.568	1	OK		NNN
05111480000534	30	0276	0	1	0.831	1	OK		NNN
05111480000535	30	0276	1	2	0.245	1	OK		NNN
05111480000536	30	0276	2	3	0.376	1	OK		NNN
05111480000537	30	0276	3	4	0.455	1	OK		NNN
05111480000538	30	0276	4	5	0.518	1	OK		NNN
05111480000539	30	0276	5	6	0.543	1	OK		NNN
05111480000540	30	0277	-1	0	0.947	1	OK		NNN
05111480000541	30	0277	0	1	1.58	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000542	30	0277	1	2	0.746	1	OK		NNN
05111480000543	30	0277	2	3	0.716	1	OK		NNN
05111480000544	30	0277	3	4	0.640	1	OK		NNN
05111480000545	30	0277	4	5	0.485	1	OK		NNN
05111480000546	30	0277	5	6	0.759	1	OK		NNN
05111480000547	30	0278	-1	0	1.88	1	OK		NNN
05111480000548	30	0278	0	1	1.89	1	OK		NNN
05111480000549	30	0278	1	2	3.30	1	OK		NNN
05111480000550	30	0278	2	3	2.62	1	OK		NNN
05111480000551	30	0278	3	4	2.38	1	OK		NNN
05111480000552	30	0278	4	5	1.74	1	OK		NNN
05111480000553	30	0278	5	6	1.75	1	OK		NNN
05111480000554	30	0279	-1	0	3.08	1	OK		NNN
05111480000555	30	0279	0	1	2.70	1	OK		NNN
05111480000556	30	0279	1	2	0.906	1	OK		NNN
05111480000557	30	0279	2	3	0.662	1	OK		NNN
05111480000558	30	0279	3	4	0.773	1	OK		NNN
05111480000559	30	0279	4	5	0.506	1	OK		NNN
05111480000560	30	0279	5	6	0.706	1	OK		NNN
05111480000561	32	0281	-1	0	11.0	1	OK		NNN
05111480000562	32	0281	0	1	14.5	1	OK		NNN
05111480000563	32	0281	1	2	3.89	1	OK		NNN
05111480000564	32	0281	2	3	2.22	1	OK		NNN
05111480000565	32	0281	3	4	2.87	1	OK		NNN
05111480000566	32	0281	4	5	1.68	1	OK		NNN
05111480000567	32	0281	5	6	2.92	1	OK		NNN
05111480000568	32	0282	-1	0	2.59	1	OK		NNN
05111480000569	32	0282	0	1	5.19	1	OK		NNN
05111480000570	32	0282	1	2	0.932	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000571	32	0282	2	3	0.673	1	OK		NNN
05111480000572	32	0282	3	4	0.845	1	OK		NNN
05111480000573	32	0282	4	5	0.337	1	OK		NNN
05111480000574	32	0282	5	6	0.367	1	OK		NNN
05111480000575	32	0283	-1	0	0.854	1	OK		NNN
05111480000576	32	0283	0	1	1.18	1	OK		NNN
05111480000577	32	0283	1	2	1.11	1	OK		NNN
05111480000578	32	0283	2	3	1.25	1	OK		NNN
05111480000579	32	0283	3	4	0.906	1	OK		NNN
05111480000580	32	0283	4	5	0.883	1	OK		NNN
05111480000581	32	0283	5	6	0.770	1	OK		NNN
05111480000582	32	0285	-1	0	4.02	1	OK		NNN
05111480000583	32	0285	0	1	6.95	1	OK		NNN
05111480000584	32	0285	1	2	7.97	1	OK		NNN
05111480000585	32	0285	2	3	9.24	1	OK		NNN
05111480000586	32	0285	3	4	9.04	1	OK		NNN
05111480000587	32	0285	4	5	5.46	1	OK		NNN
05111480000588	32	0285	5	6	9.19	1	OK		NNN
05111480000589	32	0287	-1	0	1.75	1	OK		NNN
05111480000590	32	0287	0	1	2.86	1	OK		NNN
05111480000591	32	0287	1	2	1.26	1	OK		NNN
05111480000592	32	0287	2	3	0.936	1	OK		NNN
05111480000593	32	0287	3	4	1.22	1	OK		NNN
05111480000594	32	0287	4	5	0.913	1	OK		NNN
05111480000595	32	0287	5	6	1.74	1	OK		NNN
05111480000596	32	0289	-1	0	6.79	1	OK		NNN
05111480000597	32	0289	0	1	8.28	1	OK		NNN
05111480000598	32	0289	1	2	1.55	1	OK		NNN
05111480000599	32	0289	2	3	BLQ<(0 200)	1	OK		NNN



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000600	32	0289	3	4	BLQ<(0 200)	1	OK		NNN
05111480000601	32	0289	4	5	BLQ<(0 200)	1	OK		NNN
05111480000602	32	0289	5	6	BLQ<(0 200)	1	OK		NNN
05111480000603	32	0291	-1	0	1.20	1	OK		NNN
05111480000604	32	0291	0	1	1.18	1	OK		NNN
05111480000605	32	0291	1	2	0.342	1	OK		NNN
05111480000606	32	0291	2	3	0.469	1	OK		NNN
05111480000607	32	0291	3	4	0.422	1	OK		NNN
05111480000608	32	0291	4	5	0.459	1	OK		NNN
05111480000609	32	0291	5	6	0.639	1	OK		NNN
05111480000610	32	0292	-1	0	4.50	1	OK		NNN
05111480000611	32	0292	0	1	7.09	1	OK		NNN
05111480000612	32	0292	1	2	1.57	1	OK		NNN
05111480000613	32	0292	2	3	BLQ<(0 200)	1	OK		NNN
05111480000614	32	0292	3	4	BLQ<(0 200)	1	OK		NNN
05111480000615	32	0292	4	5	BLQ<(0 200)	1	OK		NNN
05111480000616	32	0292	5	6	BLQ<(0 200)	1	OK		NNN
05111480000617	32	0296	-1	0	6.35	1	OK		NNN
05111480000618	32	0296	0	1	6.57	1	OK		NNN
05111480000619	32	0296	1	2	1.45	1	OK		NNN
05111480000620	32	0296	2	3	1.33	1	OK		NNN
05111480000621	32	0296	3	4	1.05	1	OK		NNN
05111480000622	32	0296	4	5	0.863	1	OK		NNN
05111480000623	32	0296	5	6	1.01	1	OK		NNN
05111480000624	34	0298	-1	0	2.49	1	OK		NNN
05111480000625	34	0298	0	1	3.72	1	OK		NNN
05111480000626	34	0298	1	2	4.21	1	OK		NNN
05111480000627	34	0298	2	3	2.47	1	OK		NNN
05111480000628	34	0298	3	4	2.68	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000629	34	0298	4	5	2.89	1	OK		NNN
05111480000630	34	0298	5	6	3.72	1	OK		NNN
05111480000631		0299	-1	0	.	1	Other	Analysis not required	NNN
05111480000632		0299	0	1	.	1	Other	Analysis not required	NNN
05111480000638	34	0300	-1	0	0.311	1	OK		NNN
05111480000639	34	0300	0	1	0.325	1	OK		NNN
05111480000640	34	0300	1	2	BLQ<(0 200)	1	OK		NNN
05111480000641	34	0300	2	3	BLQ<(0 200)	1	OK		NNN
05111480000642	34	0300	3	4	BLQ<(0 200)	1	OK		NNN
05111480000643	34	0300	4	5	BLQ<(0 200)	1	OK		NNN
05111480000644	34	0300	5	6	BLQ<(0 200)	1	OK		NNN
05111480000645	34	0301	-1	0	2.45	1	OK		NNN
05111480000646	34	0301	0	1	4.47	1	OK		NNN
05111480000647	34	0301	1	2	1.05	1	OK		NNN
05111480000648	34	0301	2	3	0.601	1	OK		NNN
05111480000649	34	0301	3	4	1.04	1	OK		NNN
05111480000650	34	0301	4	5	0.772	1	OK		NNN
05111480000651	34	0301	5	6	0.831	1	OK		NNN
05111480000652	34	0306	-1	0	5.59	1	OK		NNN
05111480000653	34	0306	0	1	7.63	1	OK		NNN
05111480000654	34	0306	1	2	0.892	1	OK		NNN
05111480000655	34	0306	2	3	BLQ<(0 200)	1	OK		NNN
05111480000656	34	0306	3	4	BLQ<(0 200)	1	OK		NNN
05111480000657	34	0306	4	5	BLQ<(0 200)	1	OK		NNN
05111480000658	34	0306	5	6	BLQ<(0 200)	1	OK		NNN
05111480000659	34	0307	-1	0	4.93	1	OK		NNN
05111480000660	34	0307	0	1	8.73	1	OK		NNN
05111480000661	34	0307	1	2	2.20	1	OK		NNN
05111480000662	34	0307	2	3	1.22	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000663	34	0307	3	4	1.39	1	OK		NNN
05111480000664	34	0307	4	5	1.05	1	OK		NNN
05111480000665	34	0307	5	6	1.39	1	OK		NNN
05111480000666	34	0308	-1	0	7.15	1	OK		NNN
05111480000667	34	0308	0	1	12.0	1	OK		NNN
05111480000668	34	0308	1	2	3.01	1	OK		NNN
05111480000669	34	0308	2	3	2.08	1	OK		NNN
05111480000670	34	0308	3	4	3.32	1	OK		NNN
05111480000671	34	0308	4	5	3.97	1	OK		NNN
05111480000672	34	0308	5	6	1.97	1	OK		NNN
05111480000673		0309	-1	0	.	1	Other	Analysis not required	NNN
05111480000674		0309	0	1	.	1	Other	Analysis not required	NNN
05111480000680		0312	-1	0	.	1	Other	Analysis not required	NNN
05111480000681		0312	0	1	.	1	Other	Analysis not required	NNN
05111480000687	34	0313	-1	0	4.98	1	OK		NNN
05111480000688	34	0313	0	1	4.96	1	OK		NNN
05111480000689	34	0313	1	2	6.80	1	OK		NNN
05111480000690	34	0313	2	3	4.96	1	OK		NNN
05111480000691	34	0313	3	4	5.39	1	OK		NNN
05111480000692	34	0313	4	5	4.05	1	OK		NNN
05111480000693	34	0313	5	6	4.45	1	OK		NNN
05111480000694	37	0025	-1	0	1.65	1	OK		NNN
05111480000695	37	0025	0	1	2.62	1	OK		NNN
05111480000696	37	0025	1	2	2.90	1	OK		NNN
05111480000697	37	0025	2	3	2.65	1	OK		NNN
05111480000698	37	0025	3	4	3.37	1	OK		NNN
05111480000699	37	0025	4	5	2.35	1	OK		NNN
05111480000700	37	0025	5	6	2.48	1	OK		NNN
05111480000701	37	0028	-1	0	1.43	1	OK		NNN



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000702	37	0028	0	1	2.01	1	OK		NNN
05111480000703	37	0028	1	2	0.232	1	OK		NNN
05111480000704	37	0028	2	3	BLQ<(0 200)	1	OK		NNN
05111480000705	37	0028	3	4	BLQ<(0 200)	1	OK		NNN
05111480000706	37	0028	4	5	BLQ<(0 200)	1	OK		NNN
05111480000707	37	0028	5	6	BLQ<(0 200)	1	OK		NNN
05111480000708	37	0029	-1	0	2.82	1	OK		NNN
05111480000709	37	0029	0	1	1.59	1	OK		NNN
05111480000710	37	0029	1	2	3.06	1	OK		NNN
05111480000711	37	0029	2	3	3.41	1	OK		NNN
05111480000712	37	0029	3	4	2.77	1	OK		NNN
05111480000713	37	0029	4	5	1.24	1	OK		NNN
05111480000714	37	0029	5	6	3.03	1	OK		NNN
05111480000715	37	0030	-1	0	2.72	1	OK		NNN
05111480000716	37	0030	0	1	4.86	1	OK		NNN
05111480000717	37	0030	1	2	1.26	1	OK		NNN
05111480000718	37	0030	2	3	0.568	1	OK		NNN
05111480000719	37	0030	3	4	1.13	1	OK		NNN
05111480000720	37	0030	4	5	1.21	1	OK		NNN
05111480000721	37	0030	5	6	1.14	1	OK		NNN
05111480000722	6	0031	-1	0	3.44	1	OK		NNN
05111480000723	6	0031	0	1	6.55	1	OK		NNN
05111480000724	6	0031	1	2	1.17	1	OK		NNN
05111480000725	6	0031	2	3	0.663	1	OK		NNN
05111480000726	6	0031	3	4	0.685	1	OK		NNN
05111480000727	6	0031	4	5	0.356	1	OK		NNN
05111480000728	6	0031	5	6	0.549	1	OK		NNN
05111480000729	6	0034	-1	0	1.84	1	OK		NNN
05111480000730	6	0034	0	1	1.90	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000731	6	0034	1	2	0.771	1	OK		NNN
05111480000732	6	0034	2	3	0.430	1	OK		NNN
05111480000733	6	0034	3	4	0.546	1	OK		NNN
05111480000734	6	0034	4	5	0.563	1	OK		NNN
05111480000735	6	0034	5	6	0.240	1	OK		NNN
05111480000736	6	0035	-1	0	1.77	1	OK		NNN
05111480000737	6	0035	0	1	1.69	1	OK		NNN
05111480000738	6	0035	1	2	2.02	1	OK		NNN
05111480000739	6	0035	2	3	1.79	1	OK		NNN
05111480000740	6	0035	3	4	1.65	1	OK		NNN
05111480000741	6	0035	4	5	1.84	1	OK		NNN
05111480000742	6	0035	5	6	2.45	1	OK		NNN
05111480000743	6	0038	-1	0	7.60	1	OK		NNN
05111480000744	6	0038	0	1	7.47	1	OK		NNN
05111480000745	6	0038	1	2	1.29	1	OK		NNN
05111480000746	6	0038	2	3	0.580	1	OK		NNN
05111480000747	6	0038	3	4	0.648	1	OK		NNN
05111480000748	6	0038	4	5	0.412	1	OK		NNN
05111480000749	6	0038	5	6	0.791	1	OK		NNN
05111480000750	6	0039	-1	0	1.36	1	OK		NNN
05111480000751	6	0039	0	1	1.78	1	OK		NNN
05111480000752	6	0039	1	2	0.496	1	OK		NNN
05111480000753	6	0039	2	3	BLQ<(0.200)	1	OK		NNN
05111480000754	6	0039	3	4	0.310	1	OK		NNN
05111480000755	6	0039	4	5	0.238	1	OK		NNN
05111480000756	6	0039	5	6	0.293	1	OK		NNN
05111480000757	6	0044	-1	0	1.23	1	OK		NNN
05111480000758	6	0044	0	1	1.73	1	OK		NNN
05111480000759	6	0044	1	2	0.734	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000760	6	0044	2	3	0.275	1	OK		NNN
05111480000761	6	0044	3	4	0.320	1	OK		NNN
05111480000762	6	0044	4	5	0.229	1	OK		NNN
05111480000763	6	0044	5	6	0.452	1	OK		NNN
05111480000764	8	0052	-1	0	5.95	1	OK		NNN
05111480000765	8	0052	0	1	8.60	1	OK		NNN
05111480000766	8	0052	1	2	1.07	1	OK		NNN
05111480000767	8	0052	2	3	0.240	1	OK		NNN
05111480000768	8	0052	3	4	BLQ<(0 200)	1	OK		NNN
05111480000769	8	0052	4	5	BLQ<(0 200)	1	OK		NNN
05111480000770	8	0052	5	6	BLQ<(0 200)	1	OK		NNN
05111480000771	8	0053	-1	0	1.90	1	OK		NNN
05111480000772	8	0053	0	1	1.92	1	OK		NNN
05111480000773	8	0053	1	2	1.81	1	OK		NNN
05111480000774	39	0053	2	3	2.47	1	OK		NNN
05111480000775	8	0053	3	4	2.48	1	OK		NNN
05111480000776	8	0053	4	5	2.03	1	OK		NNN
05111480000777	8	0053	5	6	2.28	1	OK		NNN
05111480000778	8	0055	-1	0	2.93	1	OK		NNN
05111480000779	8	0055	0	1	4.06	1	OK		NNN
05111480000780	8	0055	1	2	3.09	1	OK		NNN
05111480000781	8	0055	2	3	2.71	1	OK		NNN
05111480000782	8	0055	3	4	2.66	1	OK		NNN
05111480000783	8	0055	4	5	2.88	1	OK		NNN
05111480000784	8	0055	5	6	3.42	1	OK		NNN
05111480000785	8	0057	-1	0	4.83	1	OK		NNN
05111480000786	8	0057	0	1	5.75	1	OK		NNN
05111480000787	8	0057	1	2	1.77	1	OK		NNN
05111480000788	8	0057	2	3	0.845	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000789	8	0057	3	4	1.57	1	OK		NNN
05111480000790	8	0057	4	5	0.878	1	OK		NNN
05111480000791	8	0057	5	6	1.35	1	OK		NNN
05111480000792	8	0060	-1	0	6.51	1	OK		NNN
05111480000793	8	0060	0	1	8.23	1	OK		NNN
05111480000794	8	0060	1	2	2.61	1	OK		NNN
05111480000795	8	0060	2	3	1.13	1	OK		NNN
05111480000796	8	0060	3	4	1.14	1	OK		NNN
05111480000797	8	0060	4	5	1.27	1	OK		NNN
05111480000798	8	0060	5	6	1.07	1	OK		NNN
05111480000799	8	0062	-1	0	1.94	1	OK		NNN
05111480000800	8	0062	0	1	2.91	1	OK		NNN
05111480000801	8	0062	1	2	0.364	1	OK		NNN
05111480000802	8	0062	2	3	BLQ<(0 200)	1	OK		NNN
05111480000803	8	0062	3	4	BLQ<(0 200)	1	OK		NNN
05111480000804	8	0062	4	5	BLQ<(0 200)	1	OK		NNN
05111480000805	8	0062	5	6	BLQ<(0 200)	1	OK		NNN
05111480000806	8	0064	-1	0	1.01	1	OK		NNN
05111480000807	8	0064	0	1	1.87	1	OK		NNN
05111480000808	8	0064	1	2	1.38	1	OK		NNN
05111480000809	8	0064	2	3	1.08	1	OK		NNN
05111480000810	8	0064	3	4	1.34	1	OK		NNN
05111480000811	8	0064	4	5	1.17	1	OK		NNN
05111480000812	8	0064	5	6	2.46	1	OK		NNN
05111480000820	16	0126	-1	0	2.13	1	OK		NNN
05111480000821	16	0126	0	1	1.78	1	OK		NNN
05111480000822	16	0126	1	2	3.04	1	OK		NNN
05111480000823	16	0126	2	3	2.41	1	OK		NNN
05111480000824	16	0126	3	4	2.06	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000825	16	0126	4	5	1.53	1	OK		NNN
05111480000826	16	0126	5	6	1.67	1	OK		NNN
05111480000827	16	0127	-1	0	5.33	1	OK		NNN
05111480000828	16	0127	0	1	3.67	1	OK		NNN
05111480000829	16	0127	1	2	0.461	1	OK		NNN
05111480000830	16	0127	2	3	BLQ<(0 200)	1	OK		NNN
05111480000831	16	0127	3	4	BLQ<(0 200)	1	OK		NNN
05111480000832	16	0127	4	5	BLQ<(0 200)	1	OK		NNN
05111480000833	16	0127	5	6	BLQ<(0 200)	1	OK		NNN
05111480000834	16	0128	-1	0	5.50	1	OK		NNN
05111480000835	16	0128	0	1	4.33	1	OK		NNN
05111480000836	16	0128	1	2	0.772	1	OK		NNN
05111480000837	16	0128	2	3	BLQ<(0 200)	1	OK		NNN
05111480000838	16	0128	3	4	BLQ<(0 200)	1	OK		NNN
05111480000839	16	0128	4	5	BLQ<(0 200)	1	OK		NNN
05111480000840	16	0128	5	6	BLQ<(0 200)	1	OK		NNN
05111480000841	16	0129	-1	0	2.61	1	OK		NNN
05111480000842	16	0129	0	1	1.86	1	OK		NNN
05111480000843	16	0129	1	2	0.537	1	OK		NNN
05111480000844	16	0129	2	3	BLQ<(0 200)	1	OK		NNN
05111480000845	16	0129	3	4	0.609	1	OK		NNN
05111480000846	16	0129	4	5	0.226	1	OK		NNN
05111480000847	16	0129	5	6	0.360	1	OK		NNN
05111480000848	16	0130	-1	0	5.12	1	OK		NNN
05111480000849	16	0130	0	1	7.09	1	OK		NNN
05111480000850	16	0130	1	2	1.67	1	OK		NNN
05111480000851	16	0130	2	3	1.31	1	OK		NNN
05111480000852	16	0130	3	4	1.65	1	OK		NNN
05111480000853	16	0130	4	5	1.19	1	OK		NNN



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000854	16	0130	5	6	1.33	1	OK		NNN
05111480000855	16	0133	-1	0	4.44	1	OK		NNN
05111480000856	16	0133	0	1	4.77	1	OK		NNN
05111480000857	16	0133	1	2	0.651	1	OK		NNN
05111480000858	16	0133	2	3	BLQ<(0 200)	1	OK		NNN
05111480000859	16	0133	3	4	BLQ<(0 200)	1	OK		NNN
05111480000860	16	0133	4	5	BLQ<(0 200)	1	OK		NNN
05111480000861	16	0133	5	6	BLQ<(0 200)	1	OK		NNN
05111480000862	16	0134	-1	0	2.33	1	OK		NNN
05111480000863	16	0134	0	1	3.67	1	OK		NNN
05111480000864	16	0134	1	2	1.46	1	OK		NNN
05111480000865	16	0134	2	3	0.948	1	OK		NNN
05111480000866	16	0134	3	4	1.19	1	OK		NNN
05111480000867	16	0134	4	5	0.810	1	OK		NNN
05111480000868	16	0134	5	6	1.63	1	OK		NNN
05111480000869	16	0136	-1	0	4.48	1	OK		NNN
05111480000870	16	0136	0	1	4.99	1	OK		NNN
05111480000871	16	0136	1	2	1.30	1	OK		NNN
05111480000872	16	0136	2	3	0.984	1	OK		NNN
05111480000873	16	0136	3	4	0.961	1	OK		NNN
05111480000874	16	0136	4	5	0.589	1	OK		NNN
05111480000875	16	0136	5	6	1.23	1	OK		NNN
05111480000876	16	0137	-1	0	1.17	1	OK		NNN
05111480000877	16	0137	0	1	1.00	1	OK		NNN
05111480000878	16	0137	1	2	BLQ<(0 200)	1	OK		NNN
05111480000879	16	0137	2	3	BLQ<(0 200)	1	OK		NNN
05111480000880	16	0137	3	4	BLQ<(0 200)	1	OK		NNN
05111480000881	16	0137	4	5	BLQ<(0 200)	1	OK		NNN
05111480000882	16	0137	5	6	BLQ<(0 200)	1	OK		NNN



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000883	18	0139	-1	0	7.55	1	OK		NNN
05111480000884	18	0139	0	1	12.5	1	OK		NNN
05111480000885	18	0139	1	2	7.91	1	OK		NNN
05111480000886	18	0139	2	3	9.32	1	OK		NNN
05111480000887	18	0139	3	4	11.0	1	OK		NNN
05111480000888	18	0139	4	5	8.06	1	OK		NNN
05111480000889	18	0139	5	6	12.2	1	OK		NNN
05111480000890	18	0140	-1	0	1.92	1	OK		NNN
05111480000891	18	0140	0	1	2.14	1	OK		NNN
05111480000892	18	0140	1	2	1.81	1	OK		NNN
05111480000893	18	0140	2	3	1.90	1	OK		NNN
05111480000894	18	0140	3	4	1.95	1	OK		NNN
05111480000895	18	0140	4	5	1.28	1	OK		NNN
05111480000896	18	0140	5	6	1.64	1	OK		NNN
05111480000897	18	0145	-1	0	1.56	1	OK		NNN
05111480000898	18	0145	0	1	3.11	1	OK		NNN
05111480000899	18	0145	1	2	0.737	1	OK		NNN
05111480000900	18	0145	2	3	BLQ<(0 200)	1	OK		NNN
05111480000901	18	0145	3	4	BLQ<(0 200)	1	OK		NNN
05111480000902	18	0145	4	5	BLQ<(0 200)	1	OK		NNN
05111480000903	18	0145	5	6	BLQ<(0 200)	1	OK		NNN
05111480000904	18	0147	-1	0	2.83	1	OK		NNN
05111480000905	18	0147	0	1	28.2	1	OK		NNN
05111480000906	39	0147	1	2	795	1	OK		NNN
05111480000907	39	0147	2	3	993	1	OK		NNN
05111480000908	39	0147	3	4	608	1	OK		NNN
05111480000909	39	0147	4	5	315	1	OK		NNN
05111480000910	39	0147	5	6	1840	1	OK		NNN
05111480000911	18	0148	-1	0	6.16	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000912	18	0148	0	1	7.35	1	OK		NNN
05111480000913	18	0148	1	2	7.93	1	OK		NNN
05111480000914	18	0148	2	3	5.95	1	OK		NNN
05111480000915	18	0148	3	4	6.55	1	OK		NNN
05111480000916	18	0148	4	5	5.79	1	OK		NNN
05111480000917		0148	5	6	5.23	1	OK		NNN
05111480000918	18	0149	-1	0	1.76	1	OK		NNN
05111480000919	18	0149	0	1	1.71	1	OK		NNN
05111480000920	18	0149	1	2	0.515	1	OK		NNN
05111480000921	18	0149	2	3	0.560	1	OK		NNN
05111480000922		0149	3	4	0.280	1	OK		NNN
05111480000923	18	0149	4	5	0.931	1	OK		NNN
05111480000924	18	0149	5	6	0.606	1	OK		NNN
05111480000925	18	0150	-1	0	9.50	1	OK		NNN
05111480000926	18	0150	0	1	8.57	1	OK		NNN
05111480000927	18	0150	1	2	1.62	1	OK		NNN
05111480000928	18	0150	2	3	BLQ<(0 200)	1	OK		NNN
05111480000929	18	0150	3	4	BLQ<(0 200)	1	OK		NNN
05111480000930	18	0150	4	5	BLQ<(0 200)	1	OK		NNN
05111480000931	18	0150	5	6	BLQ<(0 200)	1	OK		NNN
05111480000932	18	0152	-1	0	1.46	1	OK		NNN
05111480000933	18	0152	0	1	1.20	1	OK		NNN
05111480000934	18	0152	1	2	1.08	1	OK		NNN
05111480000935	18	0152	2	3	1.57	1	OK		NNN
05111480000936	18	0152	3	4	1.56	1	OK		NNN
05111480000937	18	0152	4	5	0.924	1	OK		NNN
05111480000938	18	0152	5	6	1.59	1	OK		NNN
05111480000939	18	0153	-1	0	1.56	1	OK		NNN
05111480000940	18	0153	0	1	2.54	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000941	18	0153	1	2	0.911	1	OK		NNN
05111480000942	18	0153	2	3	0.798	1	OK		NNN
05111480000943	18	0153	3	4	0.876	1	OK		NNN
05111480000944	18	0153	4	5	0.436	1	OK		NNN
05111480000945	18	0153	5	6	0.655	1	OK		NNN
05111480000946	20	0155	-1	0	2.13	1	OK		NNN
05111480000947	20	0155	0	1	3.09	1	OK		NNN
05111480000948	20	0155	1	2	0.601	1	OK		NNN
05111480000949	20	0155	2	3	0.220	1	OK		NNN
05111480000950	20	0155	3	4	BLQ<(0 200)	1	OK		NNN
05111480000951	20	0155	4	5	BLQ<(0 200)	1	OK		NNN
05111480000952	20	0155	5	6	BLQ<(0 200)	1	OK		NNN
05111480000953	20	0156	-1	0	4.87	1	OK		NNN
05111480000954	20	0156	0	1	6.90	1	OK		NNN
05111480000955	20	0156	1	2	7.26	1	OK		NNN
05111480000956	20	0156	2	3	8.18	1	OK		NNN
05111480000957	20	0156	3	4	8.29	1	OK		NNN
05111480000958	20	0156	4	5	5.87	1	OK		NNN
05111480000959	20	0156	5	6	6.61	1	OK		NNN
05111480000960	20	0160	-1	0	3.25	1	OK		NNN
05111480000961	20	0160	0	1	6.08	1	OK		NNN
05111480000962	20	0160	1	2	5.47	1	OK		NNN
05111480000963	20	0160	2	3	5.59	1	OK		NNN
05111480000964	20	0160	3	4	4.40	1	OK		NNN
05111480000965	20	0160	4	5	3.32	1	OK		NNN
05111480000966	20	0160	5	6	5.17	1	OK		NNN
05111480000967	20	0162	-1	0	1.71	1	OK		NNN
05111480000968	20	0162	0	1	3.23	1	OK		NNN
05111480000969	20	0162	1	2	0.537	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000970	20	0162	2	3	0.700	1	OK		NNN
05111480000971	20	0162	3	4	0.936	1	OK		NNN
05111480000972	20	0162	4	5	0.543	1	OK		NNN
05111480000973	20	0162	5	6	0.787	1	OK		NNN
05111480000974	20	0167	-1	0	1.35	1	OK		NNN
05111480000975	20	0167	0	1	1.55	1	OK		NNN
05111480000976	20	0167	1	2	0.725	1	OK		NNN
05111480000977	20	0167	2	3	0.438	1	OK		NNN
05111480000978	20	0167	3	4	0.456	1	OK		NNN
05111480000979	20	0167	4	5	0.299	1	OK		NNN
05111480000980	20	0167	5	6	0.520	1	OK		NNN
05111480000981	20	0169	-1	0	0.722	1	OK		NNN
05111480000982	20	0169	0	1	0.549	1	OK		NNN
05111480000983	20	0169	1	2	BLQ<(0 200)	1	OK		NNN
05111480000984	20	0169	2	3	BLQ<(0 200)	1	OK		NNN
05111480000985	20	0169	3	4	BLQ<(0 200)	1	OK		NNN
05111480000986	20	0169	4	5	BLQ<(0 200)	1	OK		NNN
05111480000987	20	0169	5	6	BLQ<(0 200)	1	OK		NNN
05111480000988	20	0170	-1	0	1.10	1	OK		NNN
05111480000989	20	0170	0	1	0.874	1	OK		NNN
05111480000990	20	0170	1	2	0.381	1	OK		NNN
05111480000991	20	0170	2	3	0.386	1	OK		NNN
05111480000992	20	0170	3	4	0.360	1	OK		NNN
05111480000993	20	0170	4	5	BLQ<(0 200)	1	OK		NNN
05111480000994	20	0170	5	6	0.248	1	OK		NNN
05111480000995	39	0177	-1	0	2.91	1	OK		NNN
05111480000996	20	0177	0	1	3.70	1	OK		NNN
05111480000997	20	0177	1	2	0.754	1	OK		NNN
05111480000998	20	0177	2	3	0.559	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480000999	20	0177	3	4	0.684	1	OK		NNN
05111480001000	20	0177	4	5	0.465	1	OK		NNN
05111480001001	20	0177	5	6	0.760	1	OK		NNN
05111480001002	22	0183	-1	0	2.50	1	OK		NNN
05111480001003	22	0183	0	1	2.58	1	OK		NNN
05111480001004	22	0183	1	2	0.259	1	OK		NNN
05111480001005	22	0183	2	3	BLQ<(0 200)	1	OK		NNN
05111480001006	22	0183	3	4	BLQ<(0 200)	1	OK		NNN
05111480001007	22	0183	4	5	BLQ<(0 200)	1	OK		NNN
05111480001008	22	0183	5	6	BLQ<(0 200)	1	OK		NNN
05111480001009	22	0185	-1	0	4.80	1	OK		NNN
05111480001010	22	0185	0	1	3.62	1	OK		NNN
05111480001011	22	0185	1	2	0.961	1	OK		NNN
05111480001012	22	0185	2	3	BLQ<(0 200)	1	OK		NNN
05111480001013	22	0185	3	4	BLQ<(0 200)	1	OK		NNN
05111480001014	22	0185	4	5	BLQ<(0 200)	1	OK		NNN
05111480001015	22	0185	5	6	BLQ<(0 200)	1	OK		NNN
05111480001016	22	0187	-1	0	5.26	1	OK		NNN
05111480001017	22	0187	0	1	4.23	1	OK		NNN
05111480001018	22	0187	1	2	5.05	1	OK		NNN
05111480001019	22	0187	2	3	8.63	1	OK		NNN
05111480001020	22	0187	3	4	8.53	1	OK		NNN
05111480001021	22	0187	4	5	5.19	1	OK		NNN
05111480001022	22	0187	5	6	4.02	1	OK		NNN
05111480001023	22	0190	-1	0	2.27	1	OK		NNN
05111480001024	22	0190	0	1	3.49	1	OK		NNN
05111480001025	22	0190	1	2	1.07	1	OK		NNN
05111480001026	22	0190	2	3	0.559	1	OK		NNN
05111480001027	22	0190	3	4	0.489	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480001028	22	0190	4	5	0.337	1	OK		NNN
05111480001029	22	0190	5	6	0.671	1	OK		NNN
05111480001030	22	0191	-1	0	0.861	1	OK		NNN
05111480001031	22	0191	0	1	1.58	1	OK		NNN
05111480001032	22	0191	1	2	1.63	1	OK		NNN
05111480001033	22	0191	2	3	1.57	1	OK		NNN
05111480001034	22	0191	3	4	1.85	1	OK		NNN
05111480001035	22	0191	4	5	1.20	1	OK		NNN
05111480001036	22	0191	5	6	1.31	1	OK		NNN
05111480001037	22	0192	-1	0	2.15	1	OK		NNN
05111480001038	22	0192	0	1	2.71	1	OK		NNN
05111480001039	22	0192	1	2	0.640	1	OK		NNN
05111480001040	22	0192	2	3	0.599	1	OK		NNN
05111480001041	22	0192	3	4	0.576	1	OK		NNN
05111480001042	22	0192	4	5	0.390	1	OK		NNN
05111480001043	22	0192	5	6	0.750	1	OK		NNN
05111480001044		0211	-1	0	.	1	Other	Analysis not required	NNN
05111480001045		0211	0	1	.	1	Other	Analysis not required	NNN
05111480001051	22	0193	-1	0	2.79	1	OK		NNN
05111480001052	22	0193	0	1	5.06	1	OK		NNN
05111480001053	22	0193	1	2	0.714	1	OK		NNN
05111480001054	22	0193	2	3	0.452	1	OK		NNN
05111480001055	22	0193	3	4	0.759	1	OK		NNN
05111480001056	22	0193	4	5	0.437	1	OK		NNN
05111480001057	22	0193	5	6	0.651	1	OK		NNN
05111480001058	22	0195	-1	0	1.81	1	OK		NNN
05111480001059	22	0195	0	1	2.37	1	OK		NNN
05111480001060	22	0195	1	2	BLQ<(0 200)	1	OK		NNN
05111480001061	22	0195	2	3	BLQ<(0 200)	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480001062	22	0195	3	4	BLQ<(0 200)	1	OK		NNN
05111480001063	22	0195	4	5	0.207	1	OK		NNN
05111480001064	22	0195	5	6	BLQ<(0 200)	1	OK		NNN
05111480001065	24	0196	-1	0	0.799	1	OK		NNN
05111480001066	24	0196	0	1	1.33	1	OK		NNN
05111480001067	24	0196	1	2	BLQ<(0 200)	1	OK		NNN
05111480001068	24	0196	2	3	BLQ<(0 200)	1	OK		NNN
05111480001069	24	0196	3	4	0.232	1	OK		NNN
05111480001070	24	0196	4	5	0.307	1	OK		NNN
05111480001071	24	0196	5	6	0.385	1	OK		NNN
05111480001072	24	0197	-1	0	13.7	1	OK		NNN
05111480001073	24	0197	0	1	30.0	1	OK		NNN
05111480001074	24	0197	1	2	6.38	1	OK		NNN
05111480001075	24	0197	2	3	0.308	1	OK		NNN
05111480001076	24	0197	3	4	BLQ<(0 200)	1	OK		NNN
05111480001077	24	0197	4	5	BLQ<(0 200)	1	OK		NNN
05111480001078	24	0197	5	6	BLQ<(0 200)	1	OK		NNN
05111480001079	24	0198	-1	0	1.31	1	OK		NNN
05111480001080	24	0198	0	1	3.64	1	OK		NNN
05111480001081	24	0198	1	2	3.01	1	OK		NNN
05111480001082	24	0198	2	3	3.97	1	OK		NNN
05111480001083	24	0198	3	4	3.81	1	OK		NNN
05111480001084	24	0198	4	5	3.26	1	OK		NNN
05111480001085	24	0198	5	6	3.00	1	OK		NNN
05111480001086	24	0200	-1	0	1.43	1	OK		NNN
05111480001087	24	0200	0	1	2.37	1	OK		NNN
05111480001088	24	0200	1	2	2.63	1	OK		NNN
05111480001089	24	0200	2	3	2.86	1	OK		NNN
05111480001090	24	0200	3	4	4.03	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480001091	24	0200	4	5	2.72	1	OK		NNN
05111480001092	24	0200	5	6	1.95	1	OK		NNN
05111480001093	24	0202	-1	0	3.74	1	OK		NNN
05111480001094	24	0202	0	1	3.03	1	OK		NNN
05111480001095	24	0202	1	2	1.59	1	OK		NNN
05111480001096	24	0202	2	3	0.882	1	OK		NNN
05111480001097	24	0202	3	4	1.48	1	OK		NNN
05111480001098	24	0202	4	5	0.547	1	OK		NNN
05111480001099	24	0202	5	6	1.48	1	OK		NNN
05111480001100	24	0203	-1	0	1.57	1	OK		NNN
05111480001101	24	0203	0	1	2.05	1	OK		NNN
05111480001102	24	0203	1	2	0.242	1	OK		NNN
05111480001103	24	0203	2	3	BLQ<(0 200)	1	OK		NNN
05111480001104	24	0203	3	4	BLQ<(0 200)	1	OK		NNN
05111480001105	24	0203	4	5	BLQ<(0 200)	1	OK		NNN
05111480001106	24	0203	5	6	BLQ<(0 200)	1	OK		NNN
05111480001107	24	0204	-1	0	1.23	1	OK		NNN
05111480001108	24	0204	0	1	2.10	1	OK		NNN
05111480001109	24	0204	1	2	1.45	1	OK		NNN
05111480001110	24	0204	2	3	1.36	1	OK		NNN
05111480001111	24	0204	3	4	2.21	1	OK		NNN
05111480001112	24	0204	4	5	2.07	1	OK		NNN
05111480001113	24	0204	5	6	1.31	1	OK		NNN
05111480001114	6	0042	-1	0	2.06	1	OK		NNN
05111480001115	6	0042	0	1	2.73	1	OK		NNN
05111480001116	6	0042	1	2	3.02	1	OK		NNN
05111480001117	6	0042	2	3	0.417	1	OK		NNN
05111480001118	6	0042	3	4	5.14	1	OK		NNN
05111480001119	6	0042	4	5	2.32	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480001120	6	0042	5	6	4.03	1	OK		NNN
05111480001541		0242	-1	0	.	2	Other	Analysis not required	NNN
05111480001542		0242	0	1	.	2	Other	Analysis not required	NNN
05111480001555		0245	-1	0	.	2	Other	Analysis not required	NNN
05111480001556		0245	0	1	.	2	Other	Analysis not required	NNN
05111480001562		0247	-1	0	.	2	Other	Analysis not required	NNN
05111480001563		0247	0	1	.	2	Other	Analysis not required	NNN
05111480001632		0269	-1	0	.	2	Other	Analysis not required	NNN
05111480001633		0269	0	1	.	2	Other	Analysis not required	NNN
05111480001751		0299	-1	0	.	2	Other	Analysis not required	NNN
05111480001752		0299	0	1	.	2	Other	Analysis not required	NNN
05111480001793		0309	-1	0	.	2	Other	Analysis not required	NNN
05111480001794		0309	0	1	.	2	Other	Analysis not required	NNN
05111480001800		0312	-1	0	.	2	Other	Analysis not required	NNN
05111480001801		0312	0	1	.	2	Other	Analysis not required	NNN
05111480002164		0211	-1	0	.	2	Other	Analysis not required	NNN
05111480002165		0211	0	1	.	2	Other	Analysis not required	NNN
05111480003081		0242	-1	0	.	4	Other	Analysis not required	NNN
05111480003082		0242	0	1	.	4	Other	Analysis not required	NNN
05111480003088		0242	-1	0	.	3	Other	Analysis not required	NNN
05111480003089		0242	0	1	.	3	Other	Analysis not required	NNN
05111480003109		0245	-1	0	.	4	Other	Analysis not required	NNN
05111480003110		0245	0	1	.	4	Other	Analysis not required	NNN
05111480003116		0245	-1	0	.	3	Other	Analysis not required	NNN
05111480003117		0245	0	1	.	3	Other	Analysis not required	NNN
05111480003123		0247	-1	0	.	4	Other	Analysis not required	NNN
05111480003124		0247	0	1	.	4	Other	Analysis not required	NNN
05111480003130		0247	-1	0	.	3	Other	Analysis not required	NNN
05111480003131		0247	0	1	.	3	Other	Analysis not required	NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480003263		0269	-1	0	.	4	Other	Analysis not required	NNN
05111480003264		0269	0	1	.	4	Other	Analysis not required	NNN
05111480003270		0269	-1	0	.	3	Other	Analysis not required	NNN
05111480003271		0269	0	1	.	3	Other	Analysis not required	NNN
05111480003501		0299	-1	0	.	4	Other	Analysis not required	NNN
05111480003502		0299	0	1	.	4	Other	Analysis not required	NNN
05111480003508		0299	-1	0	.	3	Other	Analysis not required	NNN
05111480003509		0299	0	1	.	3	Other	Analysis not required	NNN
05111480003585		0309	-1	0	.	4	Other	Analysis not required	NNN
05111480003586		0309	0	1	.	4	Other	Analysis not required	NNN
05111480003592		0309	-1	0	.	3	Other	Analysis not required	NNN
05111480003593		0309	0	1	.	3	Other	Analysis not required	NNN
05111480003599		0312	-1	0	.	4	Other	Analysis not required	NNN
05111480003600		0312	0	1	.	4	Other	Analysis not required	NNN
05111480003606		0312	-1	0	.	3	Other	Analysis not required	NNN
05111480003607		0312	0	1	.	3	Other	Analysis not required	NNN
05111480004327		0211	-1	0	.	4	Other	Analysis not required	NNN
05111480004328		0211	0	1	.	4	Other	Analysis not required	NNN
05111480004334		0211	-1	0	.	3	Other	Analysis not required	NNN
05111480004335		0211	0	1	.	3	Other	Analysis not required	NNN
05111480004502	34	0315	-1	0	2.11	1	OK		NNN
05111480004503	34	0315	0	1	2.49	1	OK		NNN
05111480004504	34	0315	1	2	3.35	1	OK		NNN
05111480004505	34	0315	2	3	3.20	1	OK		NNN
05111480004506	34	0315	3	4	2.63	1	OK		NNN
05111480004507	34	0315	4	5	2.06	1	OK		NNN
05111480004508	34	0315	5	6	3.03	1	OK		NNN
05111480004530	34	0316	-1	0	0.908	1	OK		NNN
05111480004531	34	0316	0	1	0.959	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480004532	34	0316	1	2	1.34	1	OK		NNN
05111480004533	34	0316	2	3	0.282	1	OK		NNN
05111480004534	34	0316	3	4	0.266	1	OK		NNN
05111480004535	34	0316	4	5	0.389	1	OK		NNN
05111480004536	34	0316	5	6	0.458	1	OK		NNN
05111480004558	36	0317	-1	0	4.25	1	OK		NNN
05111480004559	36	0317	0	1	5.10	1	OK		NNN
05111480004560	36	0317	1	2	1.15	1	OK		NNN
05111480004561	36	0317	2	3	BLQ<(0 200)	1	OK		NNN
05111480004562	36	0317	3	4	BLQ<(0 200)	1	OK		NNN
05111480004563	36	0317	4	5	BLQ<(0 200)	1	OK		NNN
05111480004564	36	0317	5	6	BLQ<(0 200)	1	OK		NNN
05111480004586	36	0318	-1	0	1.62	1	OK		NNN
05111480004587	36	0318	0	1	2.31	1	OK		NNN
05111480004588	36	0318	1	2	2.67	1	OK		NNN
05111480004589	36	0318	2	3	2.81	1	OK		NNN
05111480004590	36	0318	3	4	2.64	1	OK		NNN
05111480004591	36	0318	4	5	2.45	1	OK		NNN
05111480004592	36	0318	5	6	3.50	1	OK		NNN
05111480004614	36	0320	-1	0	6.09	1	OK		NNN
05111480004615	36	0320	0	1	6.70	1	OK		NNN
05111480004616	36	0320	1	2	1.41	1	OK		NNN
05111480004617	36	0320	2	3	0.621	1	OK		NNN
05111480004618	36	0320	3	4	0.632	1	OK		NNN
05111480004619	36	0320	4	5	0.684	1	OK		NNN
05111480004620	36	0320	5	6	0.850	1	OK		NNN
05111480004642	36	0321	-1	0	2.96	1	OK		NNN
05111480004643	36	0321	0	1	4.81	1	OK		NNN
05111480004644	36	0321	1	2	1.71	1	OK		NNN



Total NNAL and Total NNN in Human Urine
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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480004645	36	0321	2	3	1.98	1	OK		NNN
05111480004646	36	0321	3	4	1.83	1	OK		NNN
05111480004647	36	0321	4	5	1.35	1	OK		NNN
05111480004648	36	0321	5	6	2.80	1	OK		NNN
05111480004670	36	0322	-1	0	1.74	1	OK		NNN
05111480004671	36	0322	0	1	2.02	1	OK		NNN
05111480004672	36	0322	1	2	1.79	1	OK		NNN
05111480004673	36	0322	2	3	1.95	1	OK		NNN
05111480004674	36	0322	3	4	1.93	1	OK		NNN
05111480004675	36	0322	4	5	1.33	1	OK		NNN
05111480004676	36	0322	5	6	1.77	1	OK		NNN
05111480004698	39	0325	-1	0	4.03	1	OK		NNN
05111480004699	39	0325	0	1	4.96	1	OK		NNN
05111480004700	39	0325	1	2	1.21	1	OK		NNN
05111480004701	39	0325	2	3	BLQ<(0 200)	1	OK		NNN
05111480004702	39	0325	3	4	BLQ<(0 200)	1	OK		NNN
05111480004703	39	0325	4	5	BLQ<(0.200)	1	OK		NNN
05111480004704	39	0325	5	6	BLQ<(0 200)	1	OK		NNN
05111480004726	39	0328	-1	0	5.25	1	OK		NNN
05111480004727	39	0328	0	1	5.17	1	OK		NNN
05111480004728	39	0328	1	2	2.54	1	OK		NNN
05111480004729	39	0328	2	3	2.63	1	OK		NNN
05111480004730	39	0328	3	4	2.10	1	OK		NNN
05111480004731	39	0328	4	5	1.57	1	OK		NNN
05111480004732	39	0328	5	6	2.52	1	OK		NNN
05111480004733		0288	-1	0	.	4	Other	Analysis not required	NNN
05111480004734		0288	0	1	.	4	Other	Analysis not required	NNN
05111480004740		0288	-1	0	.	3	Other	Analysis not required	NNN
05111480004741		0288	0	1	.	3	Other	Analysis not required	NNN



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Custom ID	Run ID	Subject	Start Day Nominal	Day Nominal	Concentration (pg/mL)	Split	Sample Condition	Sample Comments	Analyte
05111480004747		0288	-1	0	.	2	Other	Analysis not required	NNN
05111480004748		0288	0	1	.	2	Other	Analysis not required	NNN
05111480004754		0288	-1	0	.	1	Other	Analysis not required	NNN
05111480004755		0288	0	1	.	1	Other	Analysis not required	NNN



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Table 10 Summary of Reassay for Analytical Reasons for Total NNAL

Run Id	Reason	Sample Name
11	UISR	AA99071-04 05111480000212 0088 N/A P1 Day 1 URN-1
38	DFNR	AA99071-04 05111480000344 0216 N/A P1 Day 0 URN-1
38	DFNR	AA99071-04 05111480000346 0216 N/A P1 Day 2 URN-1
38	DFNR	AA99071-04 05111480000347 0216 N/A P1 Day 3 URN-1
38	DFNR	AA99071-04 05111480000348 0216 N/A P1 Day 4 URN-1
38	DFNR	AA99071-04 05111480000349 0216 N/A P1 Day 5 URN-1
38	DFNR	AA99071-04 05111480000906 0147 N/A P1 Day 2 URN-1
38	DFNR	AA99071-04 05111480000907 0147 N/A P1 Day 3 URN-1
38	DFNR	AA99071-04 05111480000908 0147 N/A P1 Day 4 URN-1
38	DFNR	AA99071-04 05111480000909 0147 N/A P1 Day 5 URN-1
38	DFNR	AA99071-04 05111480000910 0147 N/A P1 Day 6 URN-1
38	DFNR	AA99071-04 05111480000209 0087 N/A P1 Day 5 URN-1



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Table 11 Summary of Reassay for Analytical Reasons for Total NNN

Run Id	Reason	Sample Name
4	Fail	AA99071-04 05111480000043 0017 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000044 0017 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000045 0017 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000046 0017 N/A P1 Day 3 URN-1
4	Fail	AA99071-04 05111480000047 0017 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000048 0017 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000049 0017 N/A P1 Day 6 URN-1
4	Fail	AA99071-04 05111480000050 0020 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000051 0020 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000052 0020 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000053 0020 N/A P1 Day 3 URN-1
4	Fail	AA99071-04 05111480000054 0020 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000055 0020 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000056 0020 N/A P1 Day 6 URN-1
4	Fail	AA99071-04 05111480000099 0021 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000100 0021 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000101 0021 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000102 0021 N/A P1 Day 3 URN-1
4	Fail	AA99071-04 05111480000103 0021 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000104 0021 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000105 0021 N/A P1 Day 6 URN-1
4	Fail	AA99071-04 05111480000057 0022 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000058 0022 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000059 0022 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000060 0022 N/A P1 Day 3 URN-1
4	Fail	AA99071-04 05111480000061 0022 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000062 0022 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000063 0022 N/A P1 Day 6 URN-1
4	Fail	AA99071-04 05111480000064 0023 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000065 0023 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000066 0023 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000067 0023 N/A P1 Day 3 URN-1
4	Fail	AA99071-04 05111480000068 0023 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000069 0023 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000070 0023 N/A P1 Day 6 URN-1
4	Fail	AA99071-04 05111480000694 0025 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000695 0025 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000696 0025 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000697 0025 N/A P1 Day 3 URN-1



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Run Id	Reason	Sample Name
4	Fail	AA99071-04 05111480000698 0025 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000699 0025 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000700 0025 N/A P1 Day 6 URN-1
4	Fail	AA99071-04 05111480000701 0028 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000702 0028 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000703 0028 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000704 0028 N/A P1 Day 3 URN-1
4	Fail	AA99071-04 05111480000705 0028 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000706 0028 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000707 0028 N/A P1 Day 6 URN-1
4	Fail	AA99071-04 05111480000708 0029 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000709 0029 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000710 0029 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000711 0029 N/A P1 Day 3 URN-1
4	Fail	AA99071-04 05111480000712 0029 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000713 0029 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000714 0029 N/A P1 Day 6 URN-1
4	Fail	AA99071-04 05111480000715 0030 N/A P1 Day 0 URN-1
4	Fail	AA99071-04 05111480000716 0030 N/A P1 Day 1 URN-1
4	Fail	AA99071-04 05111480000717 0030 N/A P1 Day 2 URN-1
4	Fail	AA99071-04 05111480000718 0030 N/A P1 Day 3 URN-1
4	Fail	AA99071-04 05111480000719 0030 N/A P1 Day 4 URN-1
4	Fail	AA99071-04 05111480000720 0030 N/A P1 Day 5 URN-1
4	Fail	AA99071-04 05111480000721 0030 N/A P1 Day 6 URN-1
8	UISR	AA99071-04 05111480000774 0053 N/A P1 Day 3 URN-1
12	AAR	AA99071-04 05111480000209 0087 N/A P1 Day 5 URN-1
12	UISR	AA99071-04 05111480000212 0088 N/A P1 Day 1 URN-1
18	UCR/AAR	AA99071-04 05111480000906 0147 N/A P1 Day 2 URN-1
18	UCR/AAR	AA99071-04 05111480000907 0147 N/A P1 Day 3 URN-1
18	UCR/AAR	AA99071-04 05111480000908 0147 N/A P1 Day 4 URN-1
18	AAR	AA99071-04 05111480000909 0147 N/A P1 Day 5 URN-1
18	UCR/AAR	AA99071-04 05111480000910 0147 N/A P1 Day 6 URN-1
26	AAR	AA99071-04 05111480000344 0216 N/A P1 Day 0 URN-1
26	AAR	AA99071-04 05111480000346 0216 N/A P1 Day 2 URN-1
26	AAR	AA99071-04 05111480000347 0216 N/A P1 Day 3 URN-1
26	AAR	AA99071-04 05111480000348 0216 N/A P1 Day 4 URN-1
26	AAR	AA99071-04 05111480000349 0216 N/A P1 Day 5 URN-1
39	AAR	AA99071-04 05111480000209 0087 N/A P1 Day 5 URN-1



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Table 12 Summary of Reassays for Sample Investigation for Total NNN

Subject	Period	Timepoint	Analyte	Reasons for Reassay	Units	Original Value	Reassay Value 1	Reassay Value 2	Reassay Value 3	Mean repeat	CV% of Reassays	% Difference and 2	% Difference and 3	% Difference and 3	% Difference from Original	Confirms	Reported
38	1	Day 4	NNN	VRC	pg/mL	0 648	0 605	0 667	0 621	0 631	5 101	9 748	7 143	2 610	2 623	Yes	0 648
63	1	Day 0	NNN	VRC	pg/mL	3 910	1 890	1 960	1 970	1 940	2 247	3 636	0 509	4 145	50 384	No	1 940
148	1	Day 6	NNN	VRC	pg/mL	9 260	5 290	5 220	5 190	5 233	0 981	1 332	0 576	1 908	43 485	No	5 233
149	1	Day 4	NNN	VRC	pg/mL	0 745	0 317	0 245	0 279	0 280	12 848	25 623	12 977	12 752	62 371	No	0 280
234	1	Day 3	NNN	VRC	pg/mL	0 763	0 817	0 827	0 787	0 810	2 569	1 217	4 957	3 741	6 204	Yes	0 763



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Table 13 Incurred Sample Reproducibility Assessment for Total NNAL

Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0086	1	Day 1	NNAL	pg/mL	133	131	132	1.52	Pass	No	98.3
0087	1	Day 0	NNAL	pg/mL	239	231	235	3.40	Pass	No	
0090	1	Day 1	NNAL	pg/mL	47.8	48.2	48.0	0.83	Pass	No	
0093	1	Day 5	NNAL	pg/mL	24.1	22.8	23.5	5.53	Pass	No	
0105	1	Day 2	NNAL	pg/mL	226	214	220	5.45	Pass	No	
0106	1	Day 2	NNAL	pg/mL	16.1	15.7	15.9	2.52	Pass	No	
0107	1	Day 5	NNAL	pg/mL	47.3	43.6	45.5	8.13	Pass	No	
0110	1	Day 3	NNAL	pg/mL	84.0	76.9	80.5	8.82	Pass	No	
0114	1	Day 0	NNAL	pg/mL	22.6	22.1	22.4	2.23	Pass	No	
0117	1	Day 6	NNAL	pg/mL	22.6	21.0	21.8	7.34	Pass	No	
0118	1	Day 4	NNAL	pg/mL	184	179	182	2.75	Pass	No	
0121	1	Day 0	NNAL	pg/mL	18.9	17.5	18.2	7.69	Pass	No	
0122	1	Day 2	NNAL	pg/mL	20.6	20.8	20.7	0.97	Pass	No	
0123	1	Day 0	NNAL	pg/mL	15.3	15.2	15.3	0.65	Pass	No	
0181	1	Day 1	NNAL	pg/mL	162	164	163	1.23	Pass	No	
0206	1	Day 1	NNAL	pg/mL	178	171	175	4.00	Pass	No	
0216	1	Day 6	NNAL	pg/mL	29.1	27.6	28.4	5.28	Pass	No	
0218	1	Day 0	NNAL	pg/mL	42.0	40.3	41.2	4.13	Pass	No	
0220	1	Day 0	NNAL	pg/mL	26.7	24.8	25.8	7.36	Pass	No	
0224	1	Day 1	NNAL	pg/mL	134	133	134	0.75	Pass	No	
0228	1	Day 3	NNAL	pg/mL	23.7	22.6	23.2	4.74	Pass	No	
0229	1	Day 6	NNAL	pg/mL	71.6	66.9	69.3	6.78	Pass	No	
0234	1	Day 3	NNAL	pg/mL	28.8	28.1	28.5	2.46	Pass	No	
0241	1	Day 1	NNAL	pg/mL	141	131	136	7.35	Pass	No	



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Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0244	1	Day 2	NNAL	pg/mL	78.4	78.5	78.5	0.13	Pass	No	
0249	1	Day 2	NNAL	pg/mL	115	108	112	6.25	Pass	No	
0262	1	Day 6	NNAL	pg/mL	38.8	39.5	39.2	1.79	Pass	No	
0264	1	Day 0	NNAL	pg/mL	17.4	17.5	17.5	0.57	Pass	No	
0265	1	Day 1	NNAL	pg/mL	211	229	220	8.18	Pass	No	
0266	1	Day 1	NNAL	pg/mL	51.8	50.0	50.9	3.54	Pass	No	
0272	1	Day 5	NNAL	pg/mL	74.1	73.9	74.0	0.27	Pass	No	
0273	1	Day 0	NNAL	pg/mL	105	103	104	1.92	Pass	No	
0277	1	Day 1	NNAL	pg/mL	38.5	38.5	38.5	0.00	Pass	No	
0278	1	Day 6	NNAL	pg/mL	39.7	41.9	40.8	5.39	Pass	No	
0279	1	Day 0	NNAL	pg/mL	124	121	123	2.44	Pass	No	
0281	1	Day 0	NNAL	pg/mL	258	241	250	6.80	Pass	No	
0282	1	Day 3	NNAL	pg/mL	54.5	48.5	51.5	11.65	Pass	No	
0283	1	Day 3	NNAL	pg/mL	31.9	31.8	31.9	0.31	Pass	No	
0285	1	Day 3	NNAL	pg/mL	176	168	172	4.65	Pass	No	
0287	1	Day 3	NNAL	pg/mL	46.0	44.3	45.2	3.76	Pass	No	
0289	1	Day 2	NNAL	pg/mL	153	150	152	1.97	Pass	No	
0291	1	Day 0	NNAL	pg/mL	147	136	142	7.75	Pass	No	
0292	1	Day 2	NNAL	pg/mL	95.2	92.8	94.0	2.55	Pass	No	
0296	1	Day 0	NNAL	pg/mL	141	133	137	5.84	Pass	No	
0298	1	Day 3	NNAL	pg/mL	68.1	65.6	66.9	3.74	Pass	No	
0301	1	Day 1	NNAL	pg/mL	81.0	70.9	76.0	13.29	Pass	No	
0306	1	Day 2	NNAL	pg/mL	56.8	54.5	55.7	4.13	Pass	No	
0307	1	Day 1	NNAL	pg/mL	286	278	282	2.84	Pass	No	
0308	1	Day 6	NNAL	pg/mL	36.6	35.9	36.3	1.93	Pass	No	
0313	1	Day 2	NNAL	pg/mL	92.8	94.7	93.8	2.03	Pass	No	
0126	1	Day 5	NNAL	pg/mL	25.7	25.2	25.5	1.96	Pass	No	



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Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0127	1	Day 0	NNAL	pg/mL	216	202	209	6.70	Pass	No	
0128	1	Day 2	NNAL	pg/mL	158	152	155	3.87	Pass	No	
0130	1	Day 1	NNAL	pg/mL	106	103	105	2.86	Pass	No	
0133	1	Day 2	NNAL	pg/mL	124	114	119	8.40	Pass	No	
0134	1	Day 0	NNAL	pg/mL	189	183	186	3.23	Pass	No	
0136	1	Day 4	NNAL	pg/mL	97.4	95.2	96.3	2.28	Pass	No	
0139	1	Day 0	NNAL	pg/mL	170	163	167	4.19	Pass	No	
0140	1	Day 6	NNAL	pg/mL	16.4	16.6	16.5	1.21	Pass	No	
0145	1	Day 2	NNAL	pg/mL	85.7	81.1	83.4	5.52	Pass	No	
0147	1	Day 1	NNAL	pg/mL	124	123	124	0.81	Pass	No	
0148	1	Day 6	NNAL	pg/mL	160	150	155	6.45	Pass	No	
0149	1	Day 4	NNAL	pg/mL	51.0	48.9	50.0	4.20	Pass	No	
0150	1	Day 0	NNAL	pg/mL	292	283	288	3.13	Pass	No	
0152	1	Day 1	NNAL	pg/mL	16.9	16.5	16.7	2.40	Pass	No	
0153	1	Day 6	NNAL	pg/mL	22.6	22.0	22.3	2.69	Pass	No	
0155	1	Day 0	NNAL	pg/mL	132	126	129	4.65	Pass	No	
0156	1	Day 4	NNAL	pg/mL	238	215	227	10.13	Pass	No	
0160	1	Day 5	NNAL	pg/mL	69.1	66.6	67.9	3.68	Pass	No	
0162	1	Day 3	NNAL	pg/mL	66.4	64.7	65.6	2.59	Pass	No	
0167	1	Day 2	NNAL	pg/mL	68.9	64.2	66.6	7.06	Pass	No	
0169	1	Day 0	NNAL	pg/mL	25.2	22.8	24.0	10.00	Pass	No	
0177	1	Day 1	NNAL	pg/mL	162	152	157	6.37	Pass	No	
0185	1	Day 0	NNAL	pg/mL	244	259	252	5.95	Pass	No	
0187	1	Day 3	NNAL	pg/mL	87.9	84.9	86.4	3.47	Pass	No	
0191	1	Day 6	NNAL	pg/mL	21.1	21.1	21.1	0.00	Pass	No	
0192	1	Day 6	NNAL	pg/mL	50.8	48.6	49.7	4.43	Pass	No	
0193	1	Day 2	NNAL	pg/mL	57.4	58.8	58.1	2.41	Pass	No	



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Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0196	1	Day 0	NNAL	pg/mL	22.2	21.2	21.7	4.61	Pass	No	
0197	1	Day 1	NNAL	pg/mL	160	155	158	3.16	Pass	No	
0200	1	Day 6	NNAL	pg/mL	24.2	23.3	23.8	3.78	Pass	No	
0204	1	Day 1	NNAL	pg/mL	18.5	17.2	17.9	7.26	Pass	No	
0315	1	Day 5	NNAL	pg/mL	56.8	57.1	57.0	0.53	Pass	No	
0316	1	Day 0	NNAL	pg/mL	16.3	17.2	16.8	5.36	Pass	No	
0317	1	Day 2	NNAL	pg/mL	95.0	95.2	95.1	0.21	Pass	No	
0318	1	Day 6	NNAL	pg/mL	104	109	107	4.67	Pass	No	
0320	1	Day 5	NNAL	pg/mL	65.7	62.7	64.2	4.67	Pass	No	
0321	1	Day 5	NNAL	pg/mL	46.3	48.6	47.5	4.84	Pass	No	
0322	1	Day 5	NNAL	pg/mL	26.4	26.0	26.2	1.53	Pass	No	
0325	1	Day 1	NNAL	pg/mL	144	140	142	2.82	Pass	No	
0328	1	Day 0	NNAL	pg/mL	35.3	32.8	34.1	7.33	Pass	No	
0008	1	Day 3	NNAL	pg/mL	45.2	48.2	46.7	6.42	Pass	No	
0011	1	Day 2	NNAL	pg/mL	53.6	53.5	53.6	0.19	Pass	No	
0014	1	Day 2	NNAL	pg/mL	94.3	89.6	92.0	5.11	Pass	No	
0016	1	Day 0	NNAL	pg/mL	129	129	129	0.00	Pass	No	
0049	1	Day 2	NNAL	pg/mL	36.7	33.7	35.2	8.52	Pass	No	
0001	1	Day 5	NNAL	pg/mL	18.0	17.8	17.9	1.12	Pass	No	
0004	1	Day 6	NNAL	pg/mL	19.0	18.1	18.6	4.84	Pass	No	
0013	1	Day 1	NNAL	pg/mL	116	112	114	3.51	Pass	No	
0037	1	Day 0	NNAL	pg/mL	153	152	153	0.65	Pass	No	
0063	1	Day 0	NNAL	pg/mL	218	126	172	53.49	Fail	No	
0066	1	Day 0	NNAL	pg/mL	20.4	19.2	19.8	6.06	Pass	No	
0067	1	Day 6	NNAL	pg/mL	27.9	27.5	27.7	1.44	Pass	No	
0071	1	Day 0	NNAL	pg/mL	95.3	90.0	92.7	5.72	Pass	No	
0074	1	Day 0	NNAL	pg/mL	228	221	225	3.11	Pass	No	



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Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0076	1	Day 2	NNAL	pg/mL	49.1	49.1	49.1	0.00	Pass	No	
0083	1	Day 6	NNAL	pg/mL	21.4	20.2	20.8	5.77	Pass	No	
0031	1	Day 1	NNAL	pg/mL	164	150	157	8.92	Pass	No	
0038	1	Day 4	NNAL	pg/mL	89.8	87.1	88.5	3.05	Pass	No	
0044	1	Day 0	NNAL	pg/mL	24.5	24.6	24.6	0.41	Pass	No	
0052	1	Day 2	NNAL	pg/mL	249	249	249	0.00	Pass	No	
0055	1	Day 0	NNAL	pg/mL	160	158	159	1.26	Pass	No	
0057	1	Day 1	NNAL	pg/mL	107	106	107	0.93	Pass	No	
0060	1	Day 0	NNAL	pg/mL	144	204	174	34.48	Fail	No	
0064	1	Day 3	NNAL	pg/mL	16.9	16.3	16.6	3.61	Pass	No	
0042	1	Day 4	NNAL	pg/mL	153	140	147	8.84	Pass	No	



Total NNAL and Total NNN in Human Urine
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Table 14 Incurred Sample Reproducibility Assessment for total NNN

Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0008	1	Day 3	NNN	pg/mL	0.789	0.763	0.776	3.35	Pass	No	78.4
0011	1	Day 2	NNN	pg/mL	0.719	1.06	0.890	38.31	Fail	No	
0014	1	Day 2	NNN	pg/mL	0.766	0.974	0.870	23.91	Fail	No	
0016	1	Day 0	NNN	pg/mL	7.53	7.99	7.76	5.93	Pass	No	
0049	1	Day 2	NNN	pg/mL	0.774	0.665	0.720	15.14	Pass	No	
0001	1	Day 5	NNN	pg/mL	1.51	1.11	1.31	30.53	Fail	No	
0004	1	Day 6	NNN	pg/mL	0.804	0.823	0.814	2.33	Pass	No	
0013	1	Day 1	NNN	pg/mL	13.9	14.2	14.1	2.13	Pass	No	
0037	1	Day 0	NNN	pg/mL	4.46	4.99	4.73	11.21	Pass	No	
0063	1	Day 0	NNN	pg/mL	3.91	2.25	3.08	53.90	Fail	No	
0066	1	Day 0	NNN	pg/mL	1.16	1.17	1.17	0.85	Pass	No	
0067	1	Day 6	NNN	pg/mL	2.64	2.84	2.74	7.30	Pass	No	
0071	1	Day 0	NNN	pg/mL	6.60	6.82	6.71	3.28	Pass	No	
0074	1	Day 0	NNN	pg/mL	5.86	6.05	5.96	3.19	Pass	No	
0076	1	Day 2	NNN	pg/mL	0.779	0.627	0.703	21.62	Fail	No	
0083	1	Day 6	NNN	pg/mL	0.665	0.598	0.632	10.60	Pass	No	
0031	1	Day 1	NNN	pg/mL	6.55	6.62	6.59	1.06	Pass	No	
0038	1	Day 4	NNN	pg/mL	0.648	1.41	1.03	73.98	Fail	Event	
0044	1	Day 0	NNN	pg/mL	1.23	1.52	1.38	21.01	Fail	No	
0052	1	Day 2	NNN	pg/mL	1.07	1.08	1.08	0.93	Pass	No	
0055	1	Day 0	NNN	pg/mL	2.93	3.14	3.04	6.91	Pass	No	
0057	1	Day 1	NNN	pg/mL	5.75	5.75	5.75	0.00	Pass	No	
0060	1	Day 0	NNN	pg/mL	6.51	9.34	7.93	35.69	Fail	No	
0064	1	Day 3	NNN	pg/mL	1.08	1.16	1.12	7.14	Pass	No	



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Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0042	1	Day 4	NNN	pg/mL	5.14	6.39	5.77	21.66	Fail	No	
0086	1	Day 1	NNN	pg/mL	7.85	8.35	8.10	6.17	Pass	No	
0087	1	Day 0	NNN	pg/mL	2.87	3.01	2.94	4.76	Pass	No	
0090	1	Day 1	NNN	pg/mL	14.9	16.0	15.5	7.10	Pass	No	
0093	1	Day 5	NNN	pg/mL	0.896	1.34	1.12	39.64	Fail	No	
0105	1	Day 2	NNN	pg/mL	3.54	3.63	3.59	2.51	Pass	No	
0106	1	Day 2	NNN	pg/mL	0.651	0.731	0.691	11.58	Pass	No	
0107	1	Day 5	NNN	pg/mL	0.797	0.782	0.790	1.90	Pass	No	
0110	1	Day 3	NNN	pg/mL	0.637	0.852	0.745	28.86	Fail	No	
0114	1	Day 0	NNN	pg/mL	1.47	1.42	1.45	3.45	Pass	No	
0117	1	Day 6	NNN	pg/mL	2.10	2.34	2.22	10.81	Pass	No	
0118	1	Day 4	NNN	pg/mL	10.3	10.4	10.4	0.96	Pass	No	
0121	1	Day 0	NNN	pg/mL	2.15	1.96	2.06	9.22	Pass	No	
0122	1	Day 2	NNN	pg/mL	0.704	1.04	0.872	38.53	Fail	No	
0123	1	Day 0	NNN	pg/mL	1.21	1.14	1.18	5.93	Pass	No	
0181	1	Day 1	NNN	pg/mL	3.97	4.01	3.99	1.00	Pass	No	
0206	1	Day 1	NNN	pg/mL	9.62	9.59	9.61	0.31	Pass	No	
0216	1	Day 6	NNN	pg/mL	20.8	20.8	20.8	0.00	Pass	No	
0218	1	Day 0	NNN	pg/mL	0.788	1.02	0.904	25.66	Fail	No	
0220	1	Day 0	NNN	pg/mL	1.12	1.22	1.17	8.55	Pass	No	
0224	1	Day 1	NNN	pg/mL	5.09	5.15	5.12	1.17	Pass	No	
0228	1	Day 3	NNN	pg/mL	0.809	1.04	0.925	24.97	Fail	No	
0229	1	Day 6	NNN	pg/mL	2.37	2.66	2.52	11.51	Pass	No	
0234	1	Day 3	NNN	pg/mL	0.763	1.28	1.02	50.69	Fail	No	
0126	1	Day 5	NNN	pg/mL	1.53	1.43	1.48	6.76	Pass	No	
0127	1	Day 0	NNN	pg/mL	5.33	5.24	5.29	1.70	Pass	No	
0128	1	Day 2	NNN	pg/mL	0.772	0.830	0.801	7.24	Pass	No	



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Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0130	1	Day 1	NNN	pg/mL	7.09	7.15	7.12	0.84	Pass	No	
0133	1	Day 2	NNN	pg/mL	0.651	0.758	0.705	15.18	Pass	No	
0134	1	Day 0	NNN	pg/mL	2.33	2.58	2.46	10.16	Pass	No	
0136	1	Day 4	NNN	pg/mL	0.961	1.10	1.03	13.50	Pass	No	
0139	1	Day 0	NNN	pg/mL	7.55	6.68	7.12	12.22	Pass	No	
0140	1	Day 6	NNN	pg/mL	1.64	1.66	1.65	1.21	Pass	No	
0145	1	Day 2	NNN	pg/mL	0.737	0.537	0.637	31.40	Fail	No	
0147	1	Day 1	NNN	pg/mL	28.2	27.4	27.8	2.88	Pass	No	
0148	1	Day 6	NNN	pg/mL	9.26	5.62	7.44	48.92	Fail	No	
0149	1	Day 4	NNN	pg/mL	0.745	0.365	0.555	68.47	Fail	Event	
0150	1	Day 0	NNN	pg/mL	9.50	8.90	9.20	6.52	Pass	No	
0152	1	Day 1	NNN	pg/mL	1.20	1.14	1.17	5.13	Pass	No	
0153	1	Day 6	NNN	pg/mL	0.655	0.517	0.586	23.55	Fail	No	
0155	1	Day 0	NNN	pg/mL	2.13	1.97	2.05	7.80	Pass	No	
0156	1	Day 4	NNN	pg/mL	8.29	8.32	8.31	0.36	Pass	No	
0160	1	Day 5	NNN	pg/mL	3.32	3.67	3.50	10.00	Pass	No	
0162	1	Day 3	NNN	pg/mL	0.700	0.940	0.820	29.27	Fail	No	
0167	1	Day 2	NNN	pg/mL	0.725	0.819	0.772	12.18	Pass	No	
0169	1	Day 0	NNN	pg/mL	0.722	0.741	0.732	2.60	Pass	No	
0177	1	Day 1	NNN	pg/mL	3.70	3.86	3.78	4.23	Pass	No	
0185	1	Day 0	NNN	pg/mL	4.80	5.10	4.95	6.06	Pass	No	
0187	1	Day 3	NNN	pg/mL	8.63	9.32	8.98	7.68	Pass	No	
0191	1	Day 6	NNN	pg/mL	1.31	1.59	1.45	19.31	Pass	No	
0192	1	Day 6	NNN	pg/mL	0.750	1.03	0.890	31.46	Fail	No	
0193	1	Day 2	NNN	pg/mL	0.714	0.966	0.840	30.00	Fail	No	
0196	1	Day 0	NNN	pg/mL	0.799	0.788	0.794	1.39	Pass	No	
0197	1	Day 1	NNN	pg/mL	30.0	29.9	30.0	0.33	Pass	No	



Total NNAL and Total NNN in Human Urine
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Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0200	1	Day 6	NNN	pg/mL	1.95	2.13	2.04	8.82	Pass	No	
0204	1	Day 1	NNN	pg/mL	2.10	2.11	2.11	0.47	Pass	No	
0241	1	Day 1	NNN	pg/mL	5.47	5.47	5.47	0.00	Pass	No	
0244	1	Day 2	NNN	pg/mL	0.831	0.892	0.862	7.08	Pass	No	
0249	1	Day 2	NNN	pg/mL	0.880	0.959	0.920	8.59	Pass	No	
0262	1	Day 6	NNN	pg/mL	0.863	0.903	0.883	4.53	Pass	No	
0264	1	Day 0	NNN	pg/mL	1.35	1.29	1.32	4.55	Pass	No	
0265	1	Day 1	NNN	pg/mL	8.13	8.07	8.10	0.74	Pass	No	
0266	1	Day 1	NNN	pg/mL	2.47	2.44	2.46	1.22	Pass	No	
0272	1	Day 5	NNN	pg/mL	0.796	0.817	0.807	2.60	Pass	No	
0273	1	Day 0	NNN	pg/mL	2.89	2.97	2.93	2.73	Pass	No	
0277	1	Day 1	NNN	pg/mL	1.58	1.59	1.59	0.63	Pass	No	
0278	1	Day 6	NNN	pg/mL	1.75	1.74	1.75	0.57	Pass	No	
0279	1	Day 0	NNN	pg/mL	3.08	3.11	3.10	0.97	Pass	No	
0281	1	Day 0	NNN	pg/mL	11.0	10.5	10.8	4.63	Pass	No	
0282	1	Day 3	NNN	pg/mL	0.673	0.806	0.740	17.97	Pass	No	
0283	1	Day 3	NNN	pg/mL	1.25	1.28	1.27	2.36	Pass	No	
0285	1	Day 3	NNN	pg/mL	9.24	9.27	9.26	0.32	Pass	No	
0287	1	Day 3	NNN	pg/mL	0.936	0.940	0.938	0.43	Pass	No	
0289	1	Day 2	NNN	pg/mL	1.55	1.55	1.55	0.00	Pass	No	
0291	1	Day 0	NNN	pg/mL	1.20	1.22	1.21	1.65	Pass	No	
0292	1	Day 2	NNN	pg/mL	1.57	1.49	1.53	5.23	Pass	No	
0296	1	Day 0	NNN	pg/mL	6.35	6.04	6.20	5.00	Pass	No	
0298	1	Day 3	NNN	pg/mL	2.47	2.40	2.44	2.87	Pass	No	
0301	1	Day 1	NNN	pg/mL	4.47	4.36	4.42	2.49	Pass	No	
0306	1	Day 2	NNN	pg/mL	0.892	0.899	0.896	0.78	Pass	No	
0307	1	Day 1	NNN	pg/mL	8.73	8.85	8.79	1.37	Pass	No	



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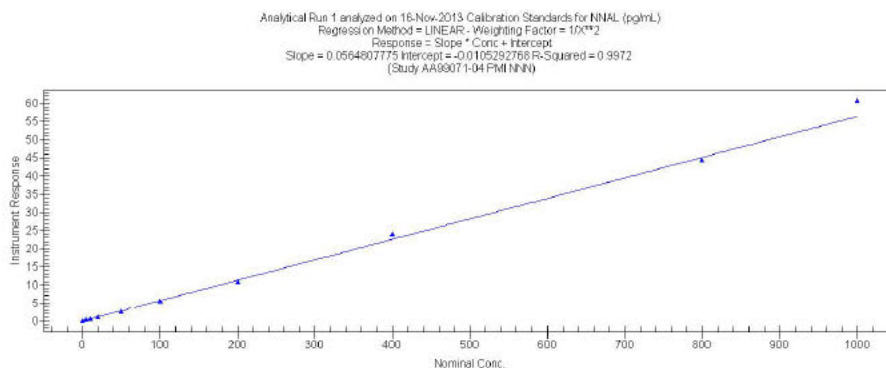
Subject	Period	Time Point	Analyte	Units	Original Value	Reassay Value	Mean Value	% Difference	Reproducible?	Event?	% of Passing ISR Samples
0308	1	Day 6	NNN	pg/mL	1.97	1.41	1.69	33.14	Fail	No	
0313	1	Day 2	NNN	pg/mL	6.80	5.82	6.31	15.53	Pass	No	
0315	1	Day 5	NNN	pg/mL	2.06	1.96	2.01	4.98	Pass	No	
0316	1	Day 0	NNN	pg/mL	0.908	0.710	0.809	24.47	Fail	No	
0325	1	Day 1	NNN	pg/mL	4.96	4.77	4.87	3.90	Pass	No	
0328	1	Day 0	NNN	pg/mL	5.25	4.99	5.12	5.08	Pass	No	



Total NNAL and Total NNN in Human Urine
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FIGURES

Figure 1 Calibration Curve for total NNAL in Control Matrix, Watson Run ID 1¹

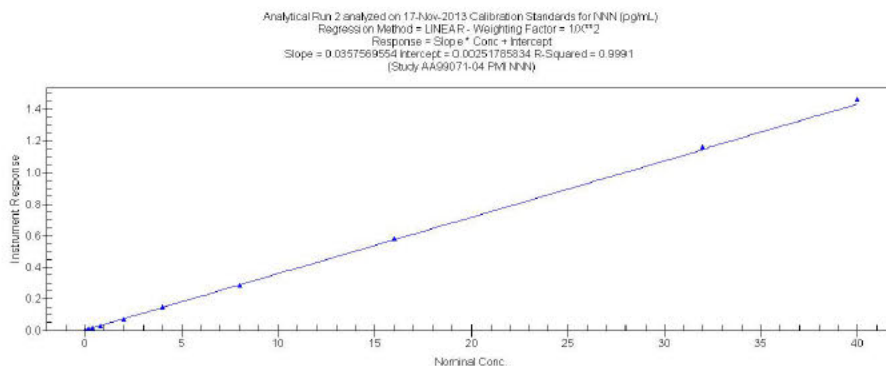


¹ Note: Though included on the figure above, the Standard 0 (blank sample extracted with internal standard) was not used as a standard to calculate the calibration curve parameters.



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Figure 2 Calibration Curve for total NNN in Control Matrix, Watson Run ID 2²



² Note: Though included on the figure above, the Standard 0 (blank sample extracted with internal standard) was not used as a standard to calculate the calibration curve parameters.



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ATTACHMENTS

Attachment 1 General List of Abbreviations used at Celerion

Abbreviations are used in this document as applicable.

Abbreviation	Description
°C	Degree Celsius (centigrade)
µg	Microgram
AAR	Above the acceptable range
AB	Applied Biosystems
API	Atmospheric pressure ionization
ASCII	American standard code for information interchange
BAM	Bioanalytical method
BLK	Blank
BLQ	Below limit of quantification
CC	Conventional Cigarette
CDER	Center for Drug Evaluation and Research
CFR	Code of Federal Regulations
CRO	Contract research organisation
CV	Coefficient of variation
Da	Dalton
DCU	Diluted concentration unreliable
DFNR	Dilution factor not reliable
DQC	Dilution quality control sample
ELISA	Enzyme-linked immunosorbent assay
EDTA	Ethylenediaminetetraacetic acid
EQB	Exceeding quadratic bounds
EXT	Extraction
fg	Femtogram
g	Gram
GLP	Good laboratory practices
h	Hour
HDPE	High density polyethylene
HPLC	High performance liquid chromatography



Total NNAL and Total NNN in Human Urine
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Abbreviation	Description
HSR	High standard removed
ID	Identifier
INC	Incongruous
INS	Instrumentation
IS	Internal standard
ISA	Insufficient volume for full analysis
ISP	Incomplete sample processing
ISR	Incurred sample reproducibility
ISV	Insufficient volume
IVR	Insufficient volume to reassay
L	Litre, liter
LLOQ	Lower limit of quantitation
LNK	Celerion, Lincoln site
M	Molar
mg	Milligram
mL	Millilitre, milliliter
mol	Mole
MS	Mass spectrometry
MW	Molecular weight
n	Number of data points
N/AP	Not applicable
N/AV	Not available
NFV	Not full volume
ng	Nanogram
No	Number
NU	Not used
OECD	Organization for Economic Cooperation and Development
PD	Period
pg	Picogram
QC	Quality control
QCs	Quality control samples
R E	Relative error
REF	Reference



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Abbreviation	Description
RI	Reinjection
RIA	Rarioimmunoassay
RT	Room temperature
RR	Reanalysis
RVL	Remaining volume low
S A	Smoking Abstinence
S D	Standard deviation
SOP	Standard operating procedure
SPE	Solid-phase extraction
SST	System suitability test
STD	Standard
Sub	Subject
SVD	Sample volume depleted
TBD	To be determined
Temp	Temperature
THS	Tobacco Heating System
UCR	Unacceptable chromatography
UISR	Unacceptable internal standard response
ULOQ	Upper limit of quantitation
U S FDA	United States Food and Drug Administration
USP	US pharmacopeia
\bar{x}	Mean



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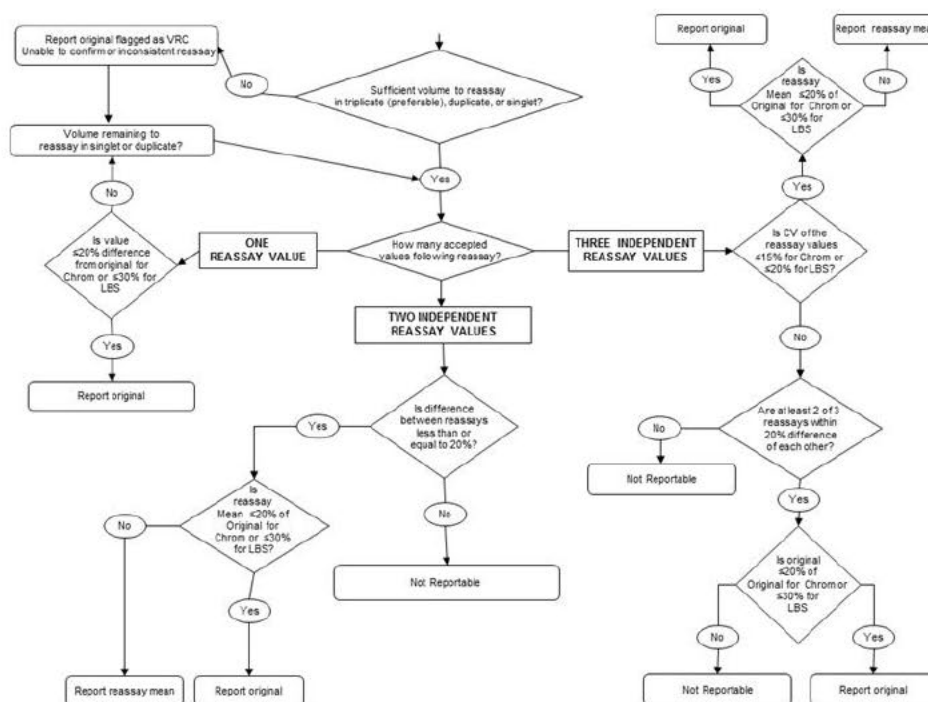
Attachment 2 Temperature Definitions at Celerion

Values for temperatures are nominal temperatures representing the following temperature ranges:

Nominal temperature	Temperature Range
-80 C	-65 C to -90 C
-20 C	-10 C to -30 C
5 C	2 C to 8 C
Room temperature	15 C to 25 C
24 C	22 C to 26 C

Total NNAL and Total NNN in Human Urine
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Attachment 3 Procedure for VRC and SSR Reassays and Reporting of Reassay Results



To compare reassays:

$$\frac{|\text{Re assay Value 1} - \text{Re assay Value 2}|}{\text{Mean of Re assay Value 1 and 2}} * 100\%$$

To compare to original:

$$\frac{|\text{Mean of Re assays} - \text{Original Value}|}{\text{Original Value}} * 100\%$$

An LC-MS/MS value as outlined in the decision tree is obtained from a single determination

If BLQ is obtained for a value, the nominal concentration of the LLOQ is used when comparing reassays in this decision tree.



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Attachment 4 General List of Calculation Formulae

Mean:
$$\bar{x}_{\text{Mean}} = \frac{1}{n} \sum_{i=1}^n x_i$$

Standard Deviation (SD):
$$SD = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x}_{\text{Mean}})^2}$$

Precision (RSD, CV):
$$CV \% = \left(\frac{SD}{\bar{x}_{\text{Mean}}} \right) * 100$$

Accuracy (% Theoretical):
$$\text{Accuracy \%} = \left(\frac{x}{x_{\text{Nominal}}} \right) * 100$$

$$\text{Accuracy of Mean \%} = \left(\frac{\bar{x}_{\text{Mean}}}{x_{\text{Nominal}}} \right) * 100$$

Inaccuracy (% Bias, % RE):
$$\text{Bias \%} = \left(\frac{(x - x_{\text{Nominal}})}{x_{\text{Nominal}}} \right) * 100$$

$$\text{Bias of Mean \%} = \left(\frac{(\bar{x}_{\text{Mean}} - x_{\text{Nominal}})}{x_{\text{Nominal}}} \right) * 100$$

x = value (e.g. analyte concentration, OD value, cpm value, peak signal)

n = number of values

$$\text{Potency} = \frac{100 - \left(\frac{\% \text{ Salts}}{\text{Determined By Assay}} + \frac{\% \text{ Water}}{\text{Content}} + \frac{\% \text{ Residual}}{\text{Solvent}} + \frac{\% \text{ Other}}{\text{Impurity}} \right)}{100} * \frac{\% \text{ Chromatographic Purity}}{100} * \frac{\% \text{ Chiral Purity}}{100} * \frac{\% \text{ Isotopic Purity}}{100} * \frac{\% \text{ Other Purity}}{100} * \frac{\text{MW Free Base}}{\text{MW Salt}}$$

$$\% \text{ Difference} = \left[\frac{\left| \frac{(\text{Re assay} - \text{Original})}{2} \right|}{\left(\frac{(\text{Re assay} + \text{Original})}{2} \right)} \right] * 100$$



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Attachment 5 Reassay Descriptions

Analytical Reason (Code)	Description
Above the Accepted Range (AAR)	Identifies a study sample whose calculated concentration is greater than the upper limit of quantitation (ULOQ). This study sample will be diluted before being reassayed.
Diluted Concentration Unreliable (DCU)	Identifies a study sample that has been diluted and determined to have a concentration below LLOQ (BLQ, below limit of quantification) before correction for the final dilution factor.
Dilution Factor Not Reliable (DFNR)	Identifies a study sample that has been diluted, and determined to have a measurable concentration, however >50% of the dilution QC samples (having the same dilution factor) did not meet their acceptance criteria. Identifies a dilution QC sample that does not fulfil the acceptance criterion and is excluded from the DQC statistics.
Highest / Lowest Standard Removed (HSR / LSR)	If the working range of the method is truncated as a result of - the ULOQ calibration standard being rejected or unavailable (e.g. incomplete sample processing or incomplete instrument analysis, unacceptable chromatography), all study samples with concentrations greater than the highest acceptable standard are identified as 'highest standard removed' (HSR). - the calibration standard at the LLOQ being rejected or unavailable (e.g. incomplete sample processing or incomplete instrument analysis, unacceptable chromatography), all study samples with concentrations below the lowest acceptable standard are identified as 'lowest standard removed' (LSR).
Incomplete Sample Processing (ISP)	Identifies a study sample, calibration standard, or QC sample for which data could not be obtained due to processing problems that occurred during the extraction or assay documented by the analyst prior to instrumental analysis.
Insufficient Volume for Reassay (IVR)	Identified a study sample that has insufficient sample volume for reanalysis (including all received splits)
Incomplete Instrument Analysis (IIA)	Identifies a study sample, calibration standard, or QC sample for which data could not be obtained due to processing problems that occurred during HPLC injection or instrumental analysis and were documented by the analyst.
Unacceptable Chromatography (UCR)	Identifies a study sample, calibration standard, or QC sample judged to demonstrate unacceptable chromatography according to the applicable Celerion procedures (e.g. split peak, poor peak symmetry, unseparated interference).




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Attachment 6 Certificates of Analysis



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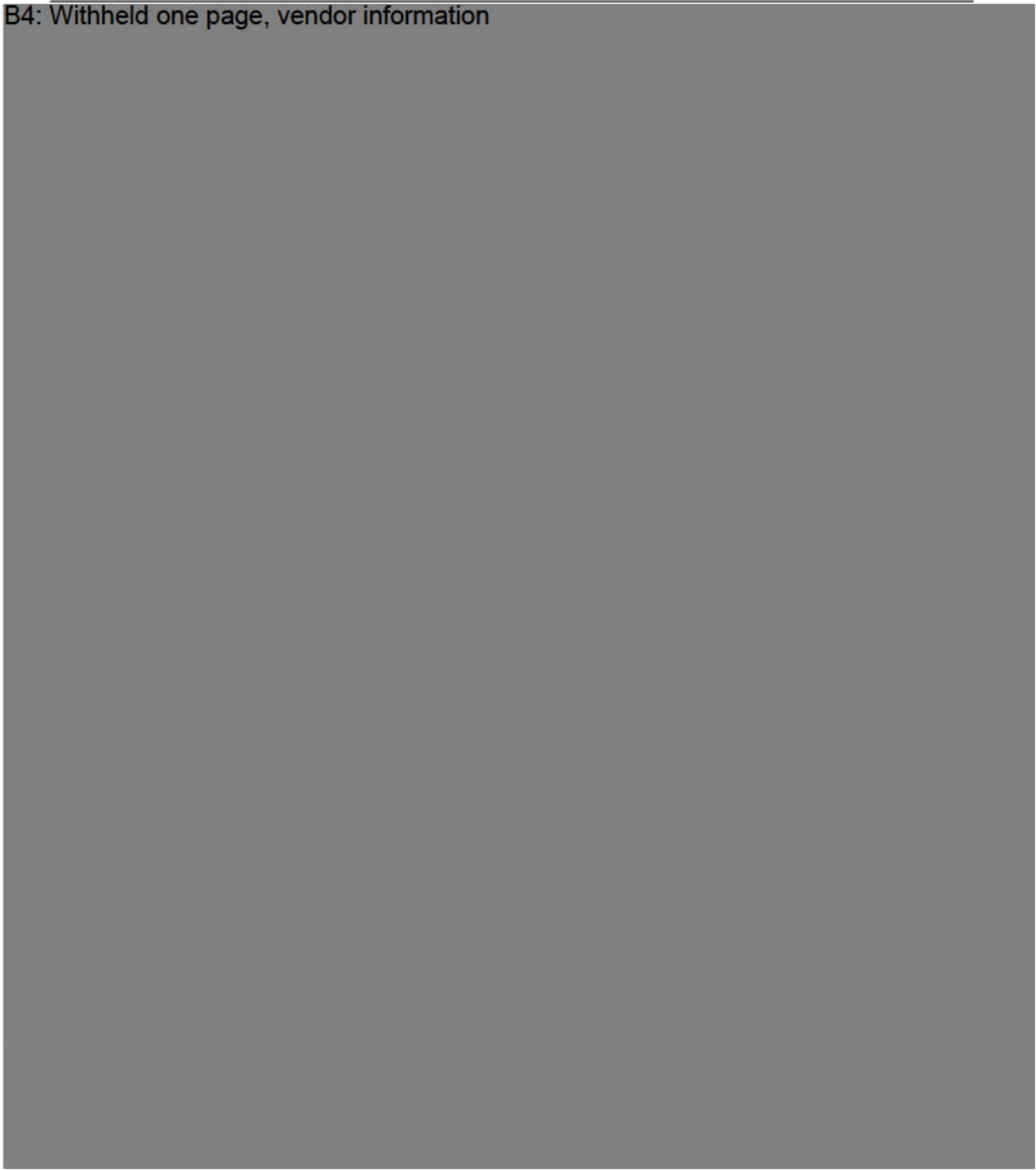
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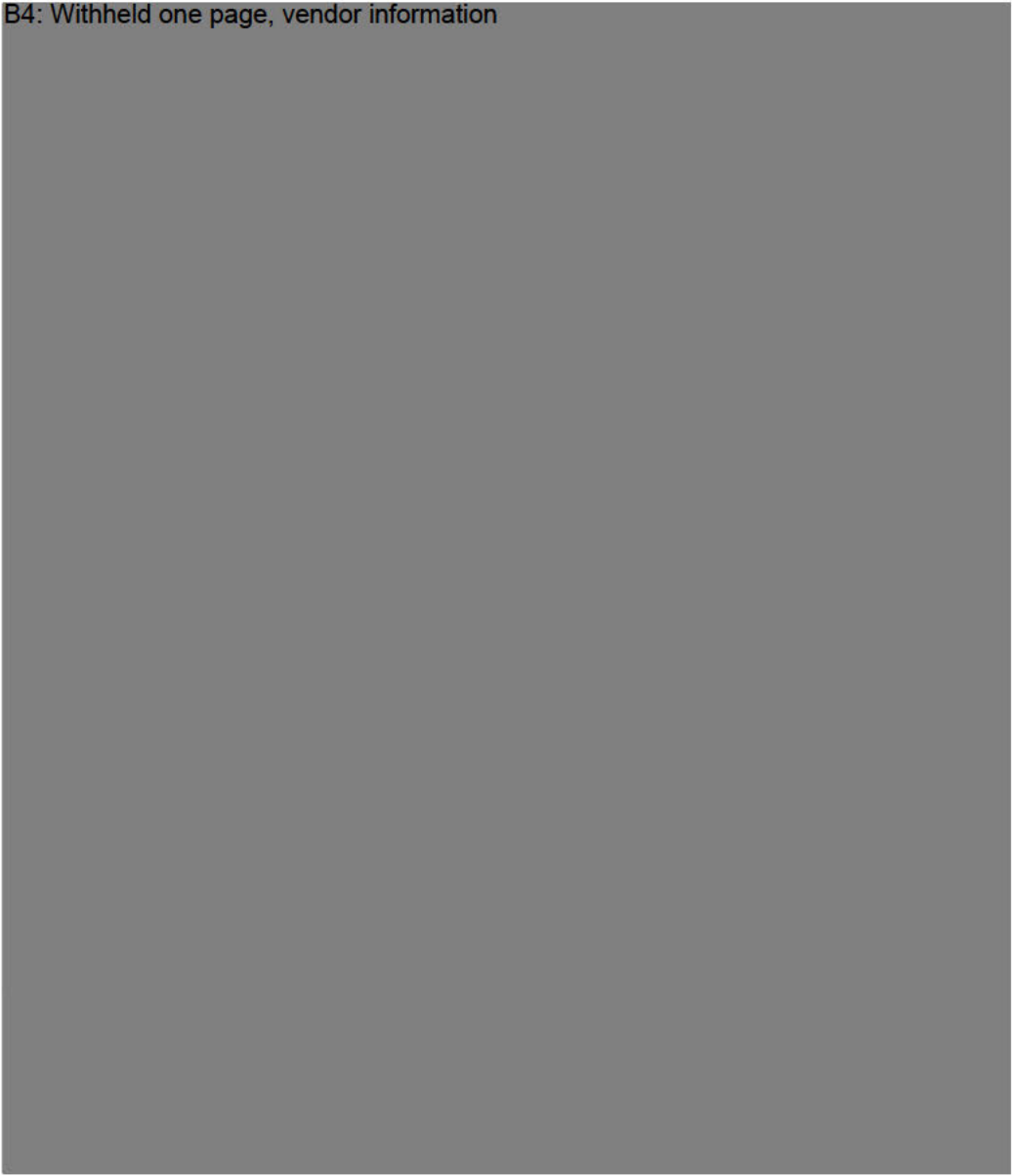
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Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

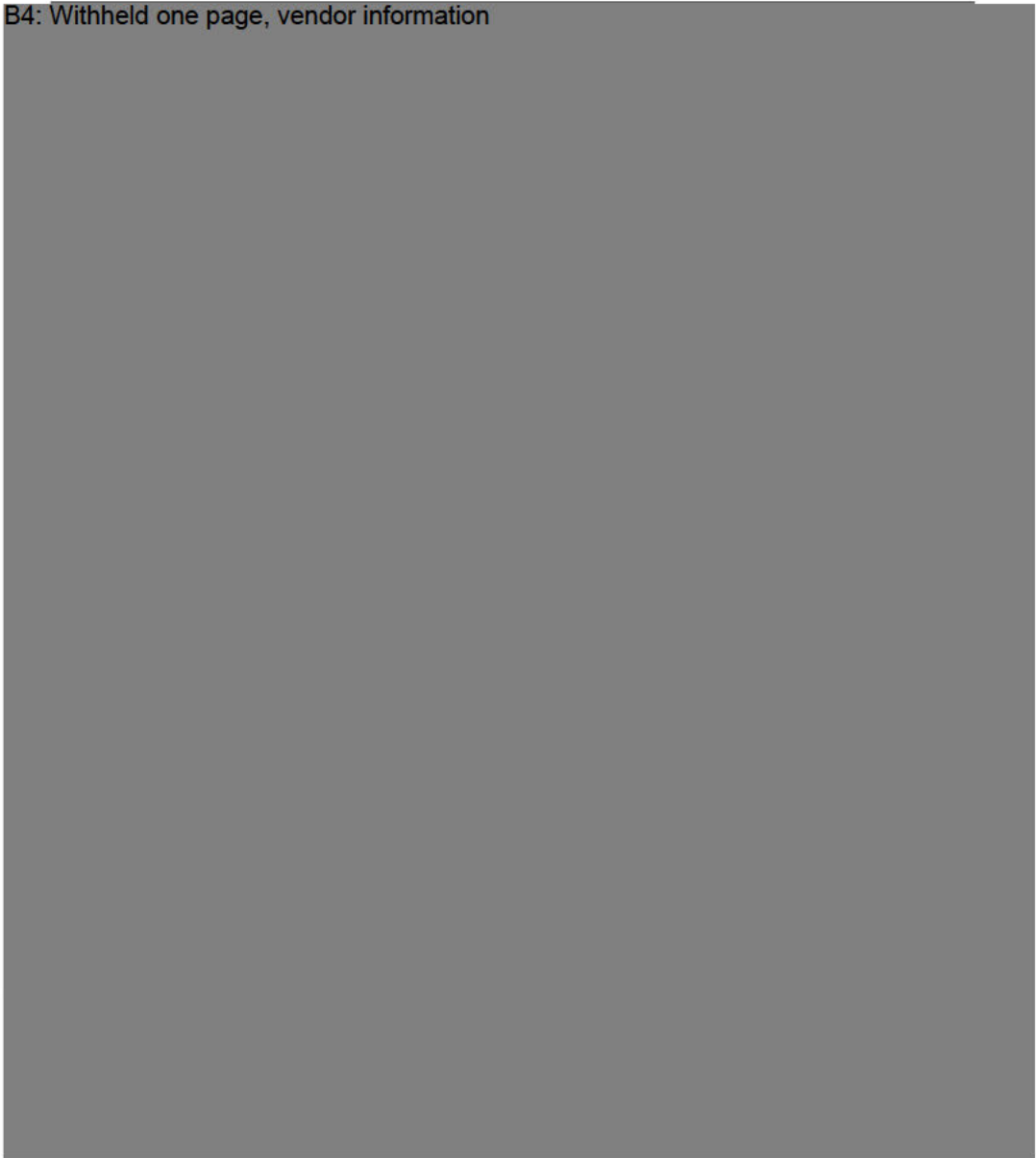
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Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04


B4: Withheld one page, vendor information

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Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

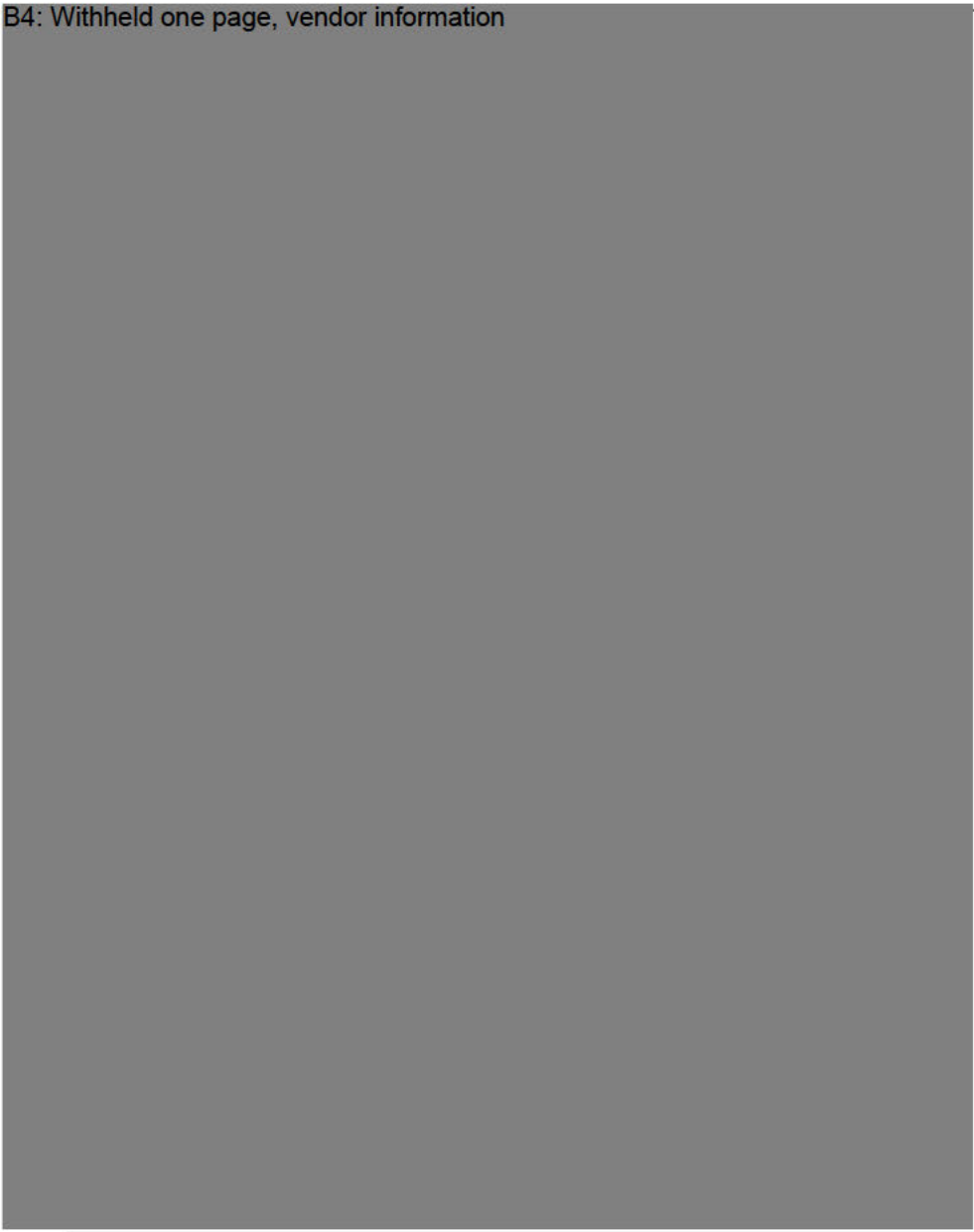
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Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

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Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

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Celerion, Inc.

621 Rose Street · Lincoln, NE 68502 · Tel 402-476-2811 · Fax 866-358-7993

CelerionGlobal
621 Rose Street
Lincoln, NE 68502
NECUSTOMER NO. Celerion
REFERENCE Harris Kanban
RECEIVED BY calahj01
SALES REP.DATE 2014.02.19
VERSION 24

Order Confirmation 2069701

DELIV. TERMS FOB
DELIVERY MODE Truck
PAYM. TERMS Immediate
INT. CHARGE/REMI/INDER CODE

ITEM NO.	QUAN.	UNIT	DESCRIPTION	DELIV. DATE	UNIT PRICE	PRICE
PS004009	1.00	PK	GLOVES, POWDER FREE, NITRILE, SMALL, (100/PK, 1000/CA) (SUP# 89038-268)	2014.02.19	6.92	6.92
PS000712	2.00	PK	WIPE, 2-PLY, 37 X 42, (90/PK)(15PK/CA) (SUP# 21903-026)	2014.02.19	5.76	11.52
PS010286	1.00	PK	TIP, MICROMAN, CP100 (96/PK, 960/CA) (SUP# F148314)	2014.02.19	23.40	23.40
PS000665	1.00	CA	COMBITIPS, ADVANCED 5.0 ML, BLUE, 100/CA, MFG# 0030089456 (SUP# 30089456)	2014.02.19	82.94	82.94
PS023514	1.00	PK	MATS, RESEALABLE SILICONE/PTFE, GREEN PRE-SLIT, 96 ROUND WELL (5/PK)(SUP# 9	2014.02.19	53.20	53.20
PS007793	5.00	EA	PLATE, 96 WELL, 1.2 ML, ABGENE, (50/CA) (SUP# AB-0564)	2014.02.19	4.40	22.00
PS000451	4.00	PK	BOTTLE, WIDE MOUTH, POLYPROPELENE, 1OZ, (12/PK, 72/CA)(H2004)(SUP# 414004-12	2014.02.19	12.16	48.64
PS001320	1.00	PK	VWR BEAKER GRAD PP 100ML (100/PK, 1000/CA) (SUP# 414004-146)	2014.02.19	28.78	28.78
PS001548	1.00	EA	PAPER, ABSORBANT, 20X150, (4/CA) (SUP# 54110-527)	2014.02.19	16.35	16.35
PS005767	1.00	CA	TUBE, 2ML, POLYPROPELENE, BROWN, PLASMA ALIQUOT TUBE, (1000/CA)(H1078)(SU	2014.02.19	52.60	52.60
PS005768	1.00	CA	CAPS, 2ML, POLYPROPELENE, BROWN, PLASMA ALIQUOT, (1000/CASE)(H1078)(SUP# 6	2014.02.19	55.40	55.40
TOTAL SALES					USD	401.75
TOTAL ORDER					USD	401.75



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

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Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

Attachment 7 Bioanalytical Method Summary



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04



BIOANALYTICAL METHOD SUMMARY (BMS)

Doc No: FOR_QM000496 – CR204A2

Version N°: 2.0

Page 1 of 2

Biomarker: NNAL		Matrix: Urine	
MVR/SOP no. & date: ZZ34313-03 / 29-Oct-2014		CRO/Laboratory: Celerion-Lincoln	
LLOQ: 5.00 pg/mL		ULOQ: 1000 pg/mL	
Validation	<input checked="" type="checkbox"/> Full <input type="checkbox"/> Partial <input type="checkbox"/> Cross		
	Comments (required for Partial/Cross):		
Assay:	<input checked="" type="checkbox"/> Chromatographic <input type="checkbox"/> Ligand binding <input type="checkbox"/> Enzymatic <input type="checkbox"/> Other describe:		
	<input type="checkbox"/> LC/MS <input checked="" type="checkbox"/> LC/MS/MS <input type="checkbox"/> GC/MS <input type="checkbox"/> GC/MS/MS		
	<input type="checkbox"/> ELISA		
Equipment and short description of extraction and analysis: An aliquot of human urine containing the analyte and internal standard was extracted using a solid phase extraction procedure. The extracted samples were analyzed by an HPLC equipped with an AB SCIEX API 4000™ using an ESI source (for total NNAL) and an UPLC equipped with an AB SCIEX Triple Quad™ 6500 using an ESI source (for total NNN). Positive ions were monitored in the multiple reaction monitoring (MRM) mode. Quantitation was determined using a weighted linear regression analysis (1/concentration ²) of peak area ratios of the analyte and internal standard.			
Selectivity/Sensitivity/Matrix effect:		No significant matrix effect was observed in any of the 10 human urine lots that were fortified with total NNAL at the concentration of the LLOQ (5.00 pg/mL) or in any of the 10 human urine lots that were fortified with total NNAL at the concentration of the high QC (750 pg/mL) samples.	
Accuracy:		Intra-batch: -5.1 to 9.4% R.E. (-5.1 to 9.4% R.E. for acceptable PA batches only) Inter-batch: -2.3 to 3.0% R.E. (-2.5 to 4.0% R.E. for acceptable PA batches only)	
Precision:		Intra-batch: 1.6 to 43.0% CV (1.6 to 6.9% CV for acceptable PA batches only) Inter-batch: 3.0 to 18.2% CV (3.3 to 6.5% CV for acceptable PA batches only)	
Recovery:		88% at 15.0 pg/mL in human urine 82% at 70.0 pg/mL in human urine 85% at 750 pg/mL in human urine	
Freeze and thaw stability:		6 freeze (-20°C)-thaw (ambient temperature) cycles in clear polypropylene tubes under UV-shielded light 6 freeze (-20°C)-thaw (ambient temperature) cycles in brown polypropylene tubes under UV-shielded light	



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04



BIOANALYTICAL METHOD SUMMARY (BMS)

Doc No: FOR_QM000496 - CR204A2

Version N°: 2.0

Page 2 of 2

Short-term temperature stability:	Short-Term Stability: 26 hours in clear polypropylene tubes at ambient temperature under UV-shielded light Cumulative Short-Term Stability: 52 hours in clear polypropylene tubes at ambient temperature under UV-shielded light (total of all thaw cycles) Short-Term Stability: 25 hours (LLOQ QC) and 24 hours (dilution QC) in brown polypropylene tubes at ambient temperature under UV-shielded light Cumulative Short-Term Stability: 52 hours (LLOQ QC) and 53 hours (dilution QC) in brown polypropylene tubes at ambient temperature under UV-shielded light (total of all thaw cycles)
Long-term stability:	63 days in clear polypropylene tubes at -20°C, 318 days (LLOQ QC) and 296 days (dilution QC) in brown polypropylene tubes at -20°C
Stock solution stability:	98 days at approximately 100 µg/mL in methanol in a polypropylene container at -20°C
Post-preparative stability:	126 hours in a polypropylene 96 well plate at 5°C
Stability of Analyte During Sample Collection and Handling:	45 minutes in non-colored high-density polyethylene void containers at ambient temperature under white light, 4 hours in amber high-density polyethylene refrigeration containers at ambient temperature under white light, and approximately 2 days in amber high-density polyethylene refrigeration containers at 5°C Up to 96 hours in smoker human urine in high-density polyethylene containers at 5°C, 20°C, and 40°C under UV-shielded light

Accreditation/ GLP compliance/ QA statements:	GLP Compliance as Assay Validation conforms to Celerion Standard Operating Procedures which were written in compliance with FDA: Guidance to Industry "Bioanalytical Method Validation"
--	---

BMS completed by:		
Name:	Date:	Signature:
Erica Nachi	31-Oct-2014	<i>Erica Nachi</i>



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04



BIOANALYTICAL METHOD SUMMARY (BMS)

Doc No: FOR_QM000496 - CR204A2

Version N°: 2.0

Page 1 of 2

Biomarker: NNN		Matrix: Urine
MVR/SOP no. & date: ZZ34313-03 / 29-Oct-2014		CRO/Laboratory: Celerion-Lincoln
LLOQ: 0.200 pg/mL		ULOQ: 40.0 pg/mL
Validation	<input checked="" type="checkbox"/> Full <input type="checkbox"/> Partial <input type="checkbox"/> Cross Comments (required for Partial/Cross):	
Assay:	<input checked="" type="checkbox"/> Chromatographic <input type="checkbox"/> Ligand binding <input type="checkbox"/> Enzymatic <input type="checkbox"/> Other describe: <input type="checkbox"/> LC/MS <input checked="" type="checkbox"/> LC/MS/MS <input type="checkbox"/> GC/MS <input type="checkbox"/> GC/MS/MS <input type="checkbox"/> ELISA	
Equipment and short description of extraction and analysis: An aliquot of human urine containing the analyte and internal standard was extracted using a solid phase extraction procedure. The extracted samples were analyzed by an HPLC equipped with an AB SCIEX API 4000 TM using an ESI source (for total NNAL) and an UPLC equipped with an AB SCIEX Triple Quad TM 6500 using an ESI source (for total NNN). Positive ions were monitored in the multiple reaction monitoring (MRM) mode. Quantitation was determined using a weighted linear regression analysis (1/concentration ²) of peak area ratios of the analyte and internal standard.		
Selectivity/Sensitivity/Matrix effect:	No significant matrix effect was observed in 7 of the 10 human urine lots that were fortified with total NNN at the concentration of the LLOQ (0.200 pg/mL) or in any of the 10 human urine lots that were fortified with total NNN at the concentration of the high QC (30.0 pg/mL) samples.	
Accuracy:	Intra-batch: -5.0 to 12.5% R.E. (-5.0 to 12.5% R.E. for acceptable PA batches only) Inter-batch: -0.3 to 3.5% R.E. (-1.3 to 3.5% R.E. for acceptable PA batches only)	
Precision:	Intra-batch: 1.5 to 56.1% CV (1.5 to 11.5% CV for acceptable PA batches only) Inter-batch: 4.4 to 24.6% CV (2.9 to 9.8% CV for acceptable PA batches only)	
Recovery:	64% at 0.600 pg/mL in human urine 62% at 2.80 pg/mL in human urine 66% at 30.0 pg/mL in human urine	
Freeze and thaw stability:	6 freeze (-20°C)-thaw (ambient temperature) cycles in clear polypropylene tubes under UV-shielded light 6 freeze (-20°C)-thaw (ambient temperature) cycles in brown polypropylene tubes under UV-shielded light	



Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04



PMI RESEARCH & DEVELOPMENT

BIOANALYTICAL METHOD SUMMARY (BMS)

Doc No: FOR_QM000496 - CR204A2

Version N°: 2.0

Page 2 of 2

Short-term temperature stability:	Short-Term Stability: 26 hours in clear polypropylene tubes at ambient temperature under UV-shielded light Cumulative Short-Term Stability: 52 hours in clear polypropylene tubes at ambient temperature under UV-shielded light (total of all thaw cycles) Short-Term Stability: 24 hours in brown polypropylene tubes at ambient temperature under UV-shielded light Cumulative Short-Term Stability: 53 hours in brown polypropylene tubes at ambient temperature under UV-shielded light (total of all thaw cycles)	
Long-term stability:	63 days in clear polypropylene tubes at -20°C; 318 days (LLOQ QC) and 296 days (dilution QC) in brown polypropylene tubes at -20°C	
Stock solution stability:	98 days at approximately 100 µg/mL in methanol in a polypropylene container at -20°C	
Post-preparative stability:	179 hours in a polypropylene 96 well plate at 5°C	
Stability of Analyte During Sample Collection and Handling:	45 minutes in non-colored high-density polyethylene void containers at ambient temperature under white light, 4 hours in amber high-density polyethylene refrigeration containers at ambient temperature under white light, and approximately 2 days in amber high-density polyethylene refrigeration containers at 5°C Up to 96 hours in smoker human urine in high-density polyethylene containers at 5°C, 20°C, and 40°C under UV-shielded light	
Accreditation/ GLP compliance/ QA statements:	GLP Compliance as Assay Validation conforms to Celerion Standard Operating Procedures which were written in compliance with FDA: Guidance to Industry "Bioanalytical Method Validation"	
BMS completed by:		
Name: Erica N. N. N.	Date: 31-Oct-2014	Signature: Erica J. N. N.



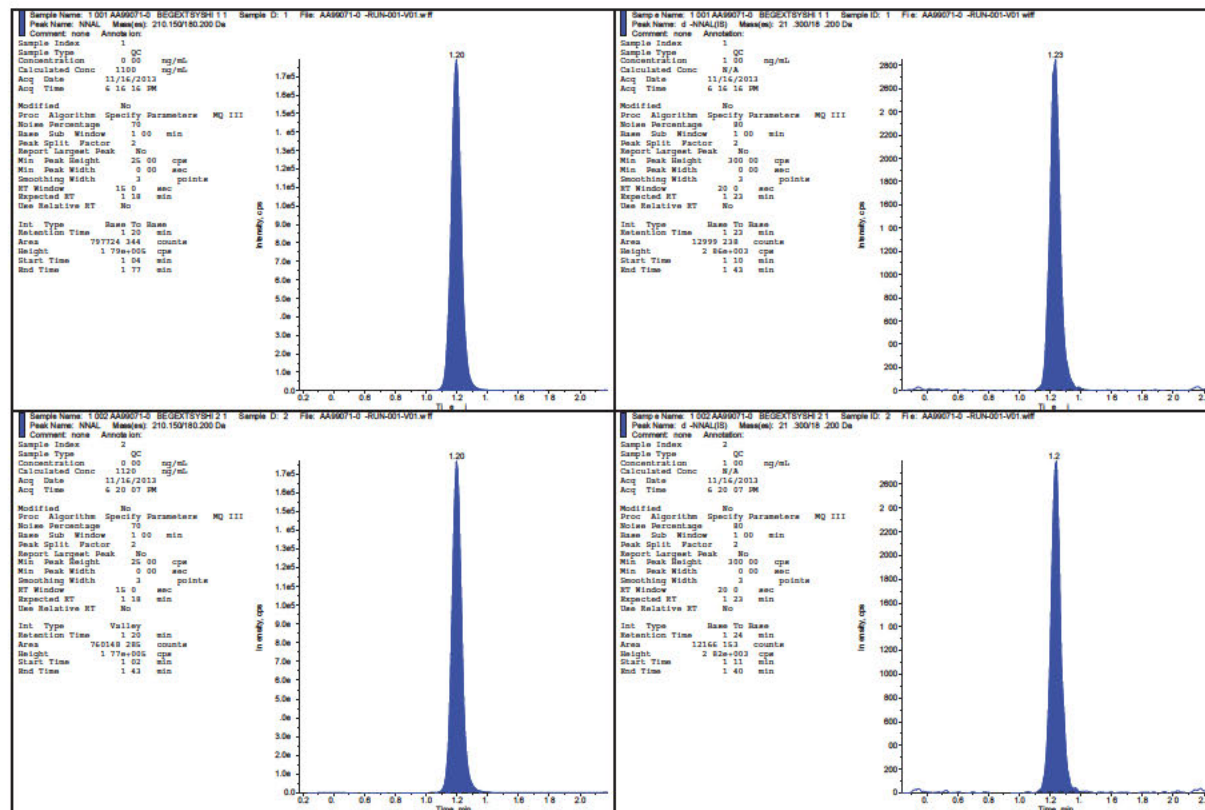
Total NNAL and Total NNN in Human Urine
Celerion Study AA99071-04

Attachment 8 Chromatograms

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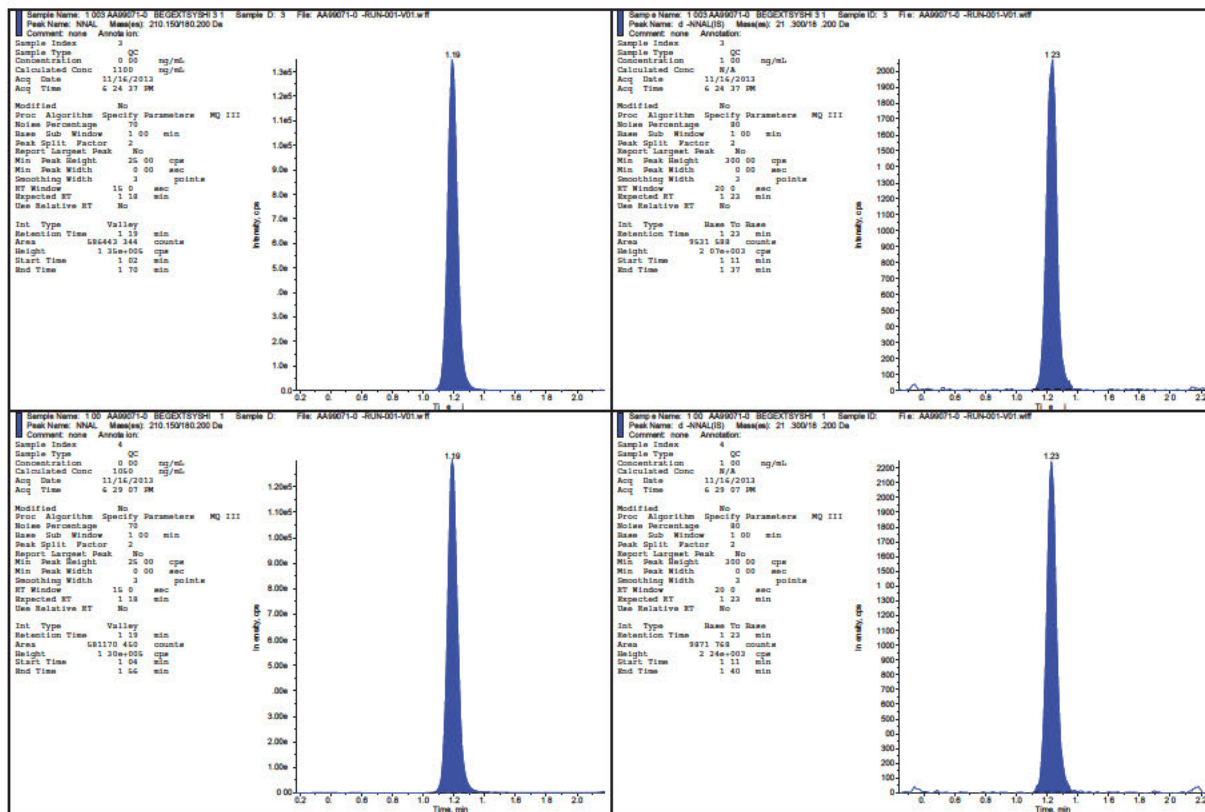


Total NNAL and Total NNN in Human Urine
Celention Study AA99071-04



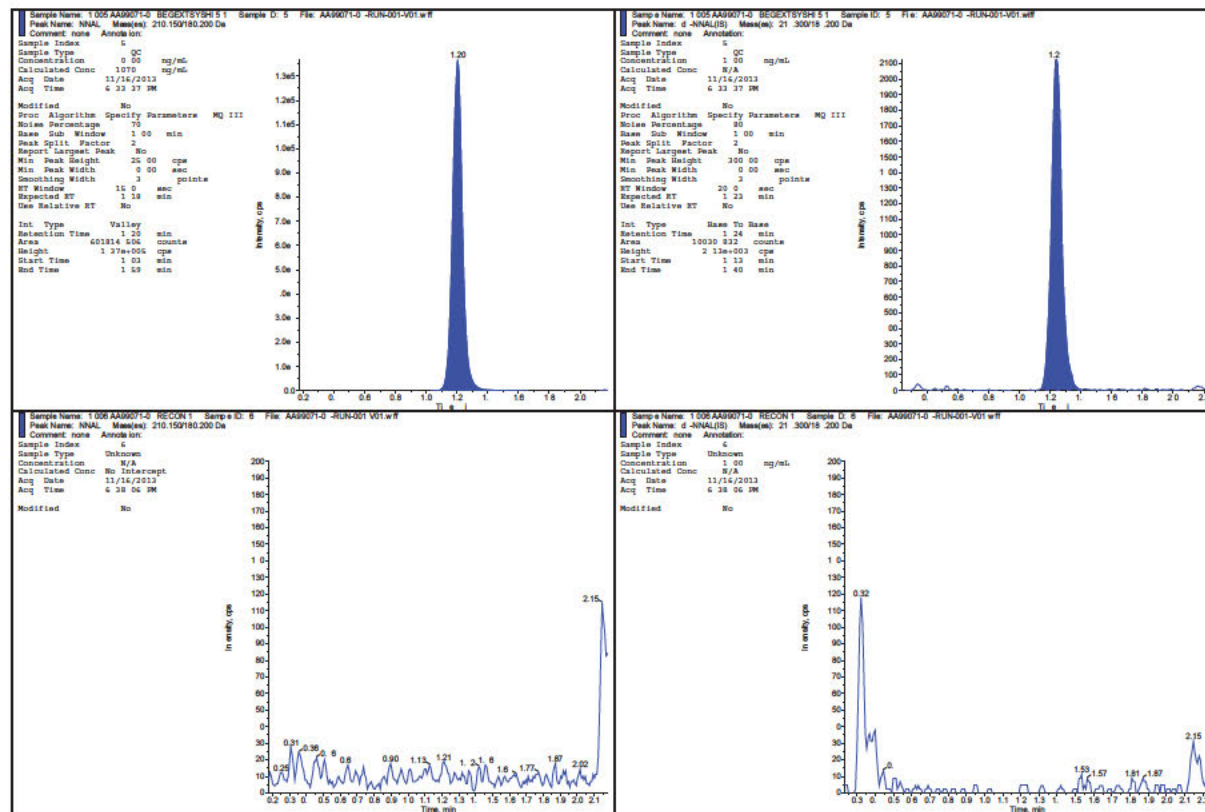


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Celerion Study AA99071-04



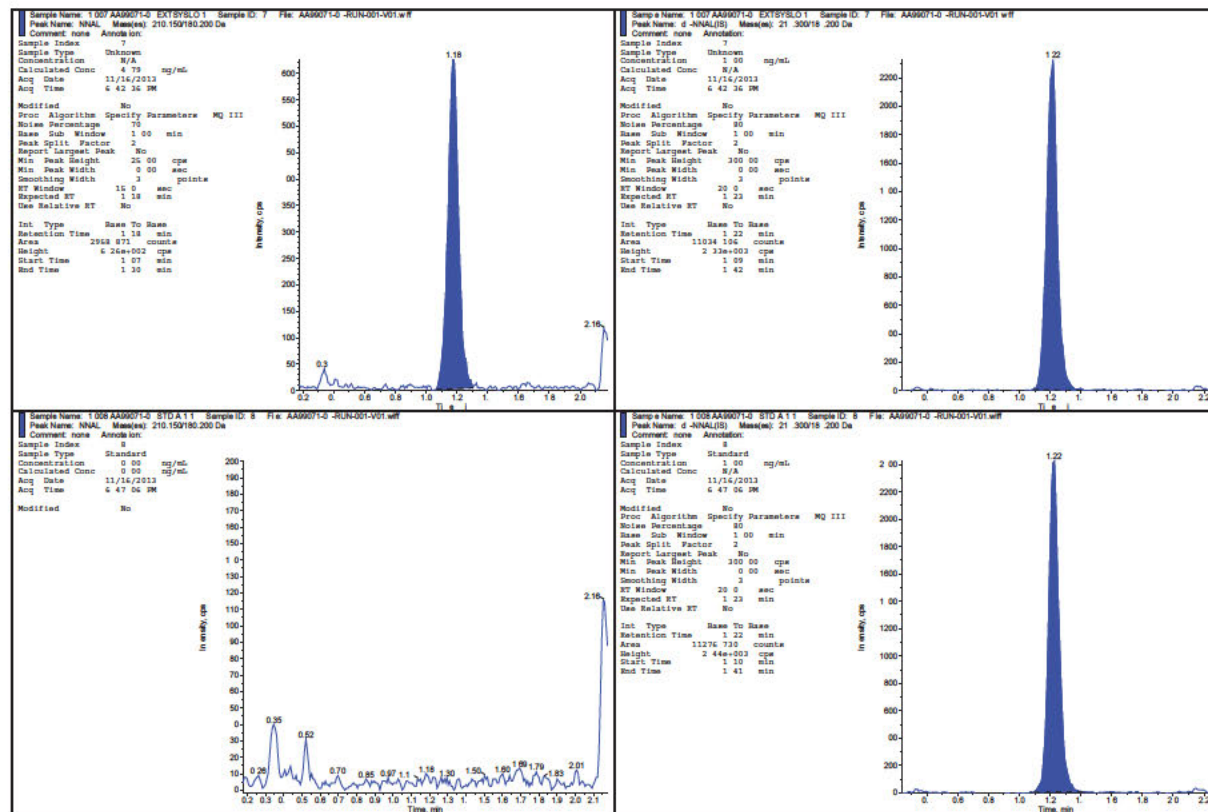


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Celcoron Study AA99071-04



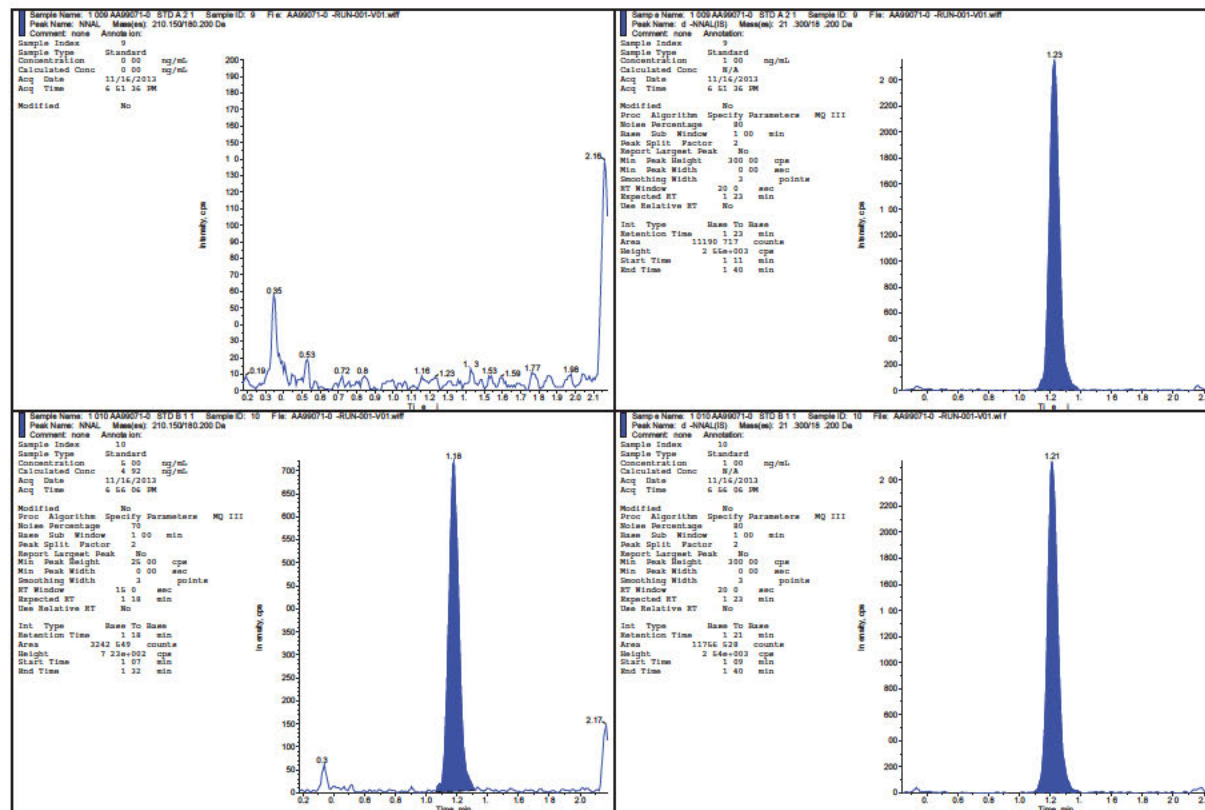


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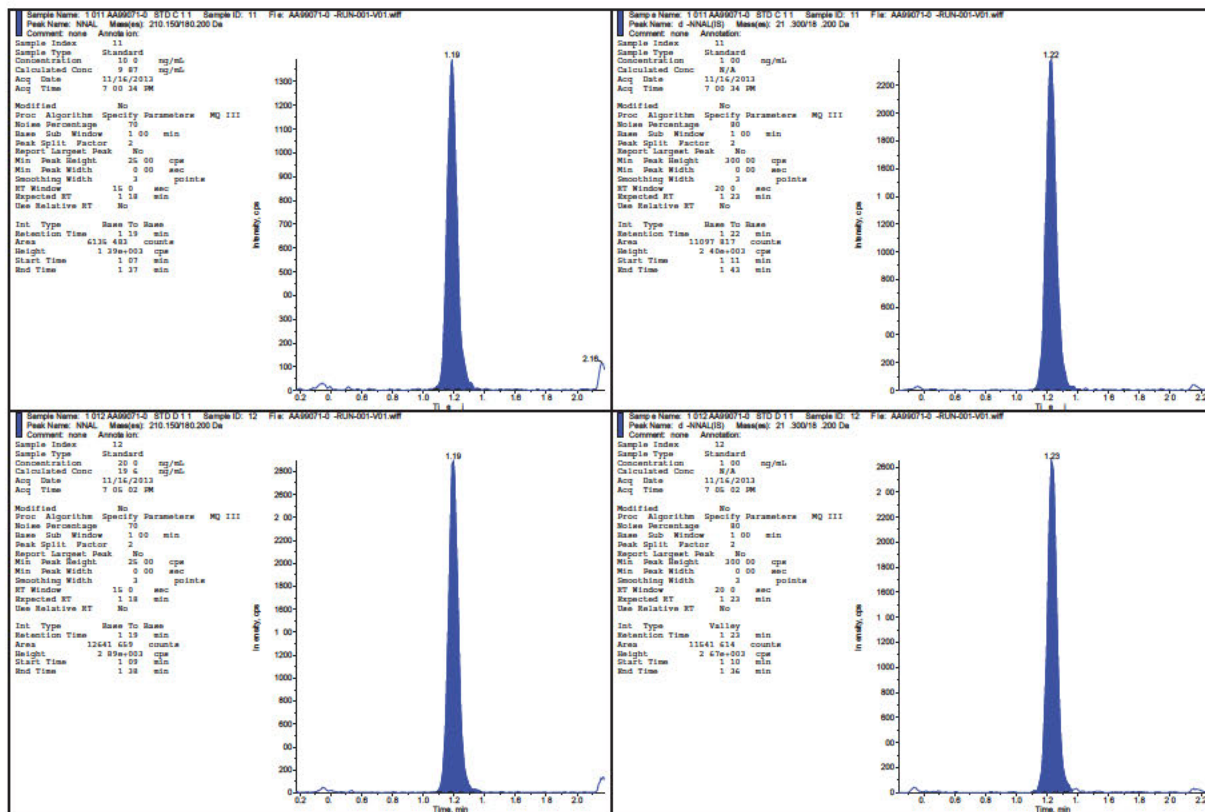


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Celerion Study AA99071-04



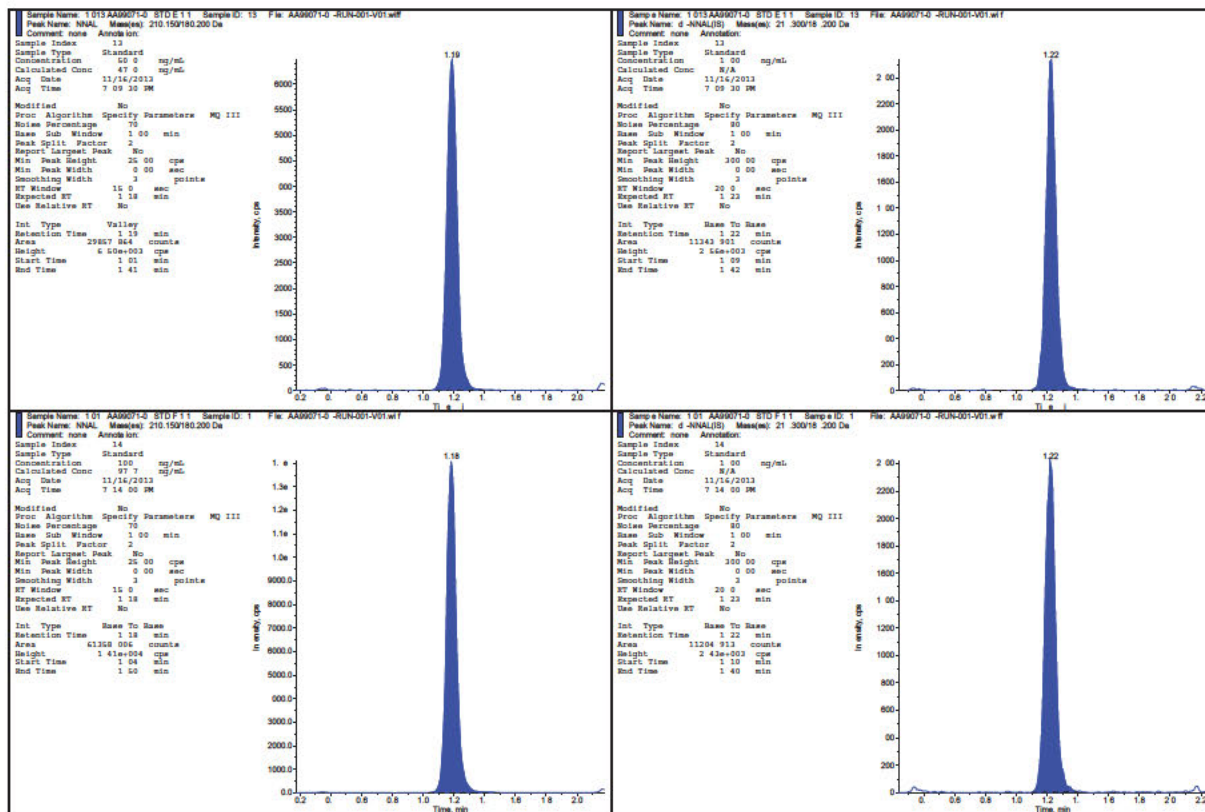


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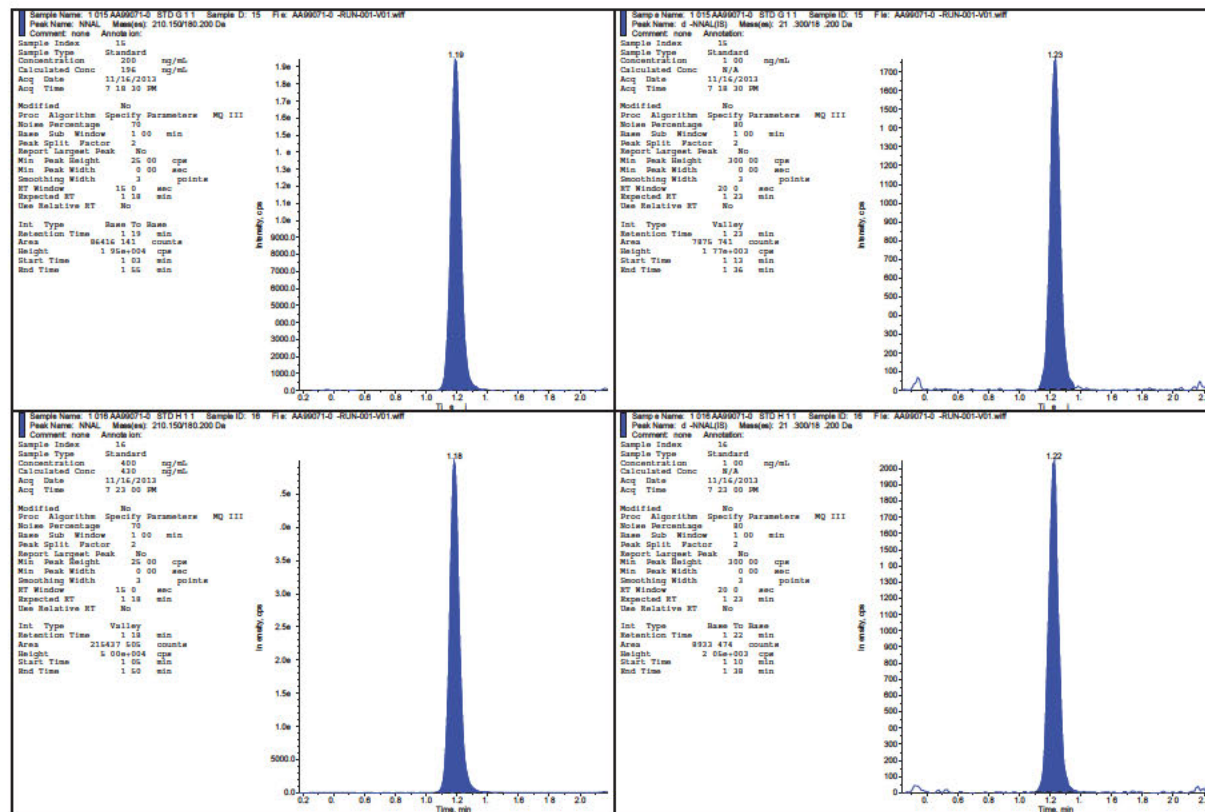


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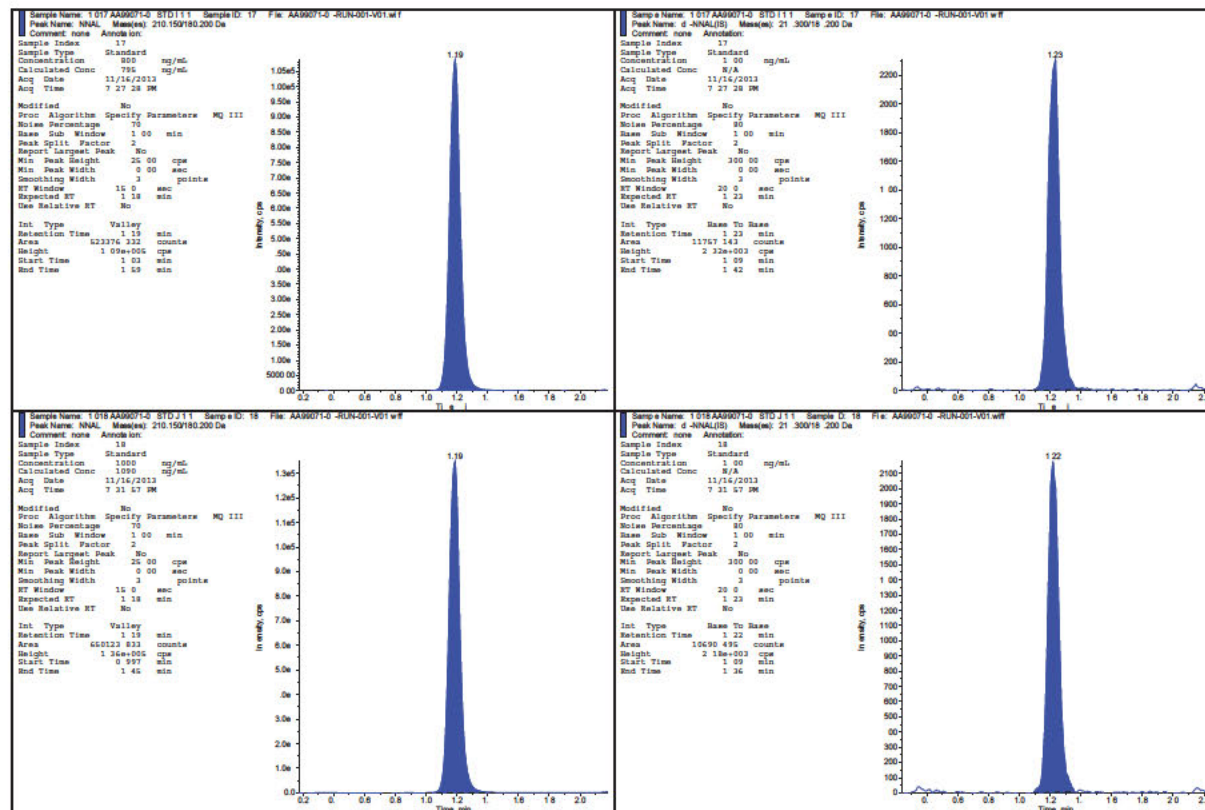


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Celention Study AA99071-04



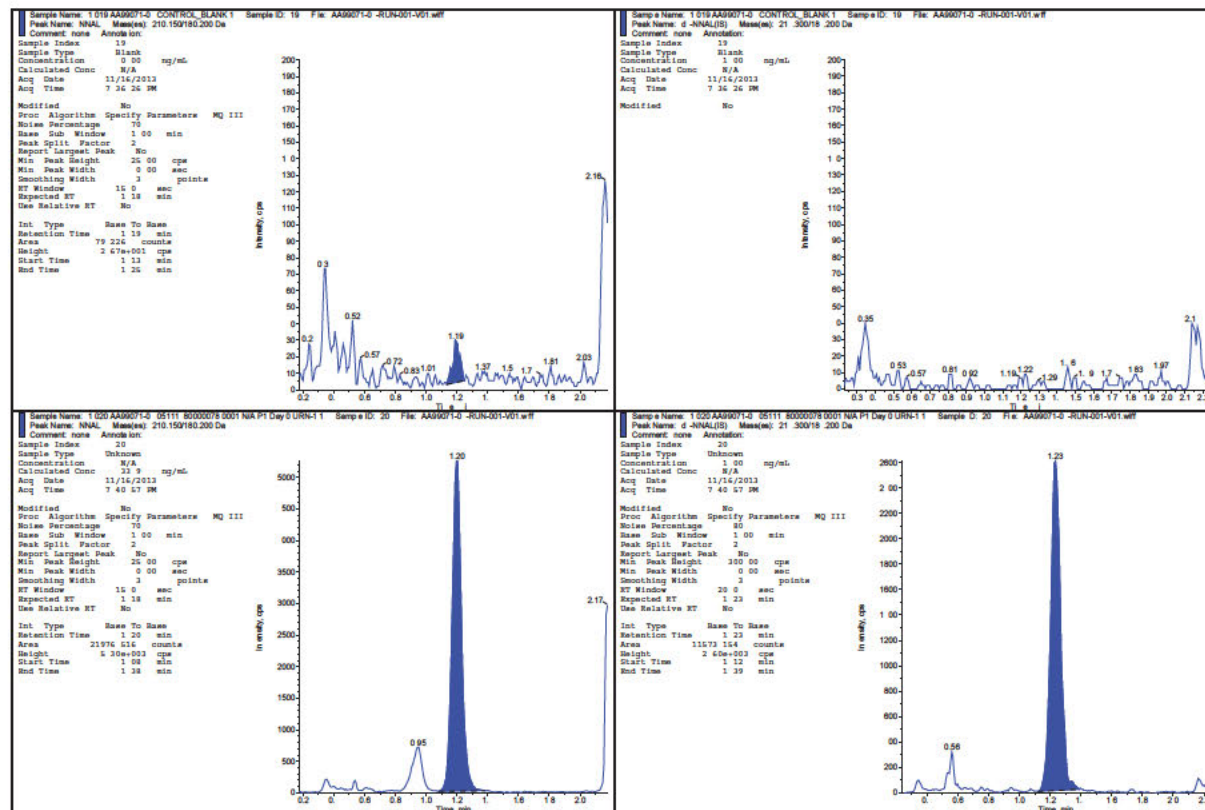


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Celcerion Study AA99071-04



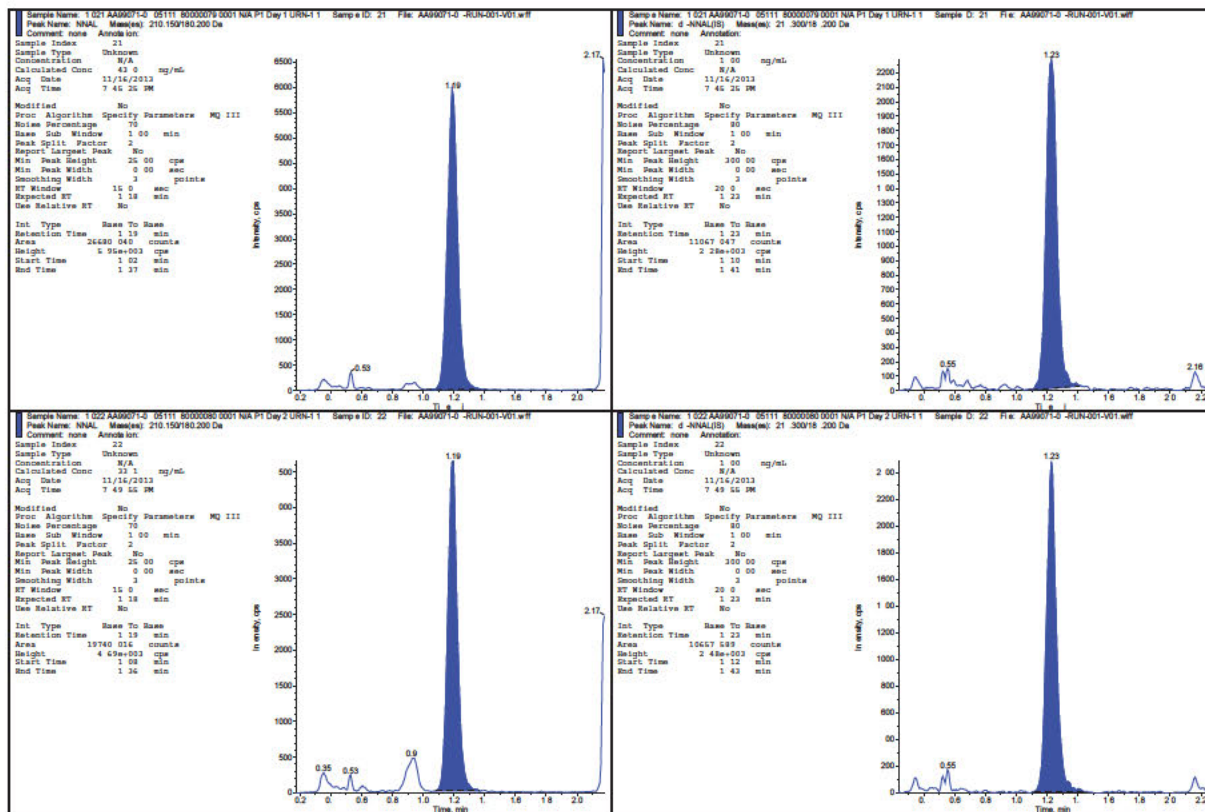


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Celerion Study AA99071-04



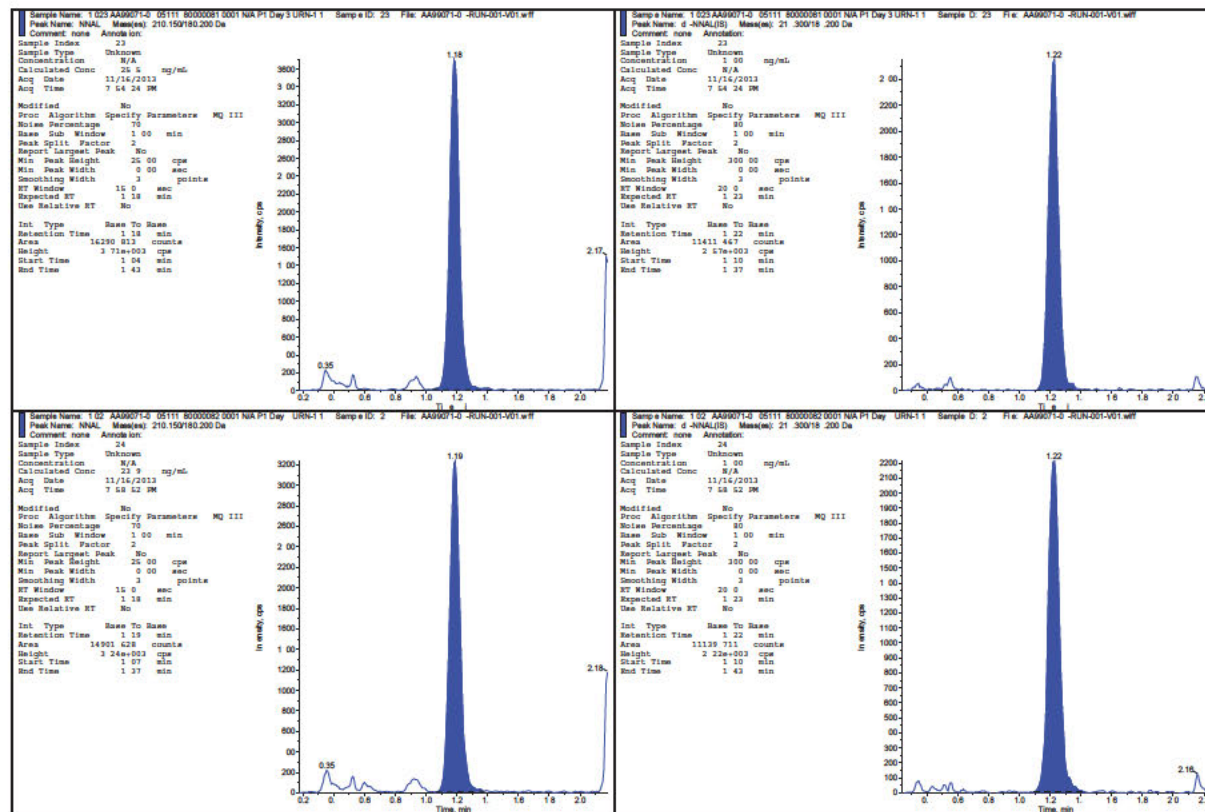


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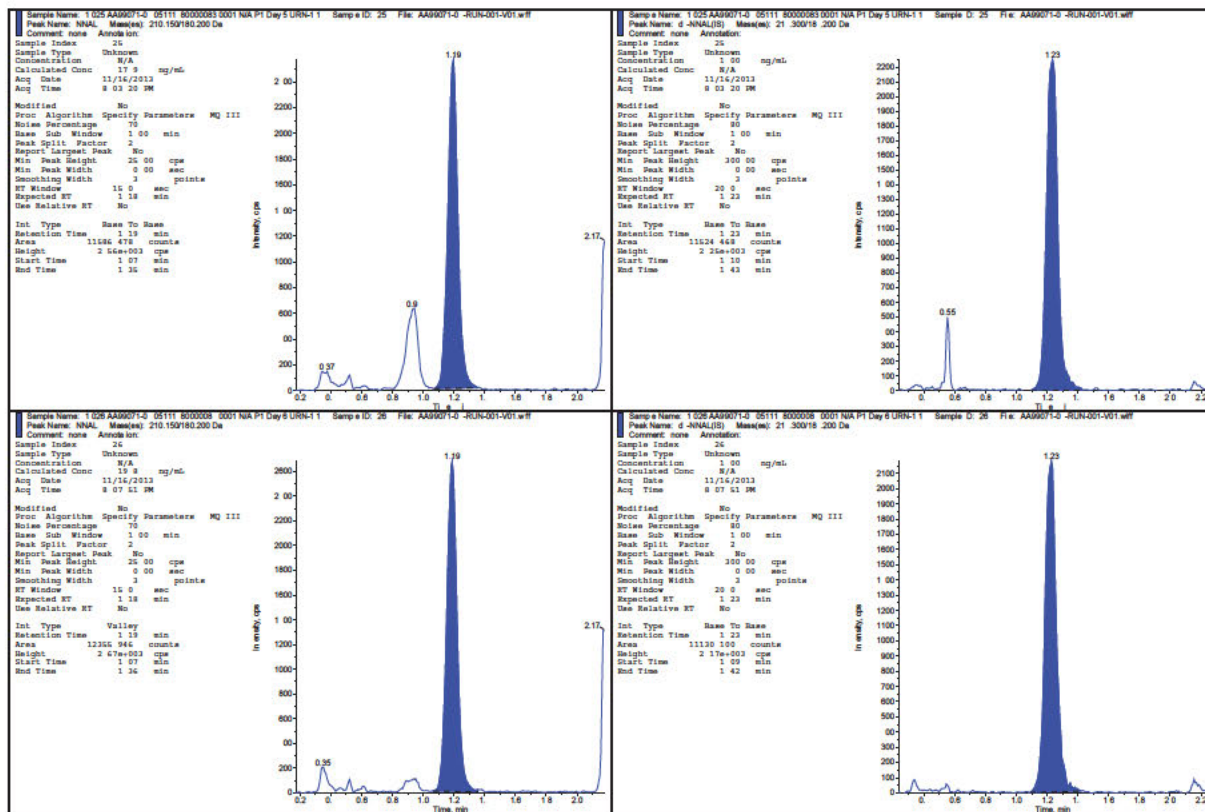


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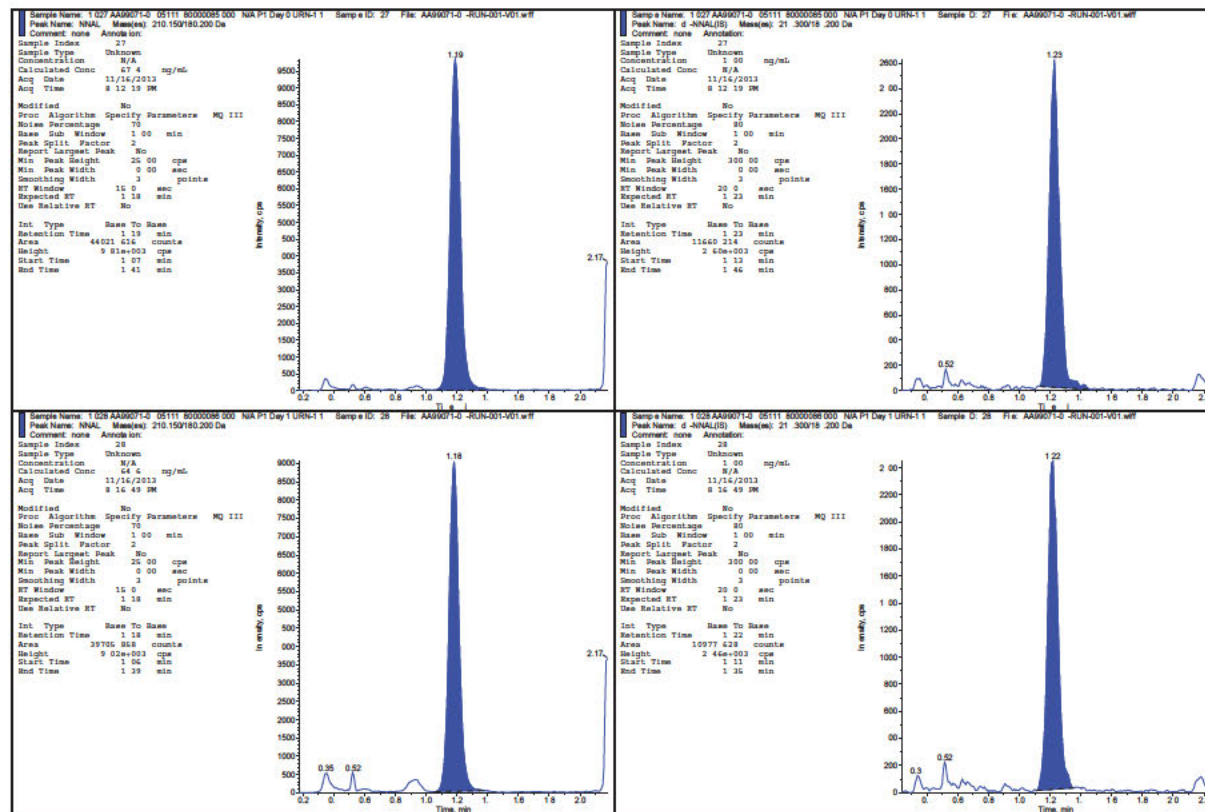


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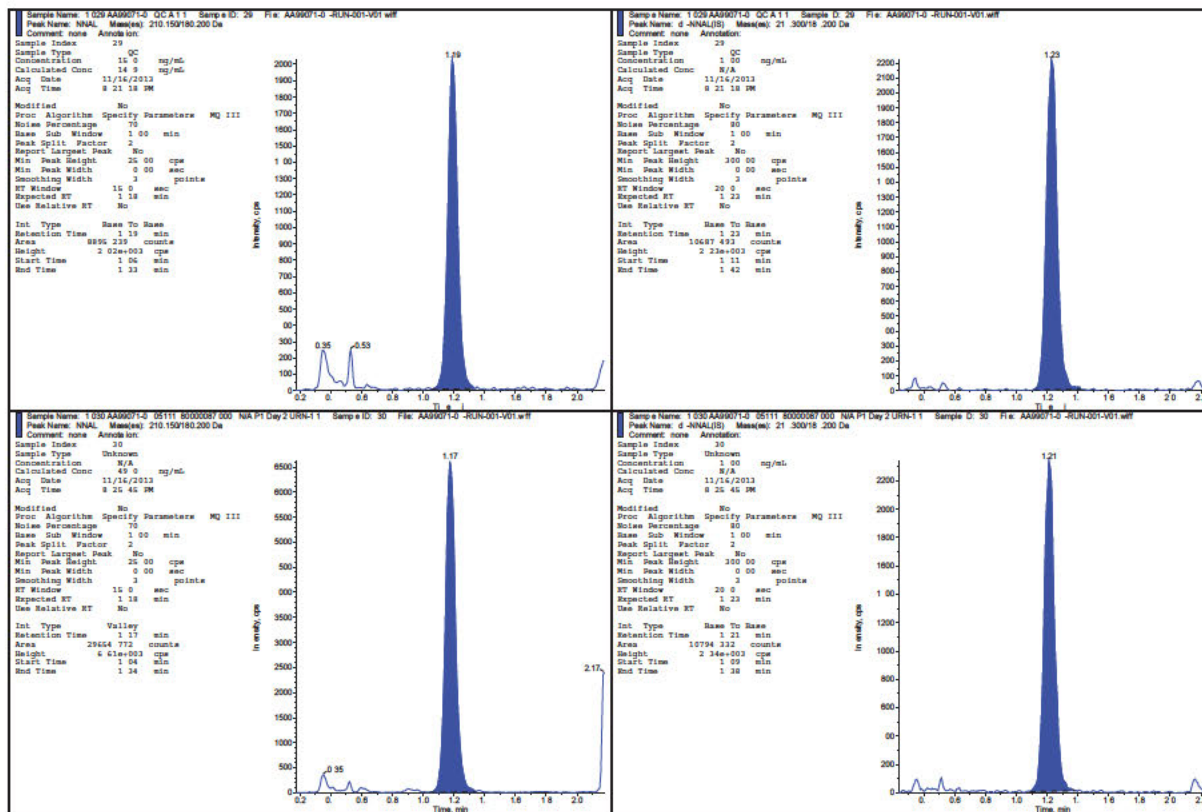


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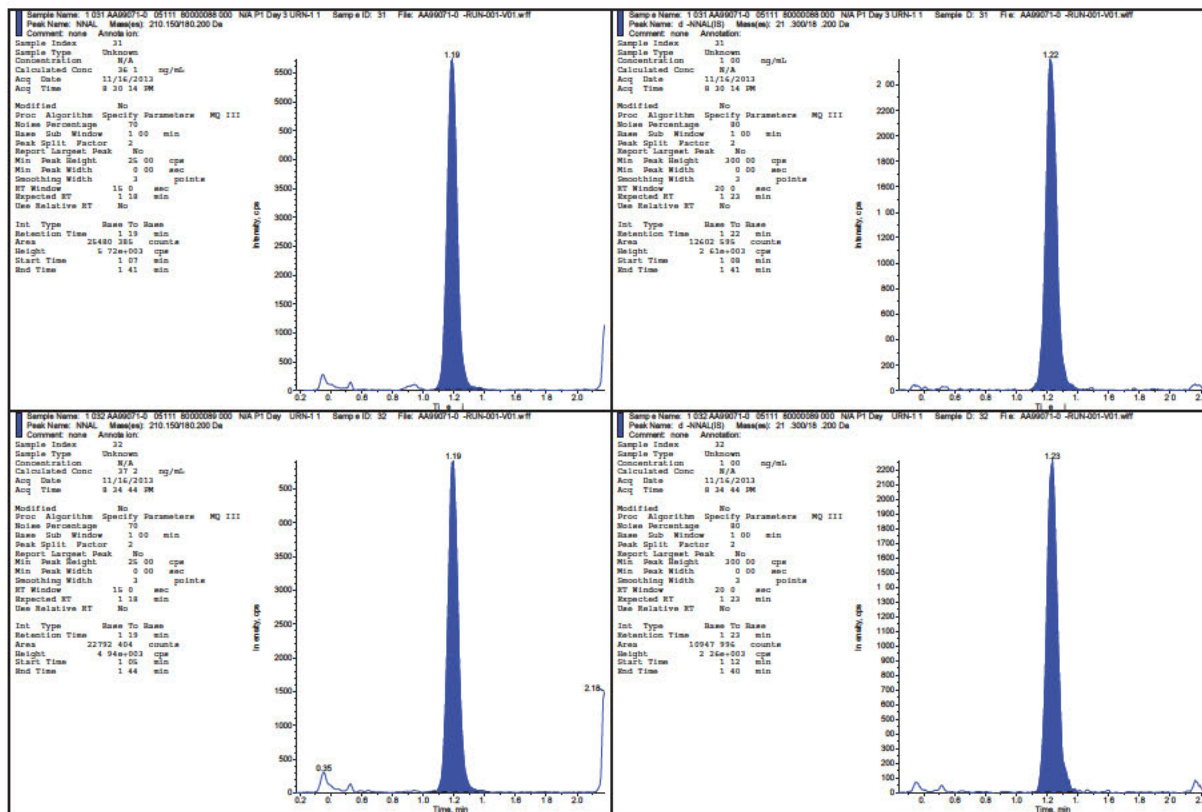


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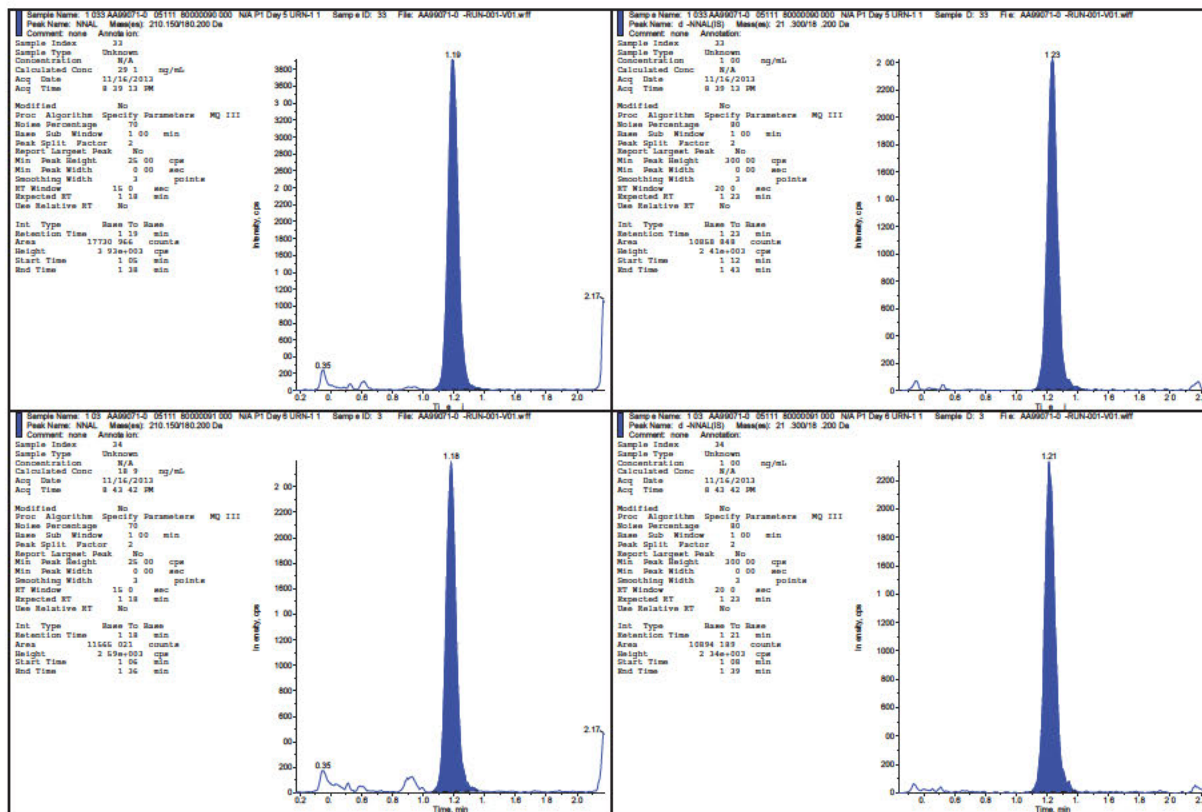


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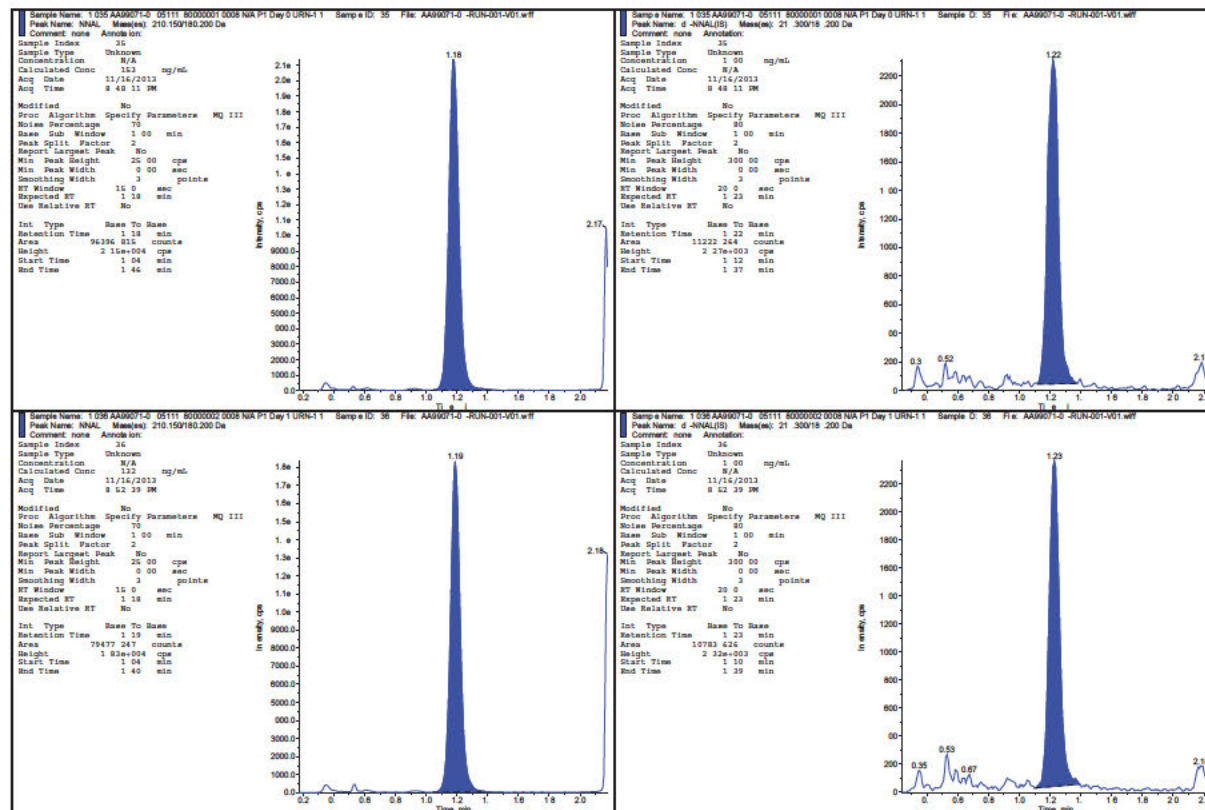


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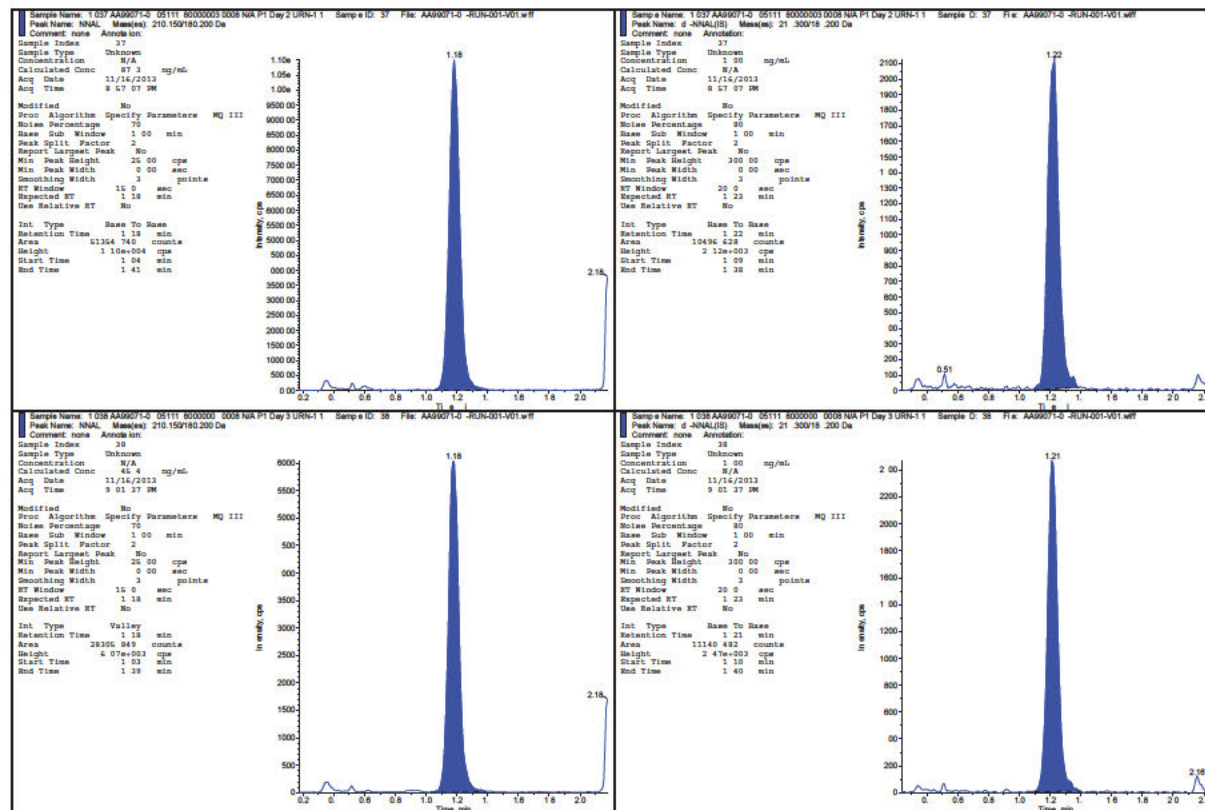


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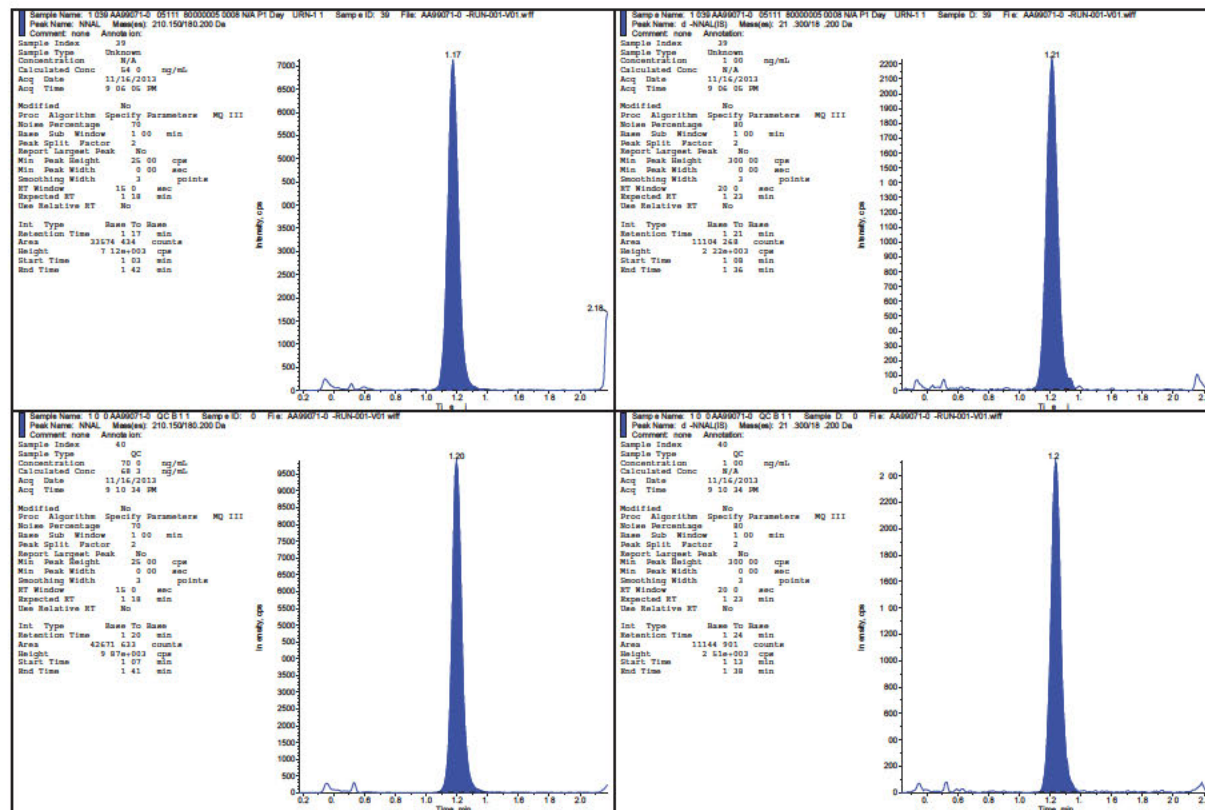


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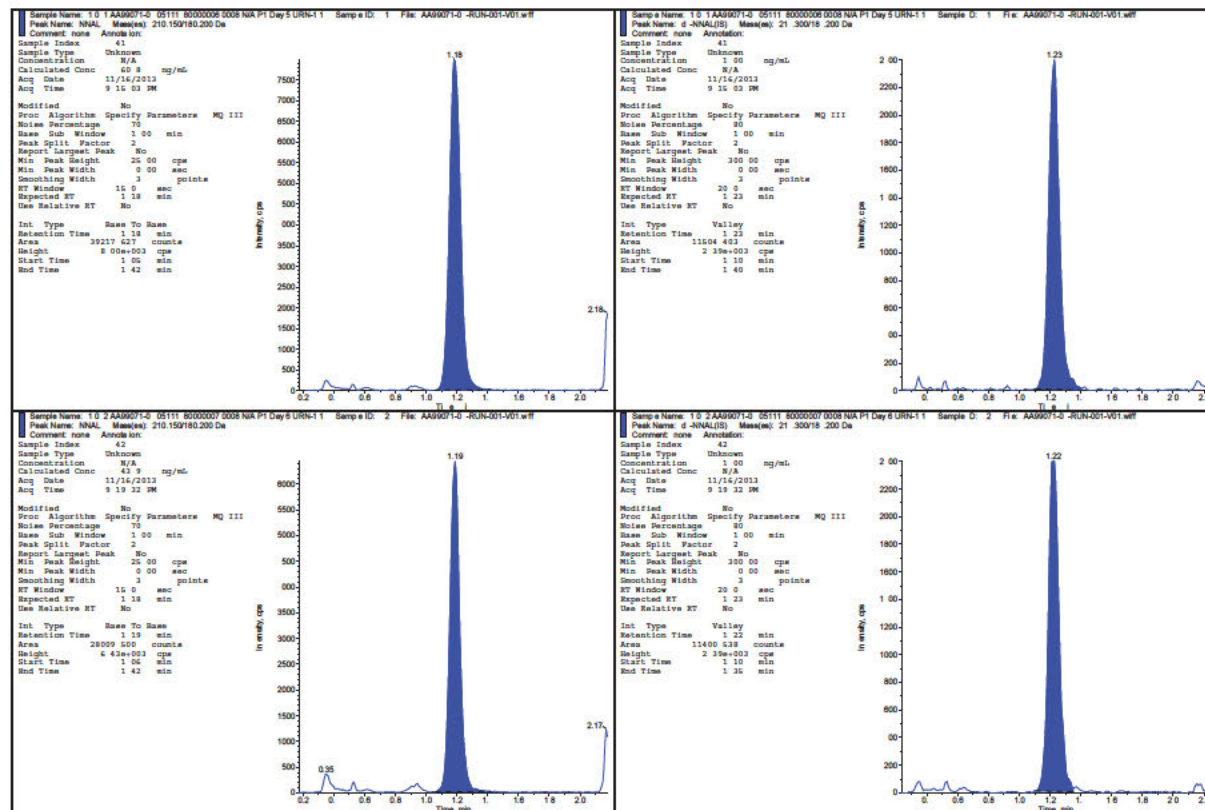


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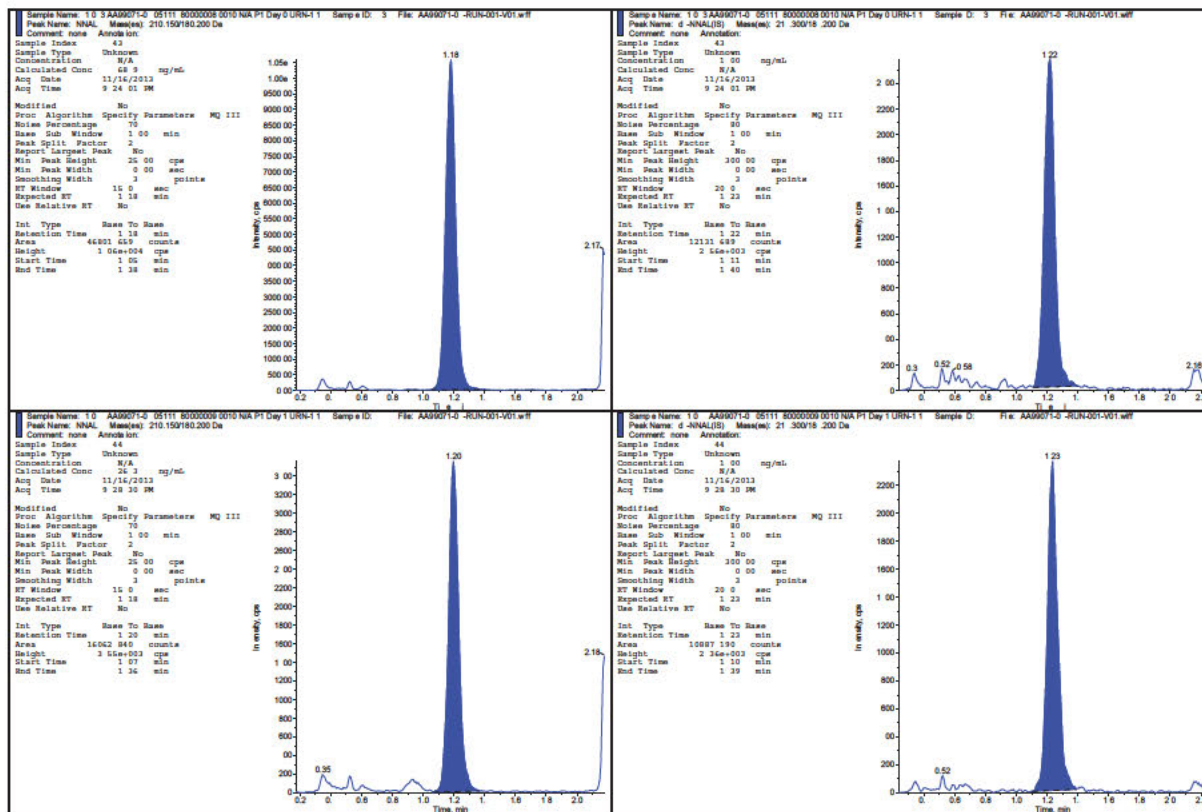


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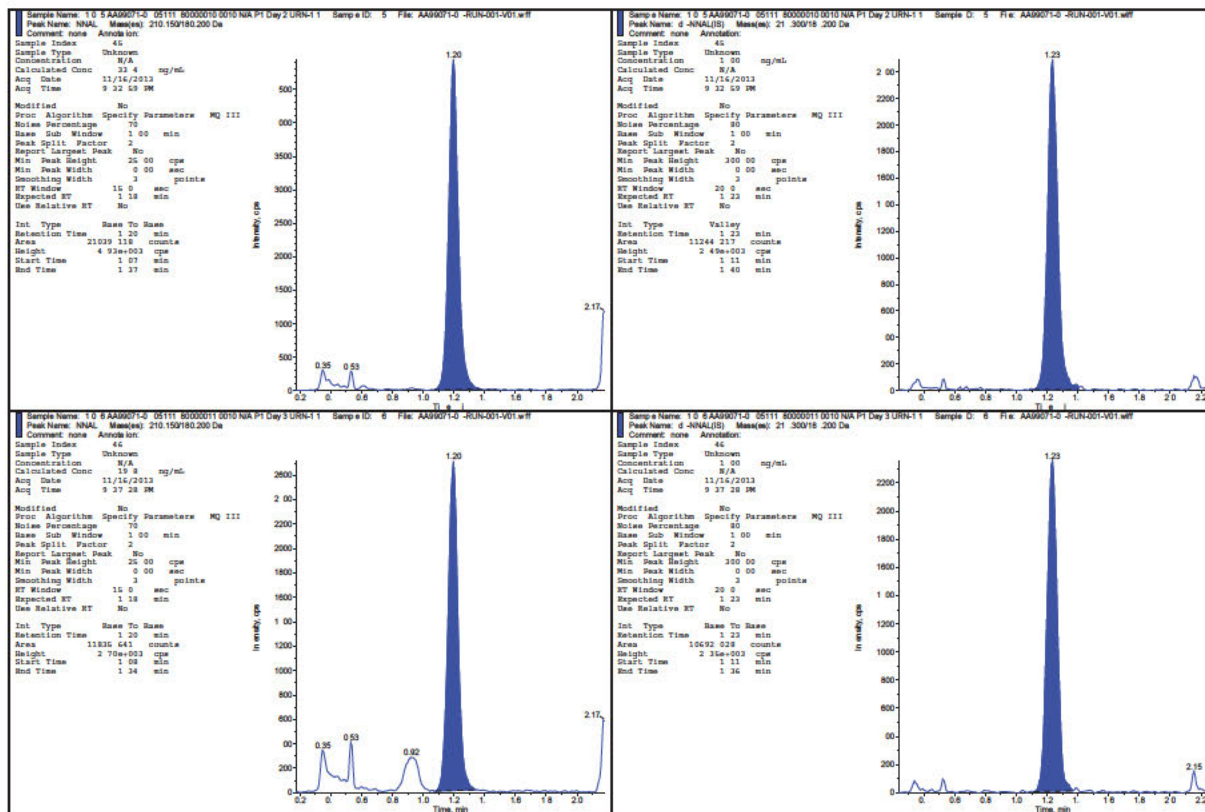


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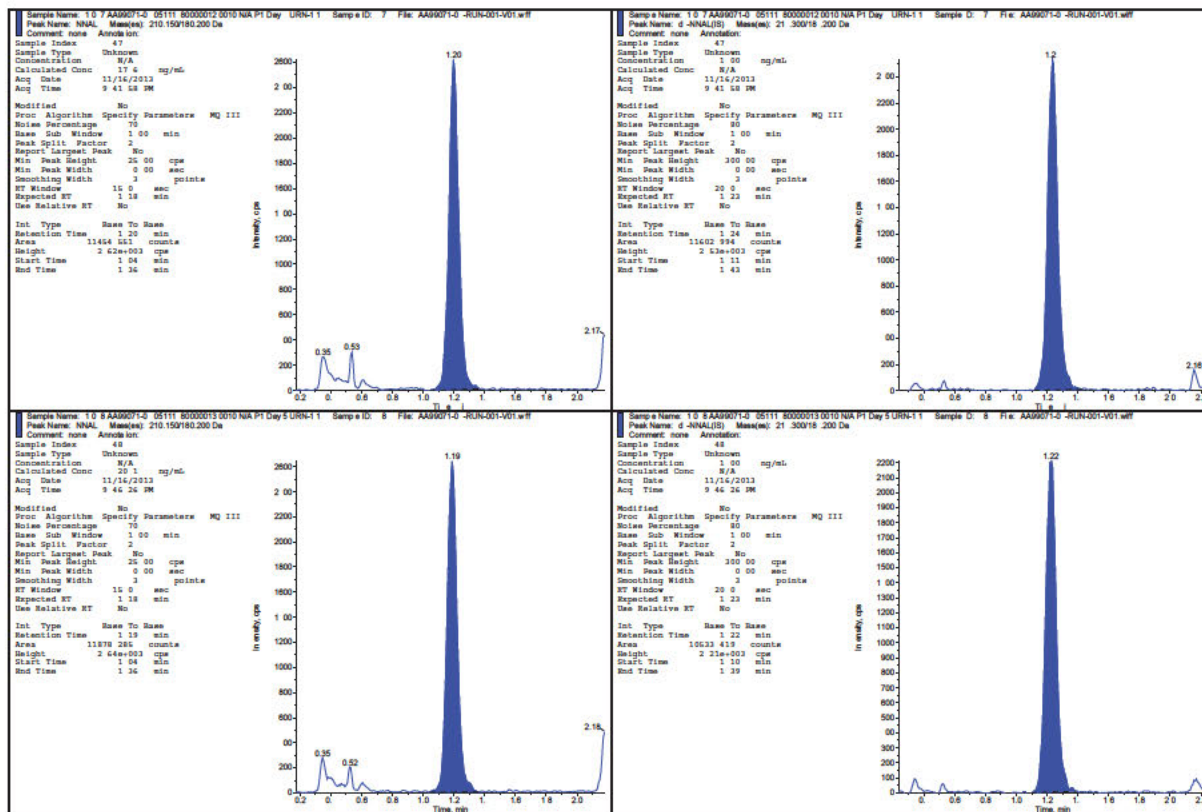


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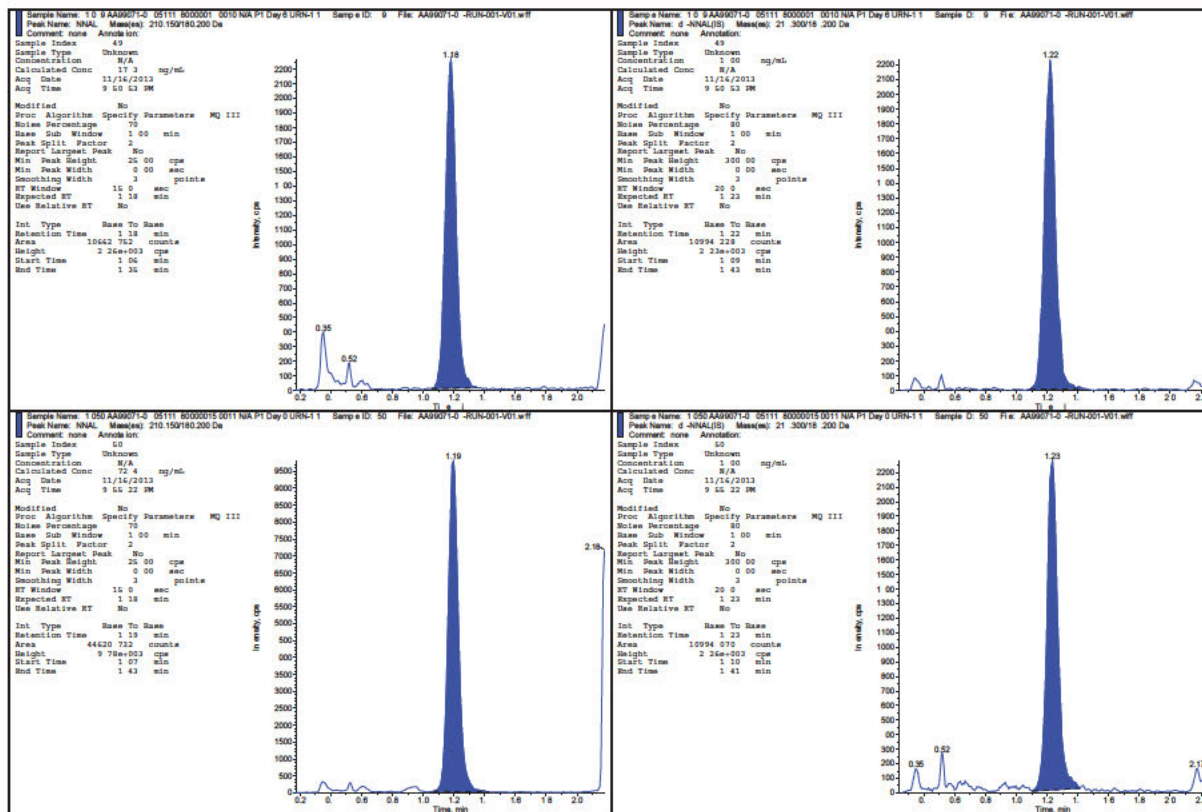


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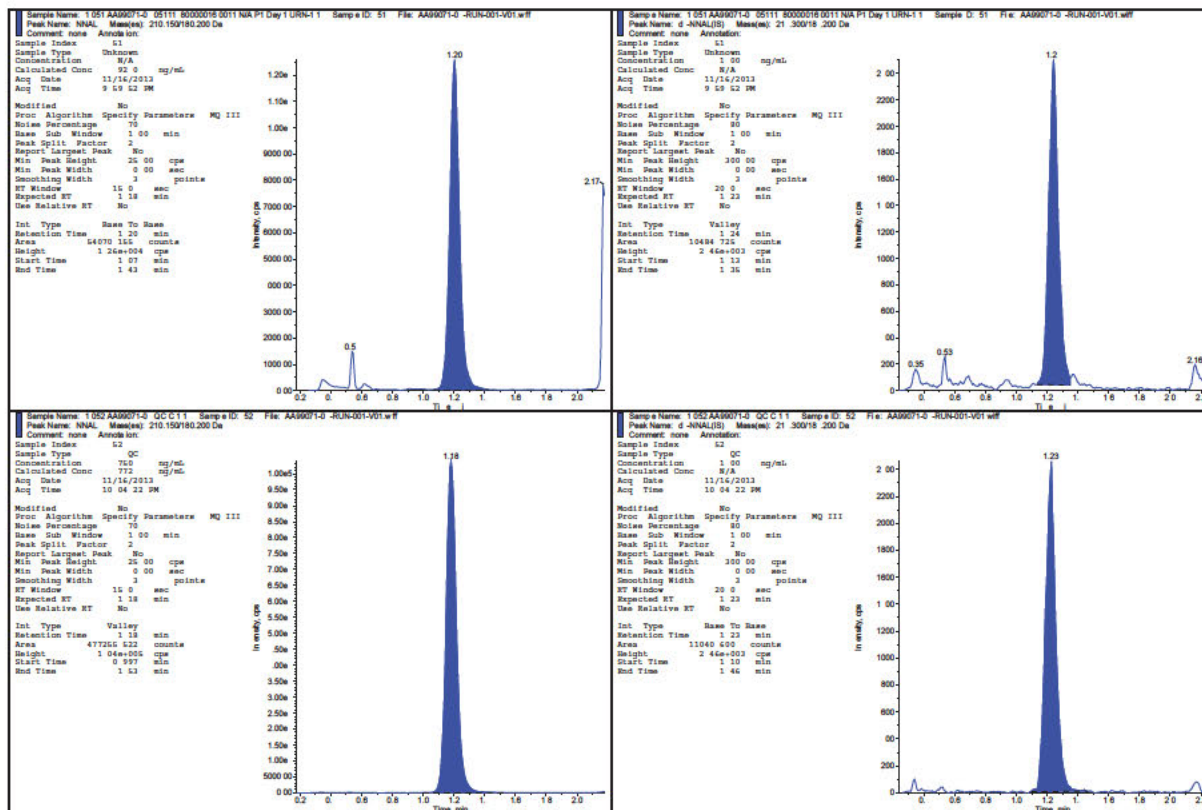


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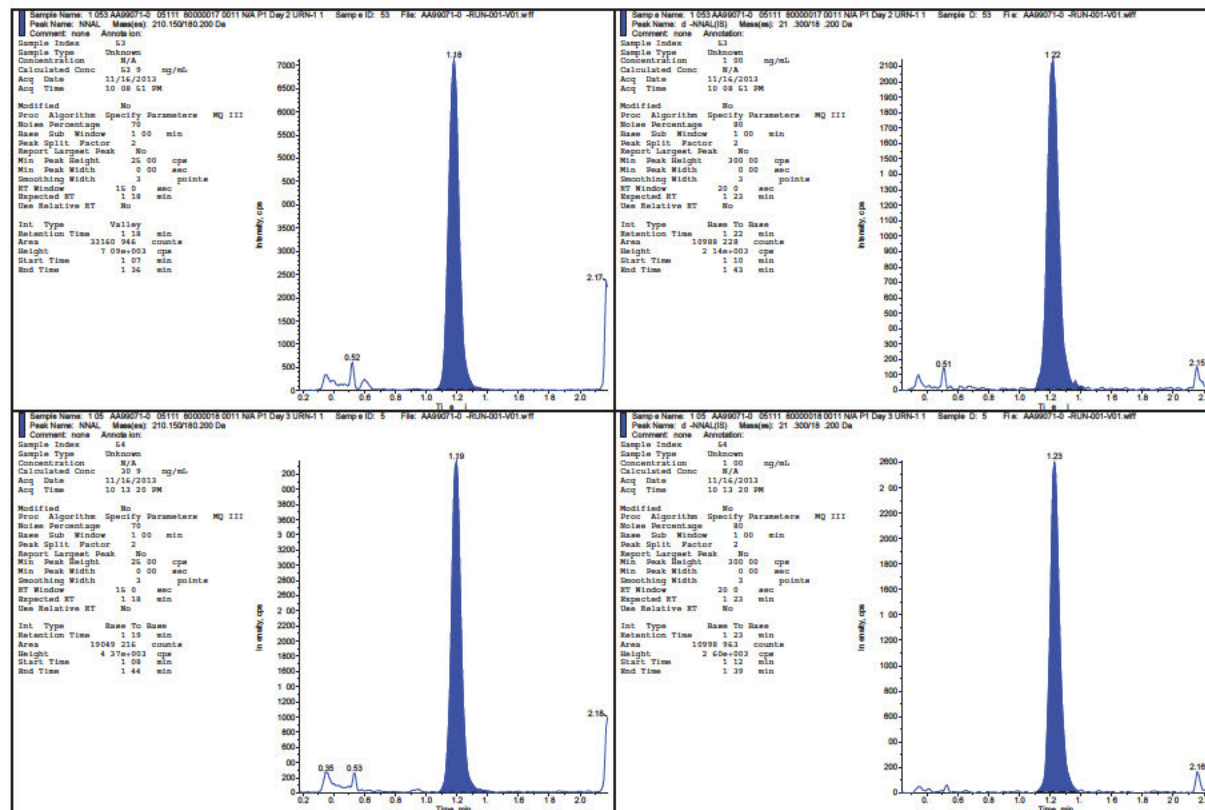


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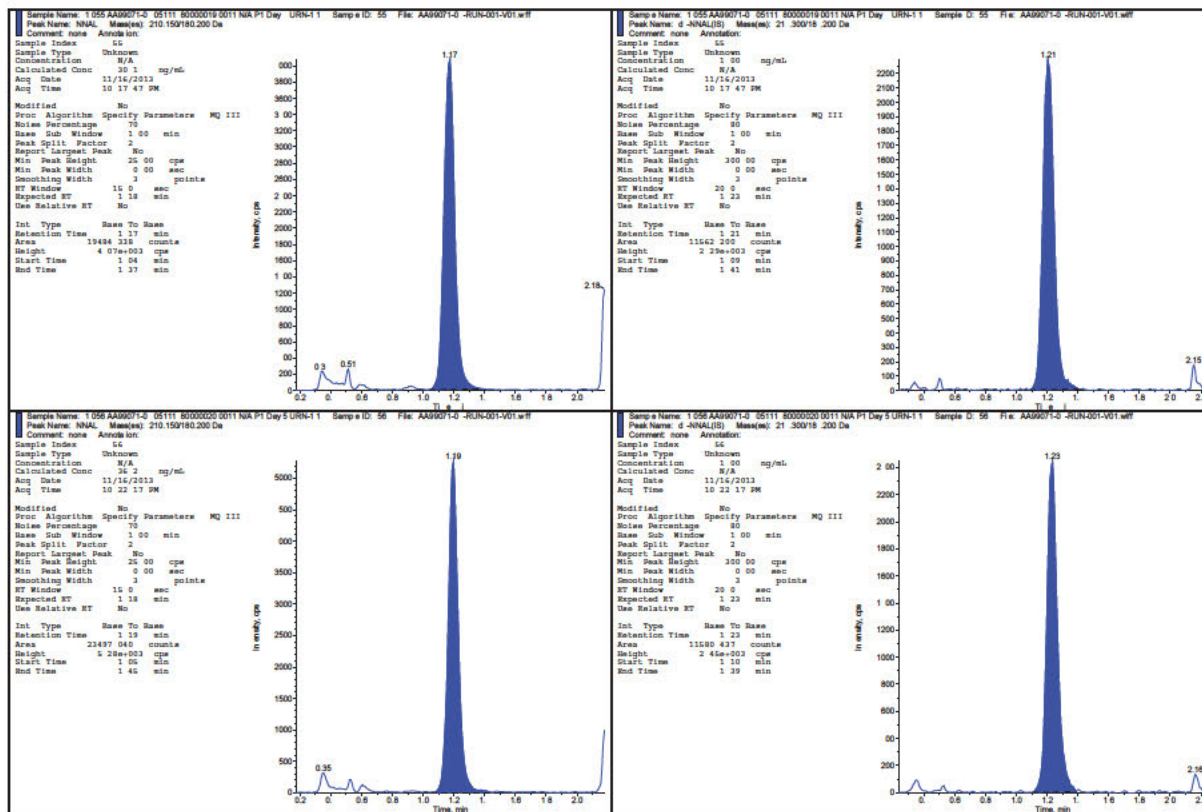


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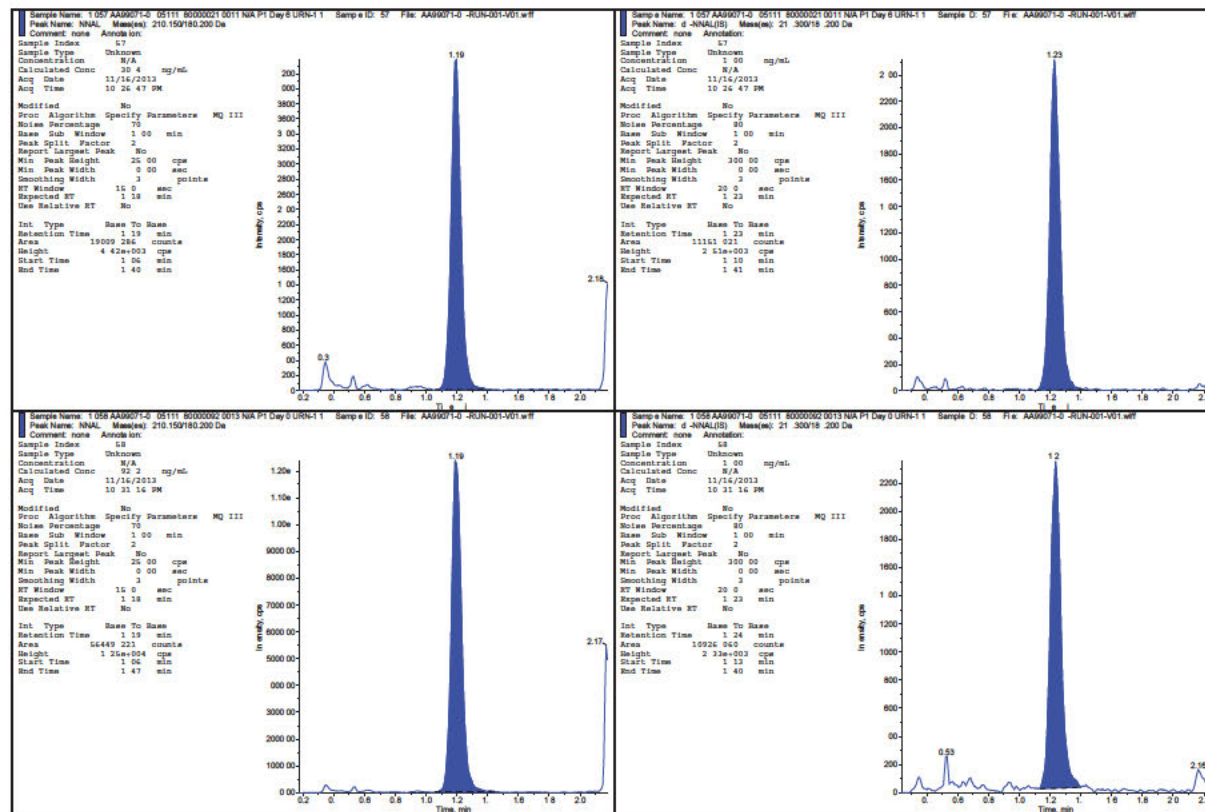


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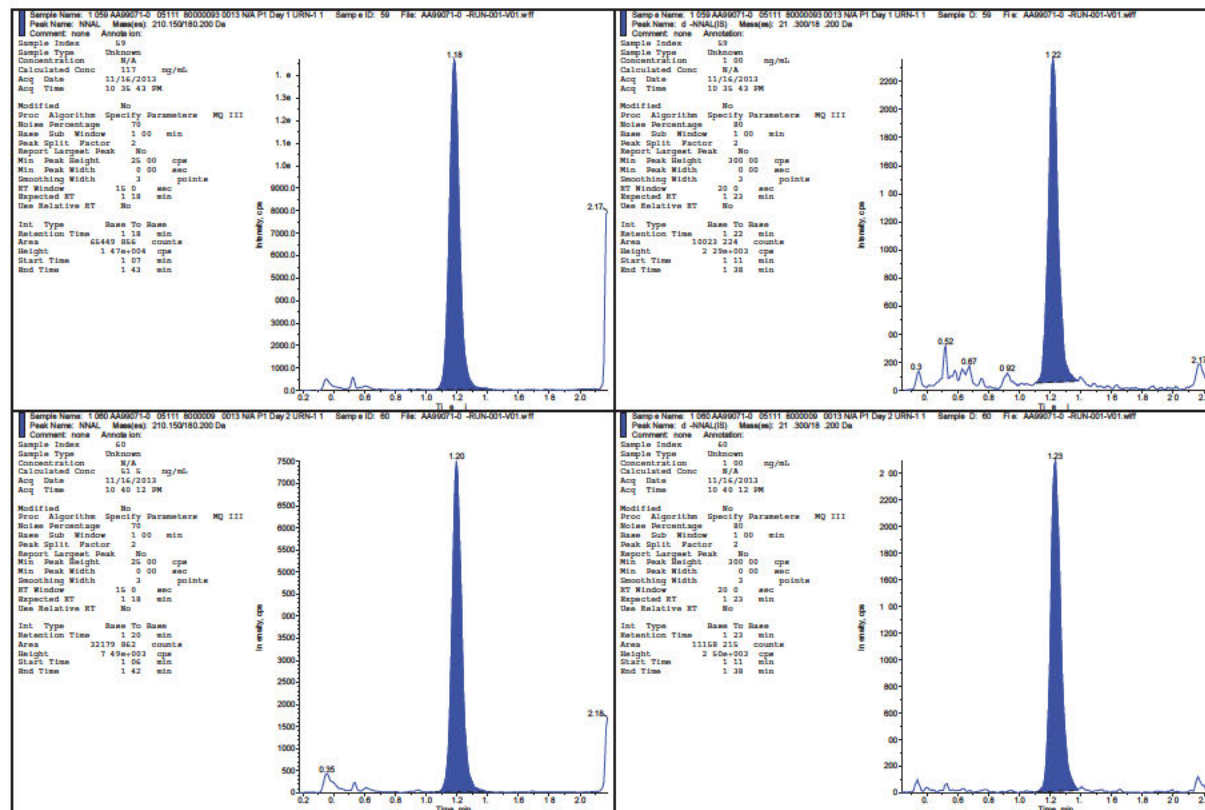


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Celerion Study AA99071-04



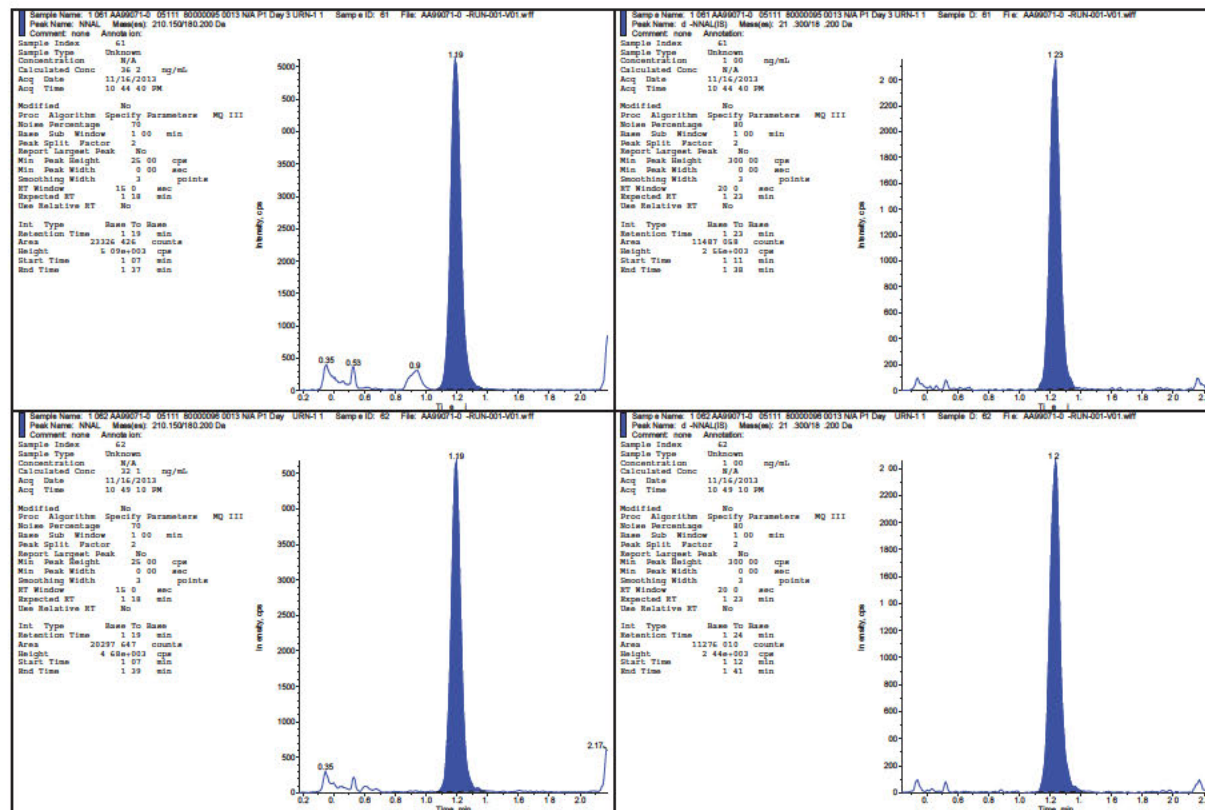


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Celention Study AA99071-04



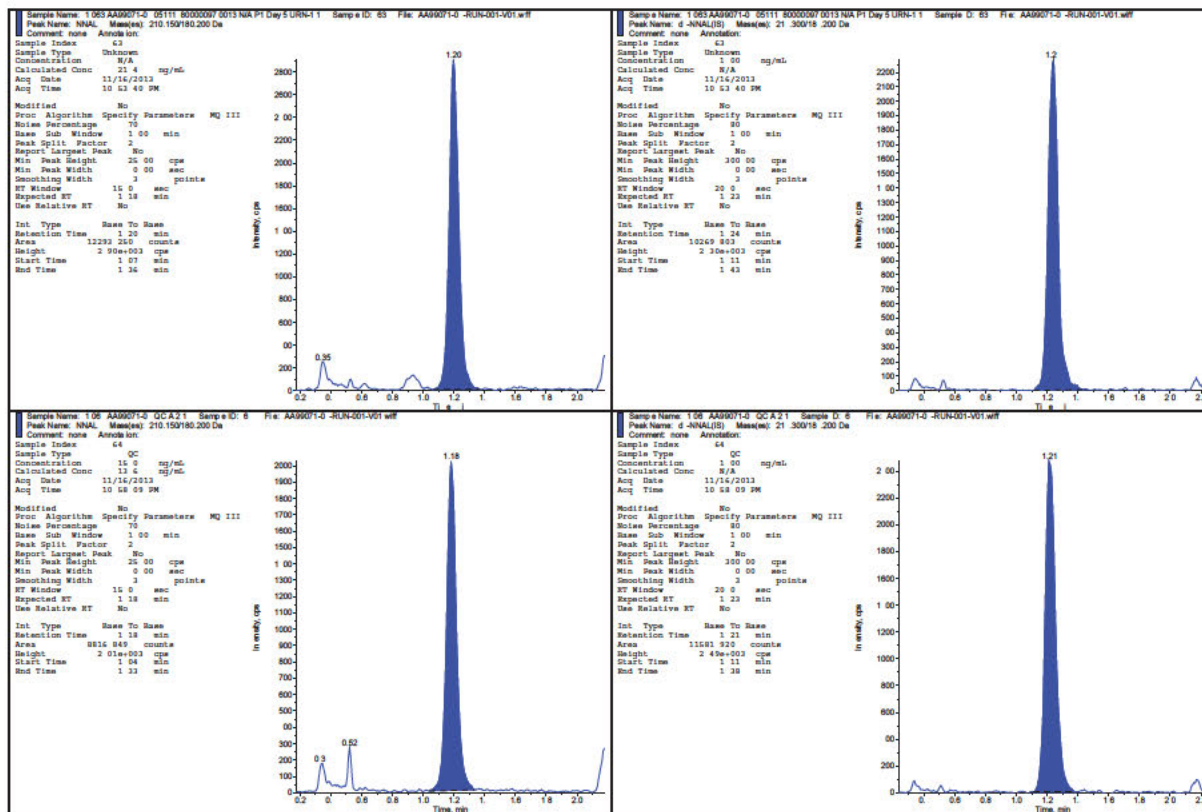


Total NNAL and Total NNN in Human Urine
Celention Study AA99071-04



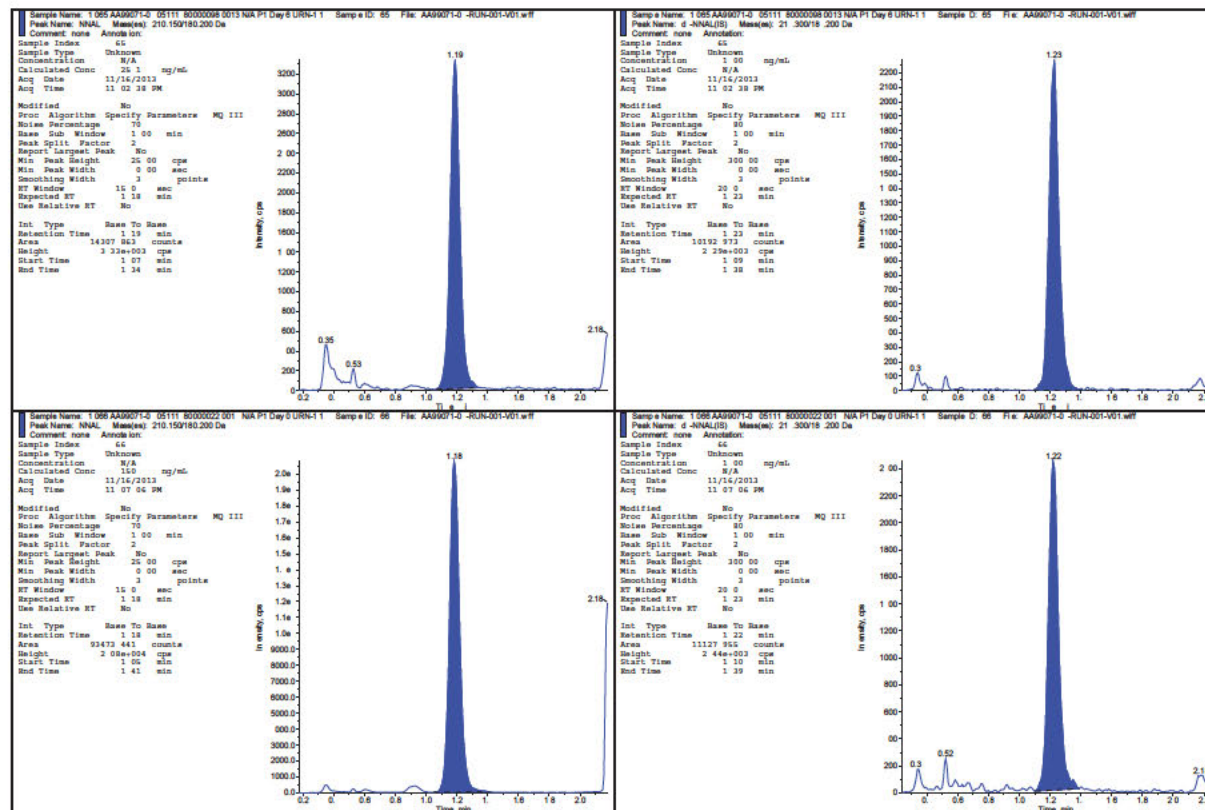


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Celention Study AA99071-04



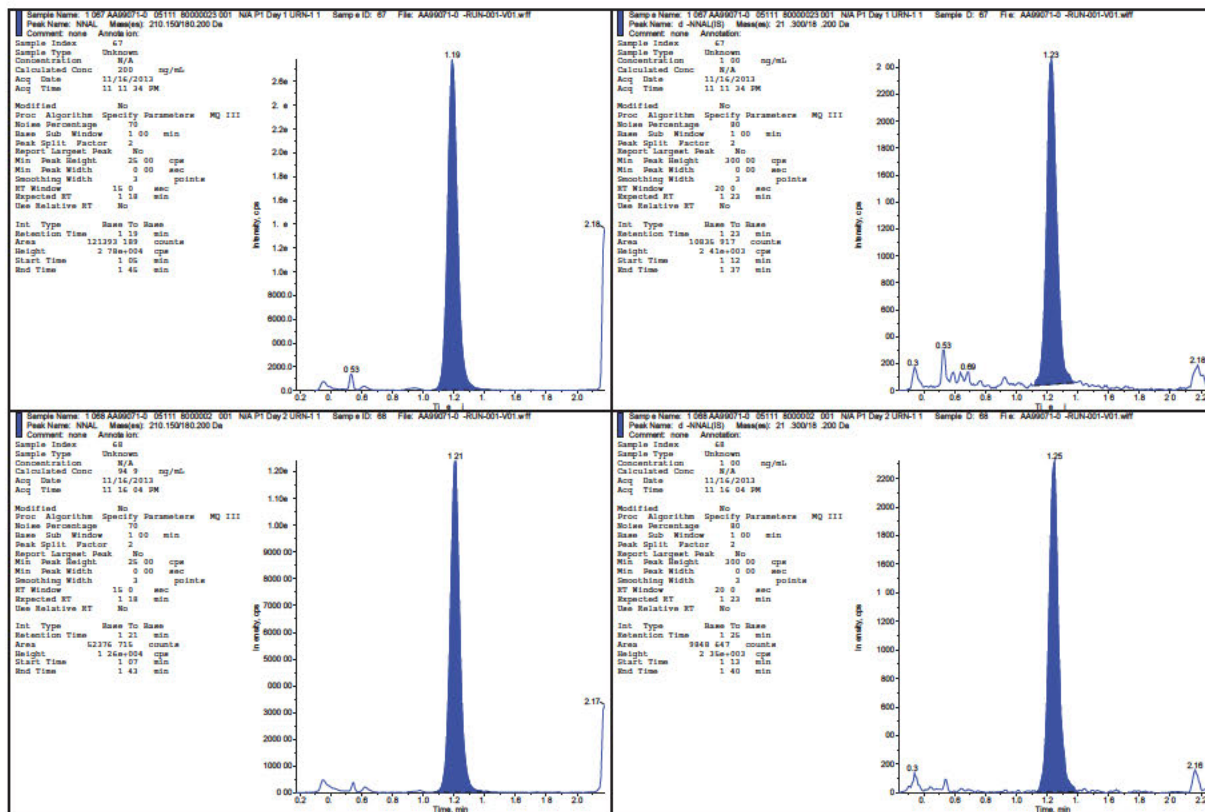


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Celcoron Study AA99071-04



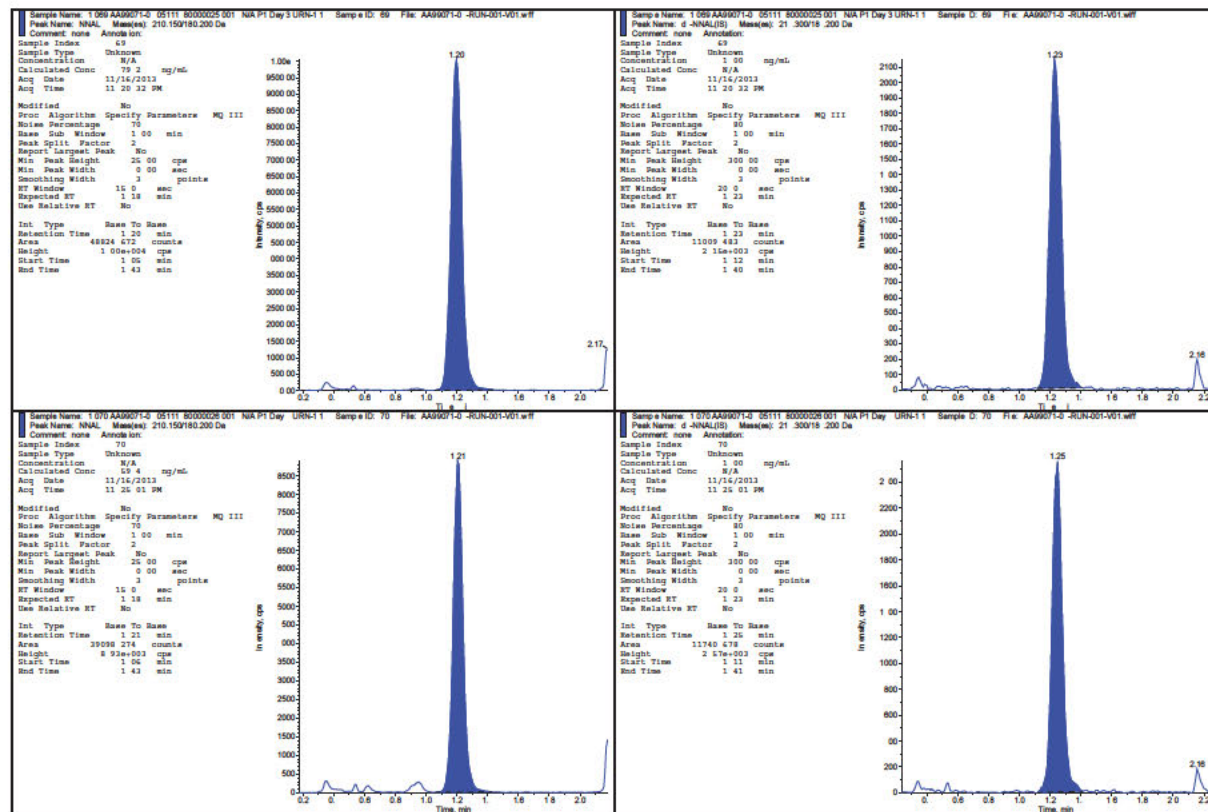


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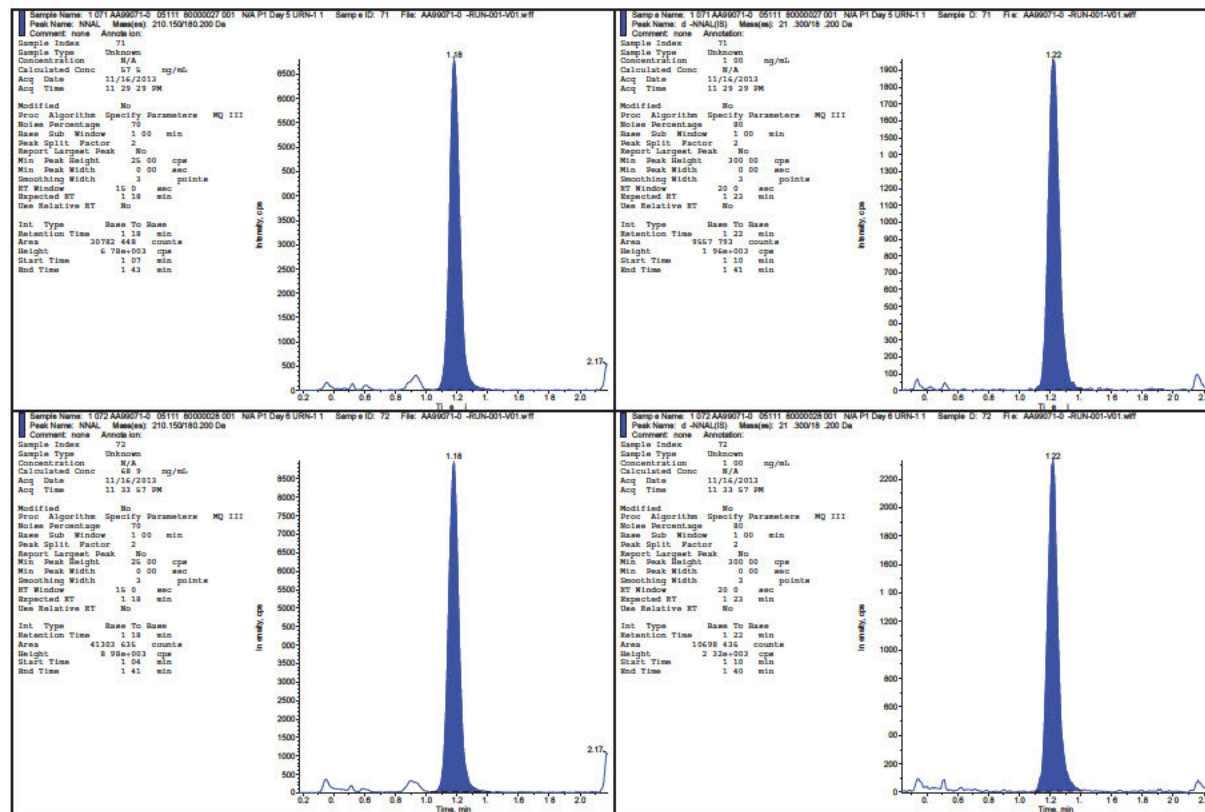


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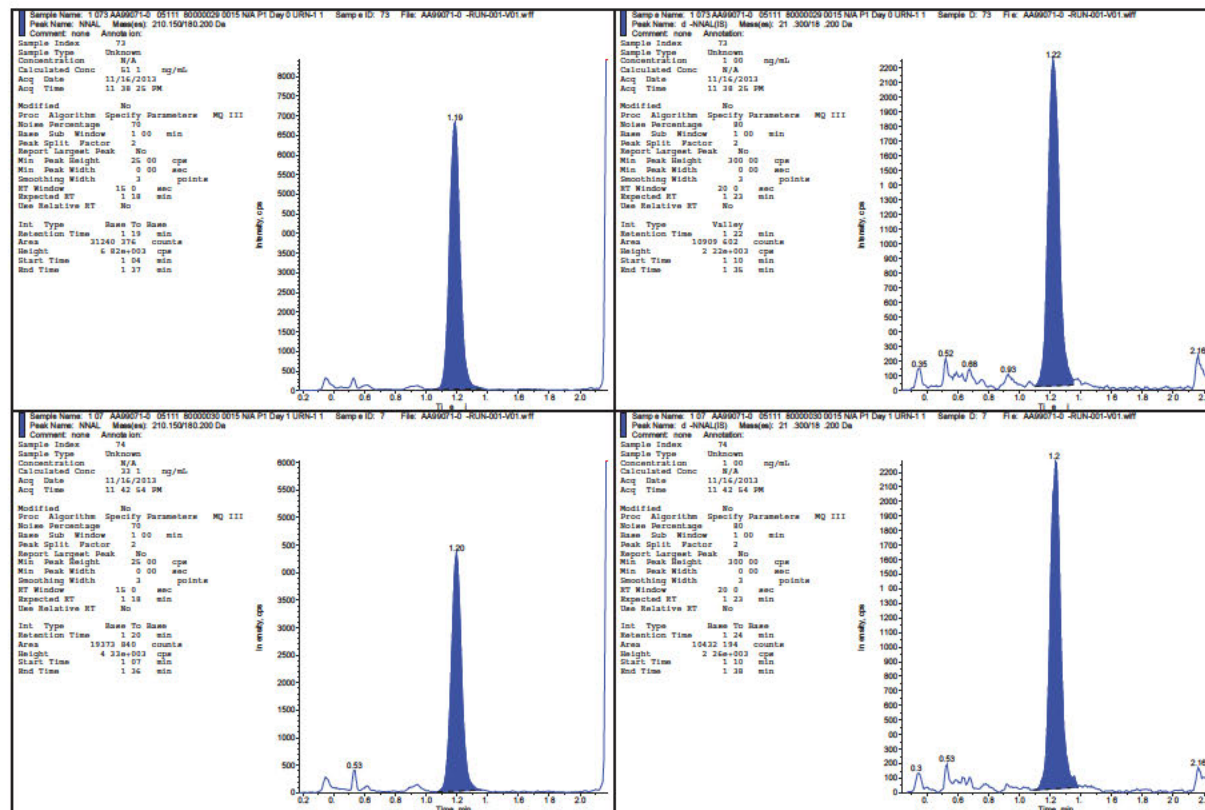


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Celcerion Study AA99071-04



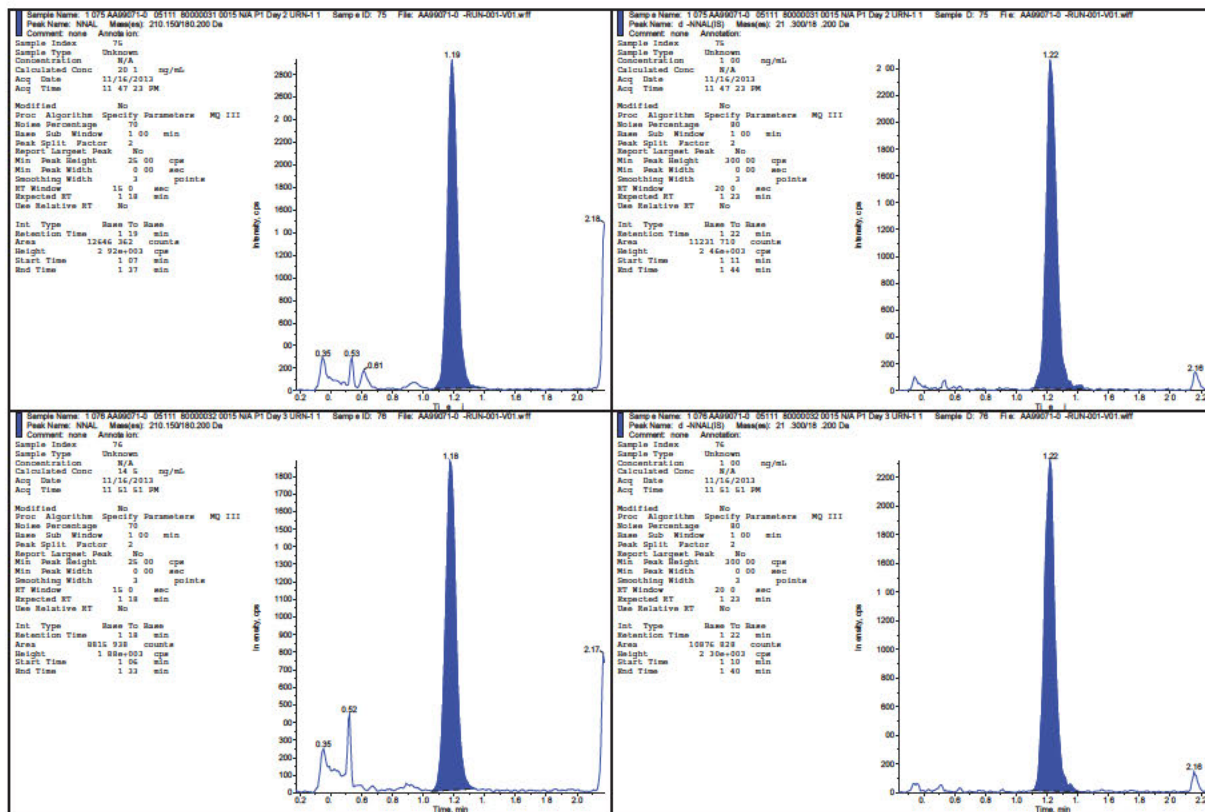


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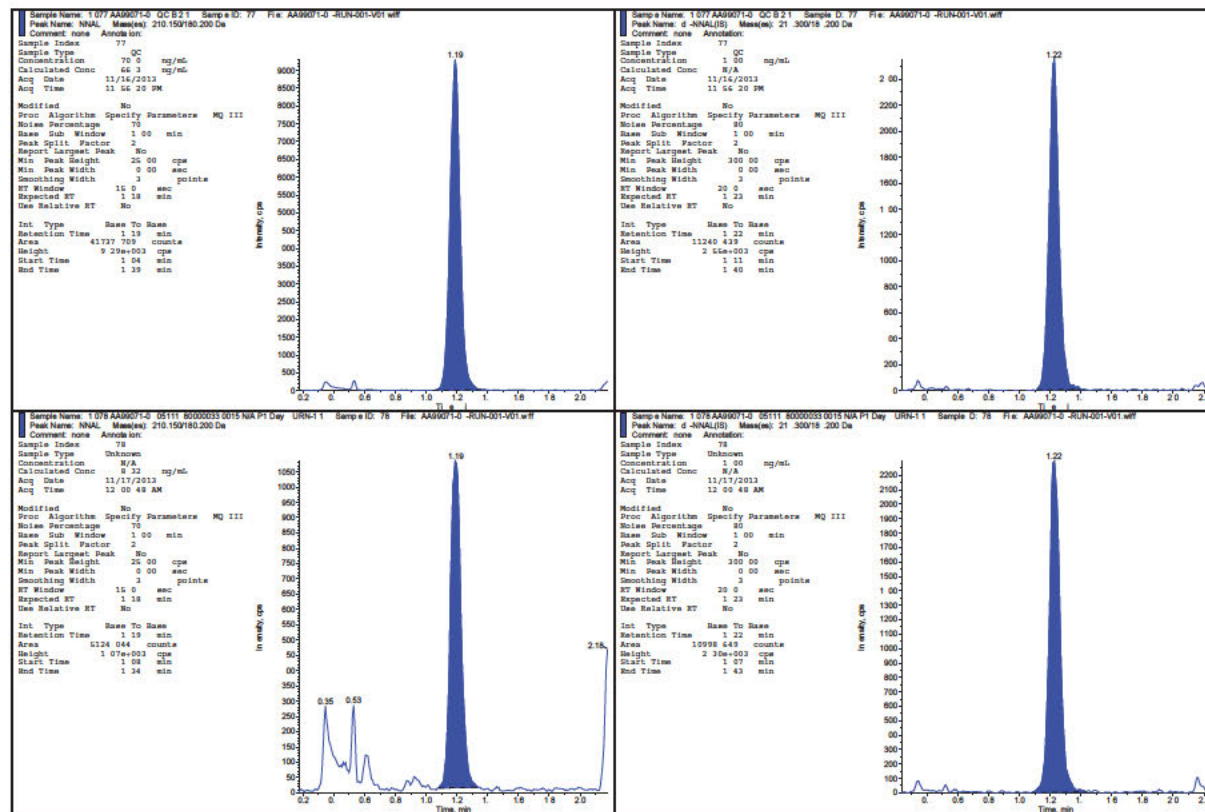


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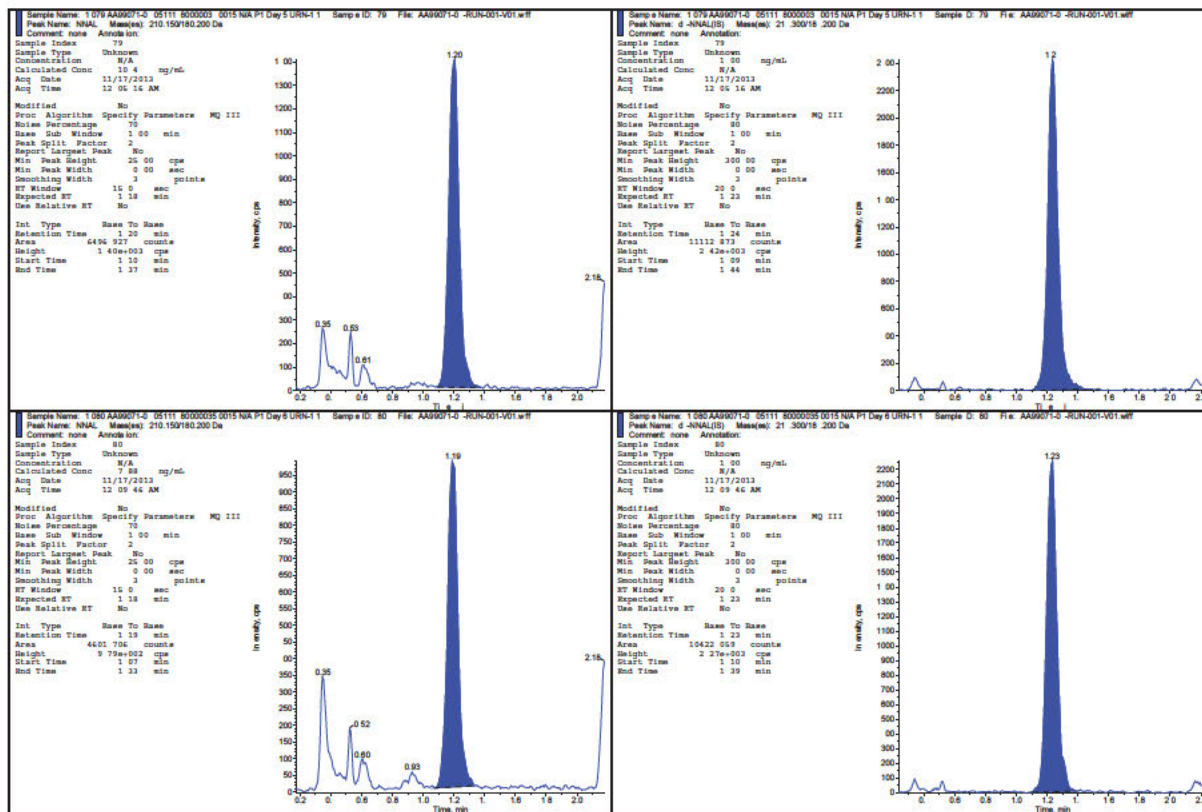


Total NNAL and Total NNN in Human Urine
Celention Study AA99071-04



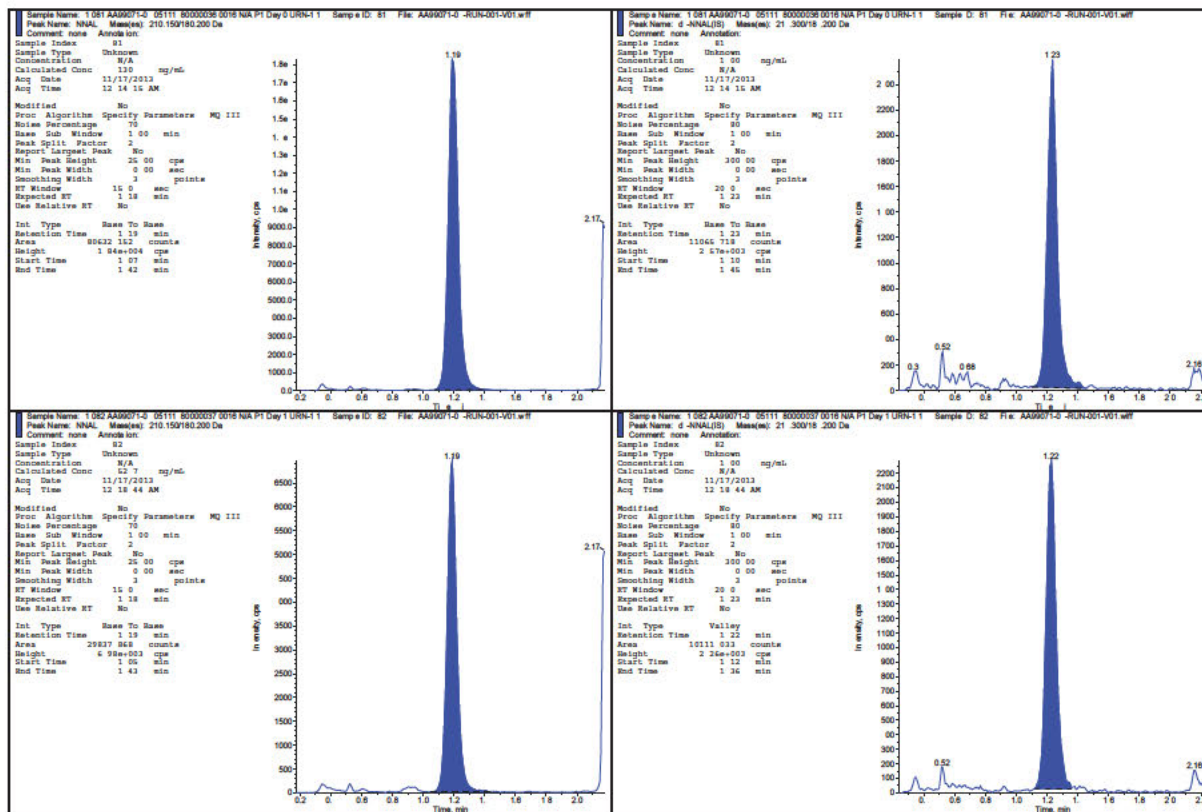


Total NNAL and Total NNN in Human Urine
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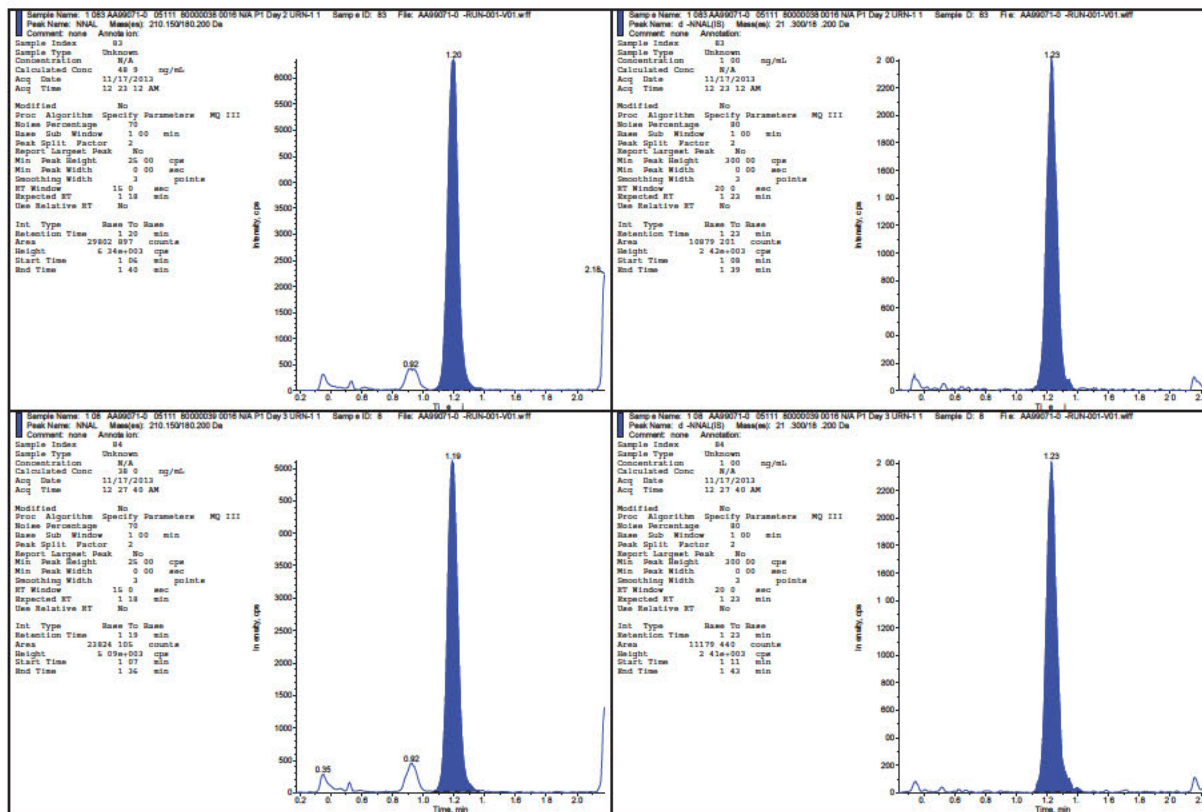


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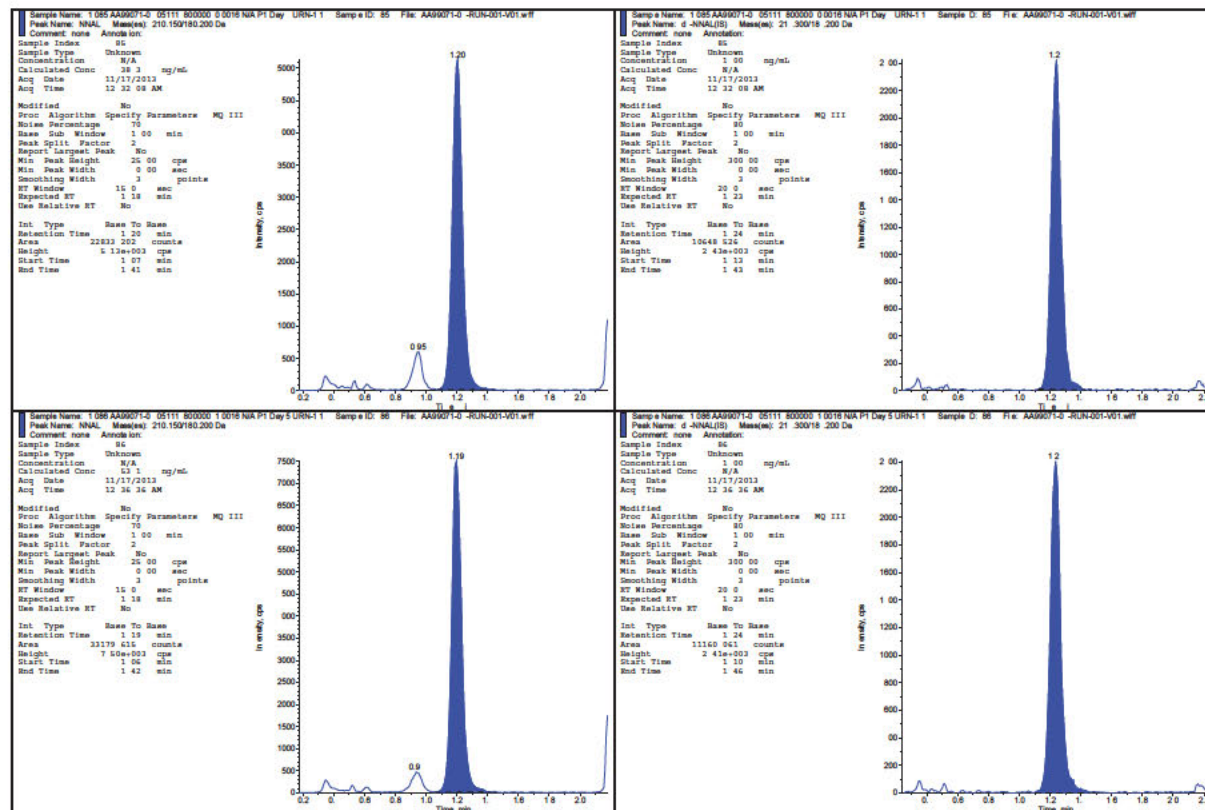


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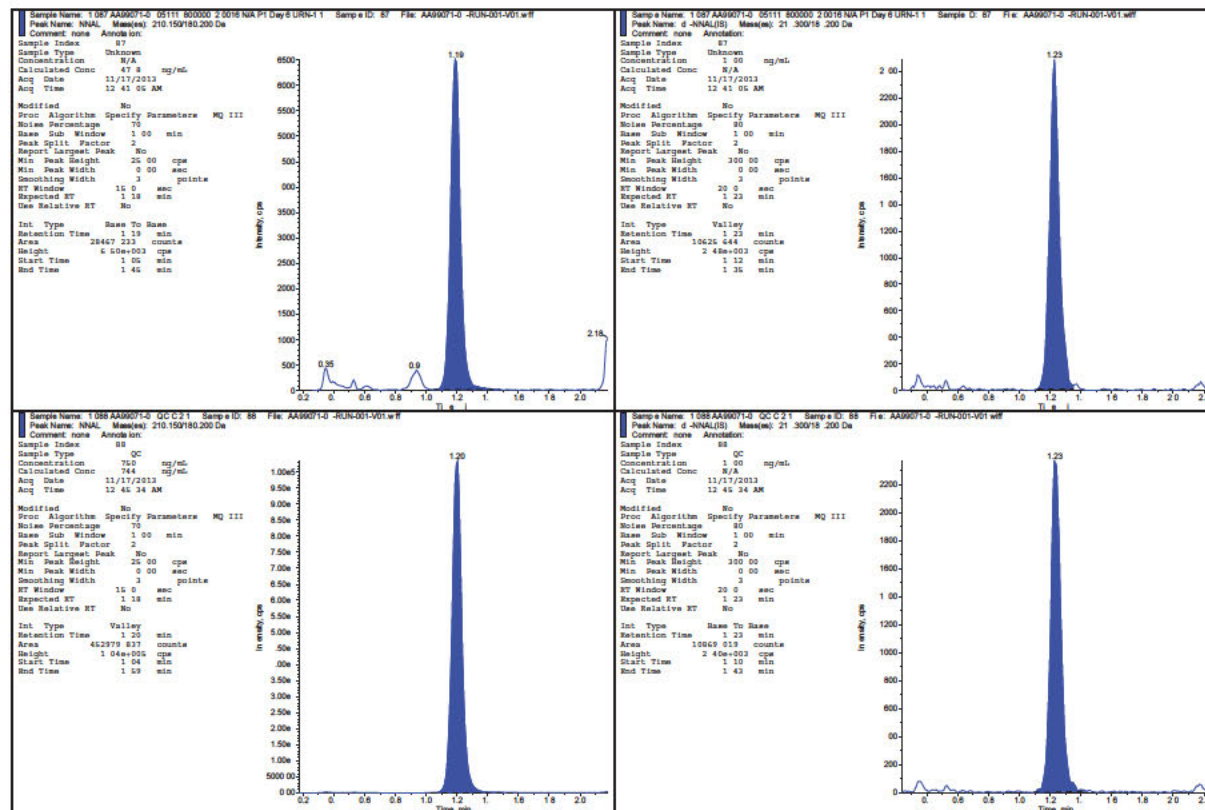


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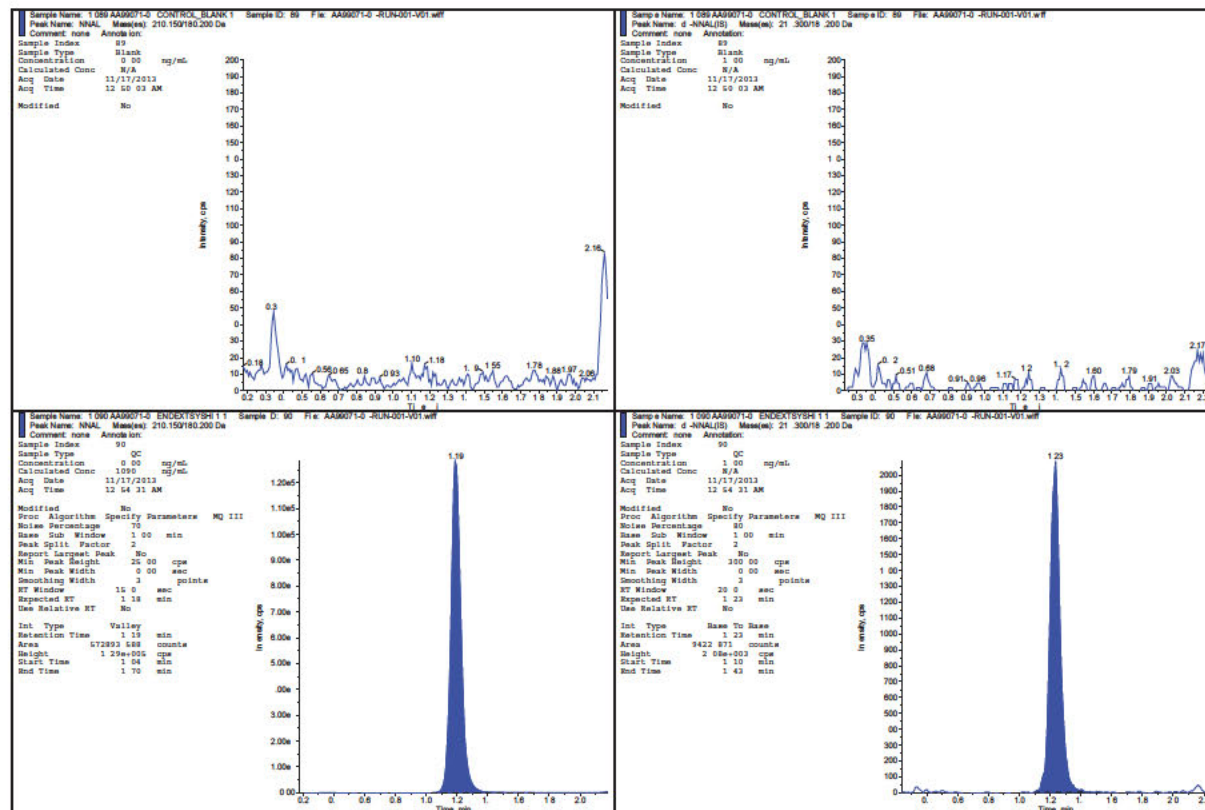


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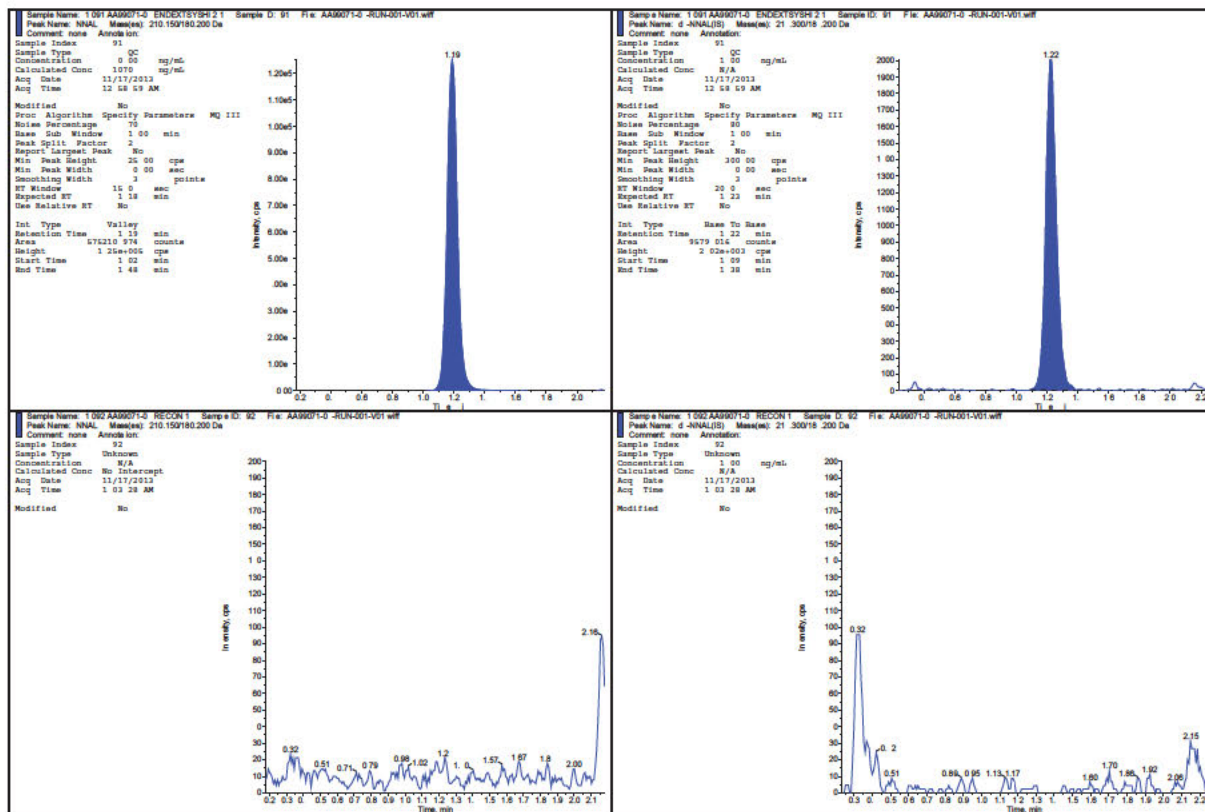


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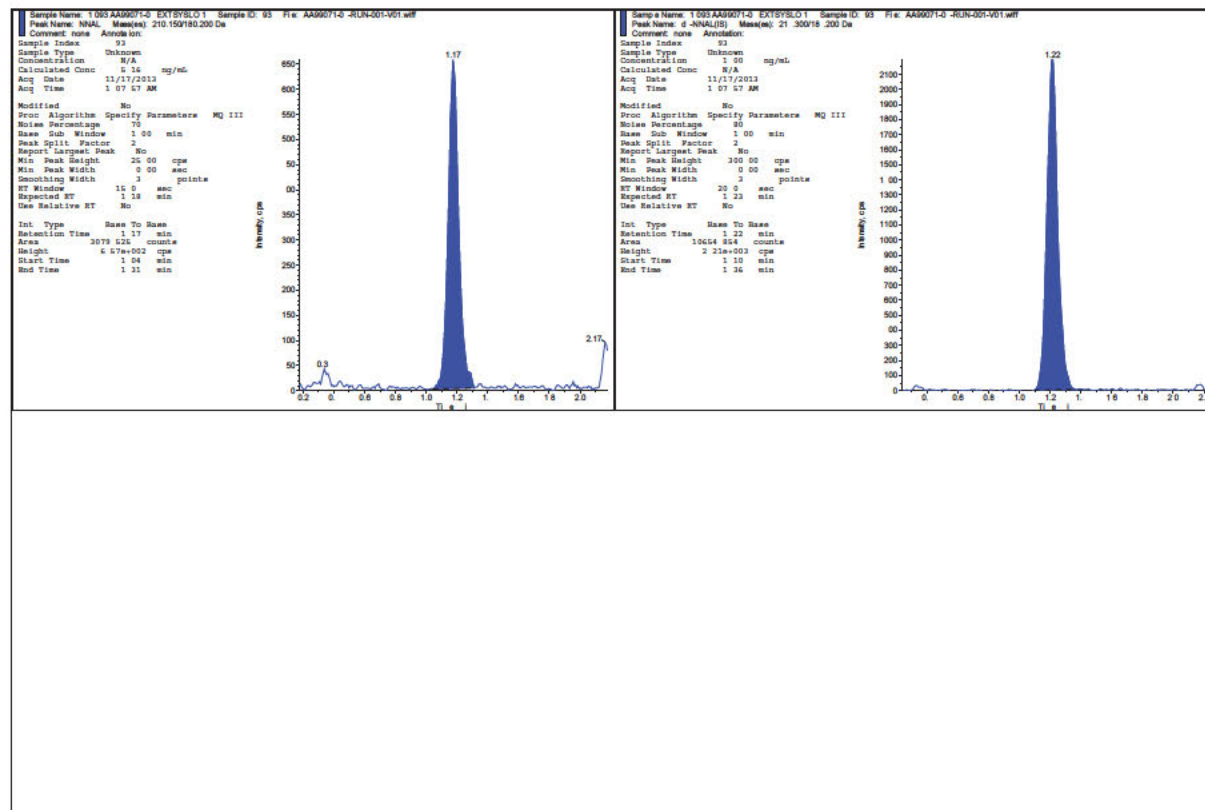


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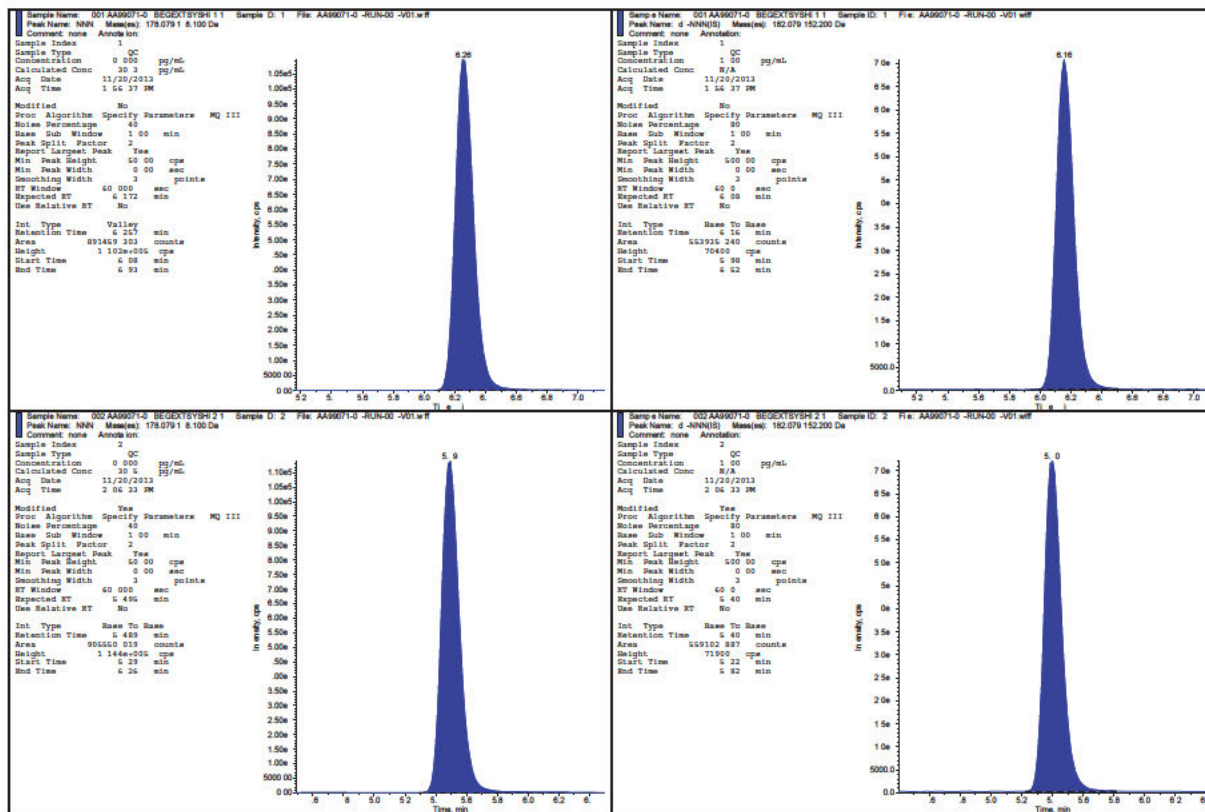


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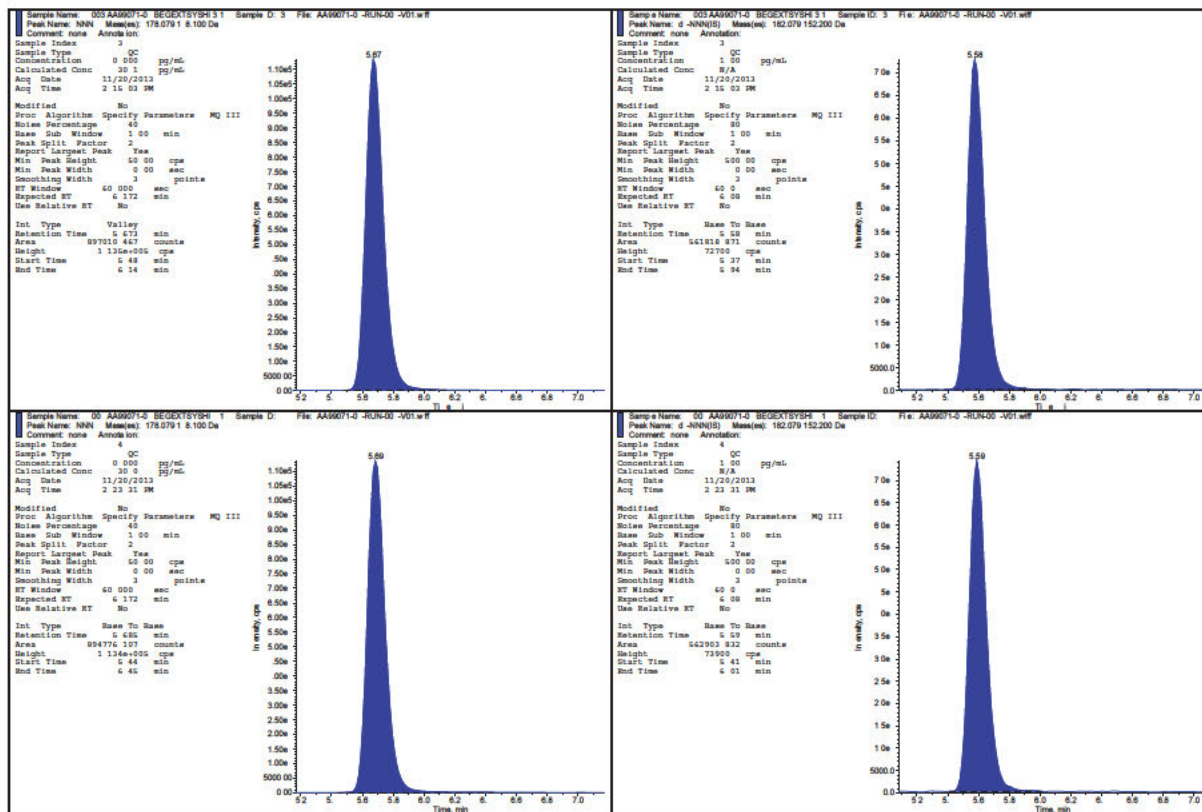


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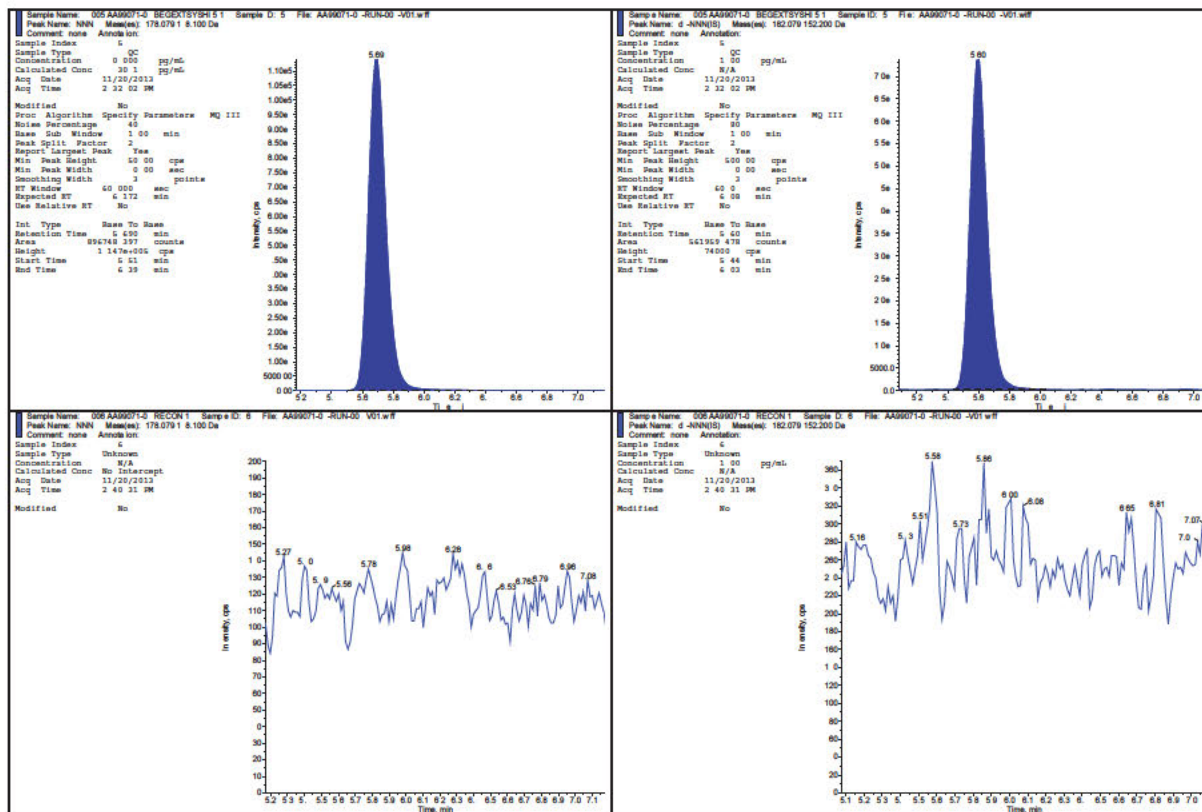


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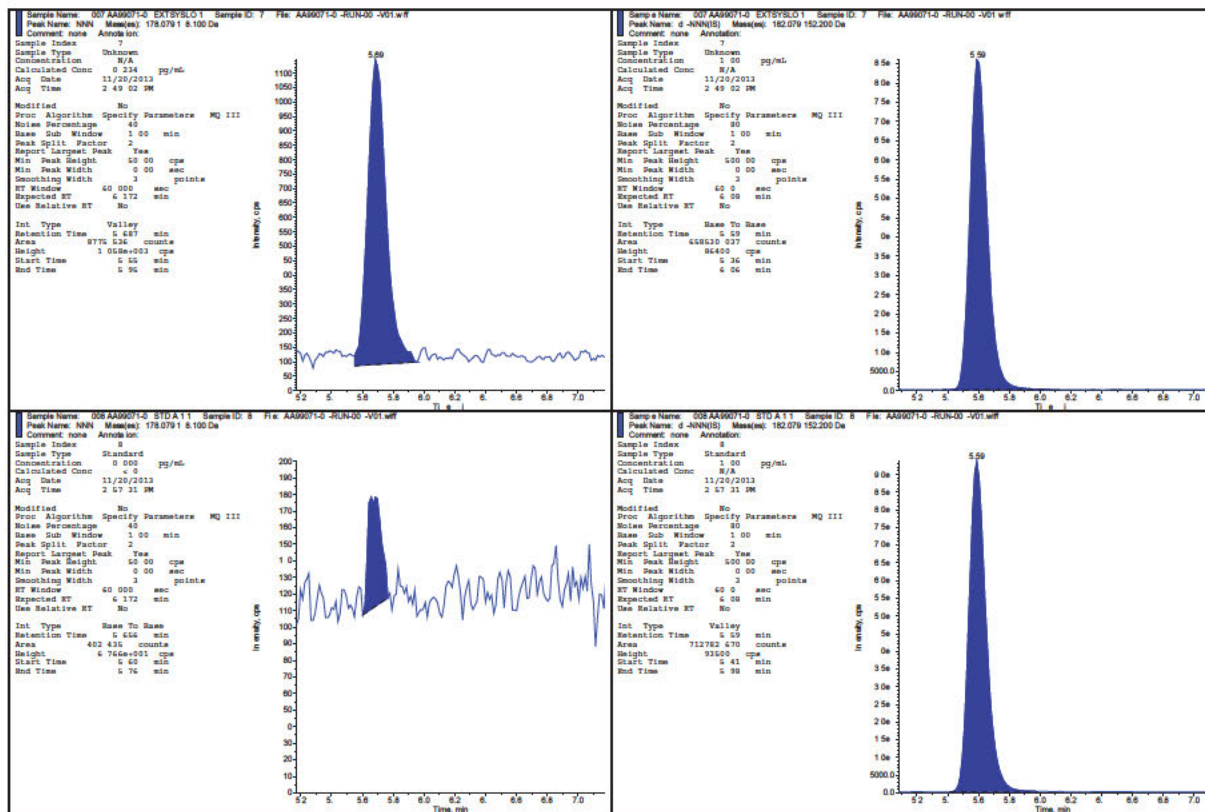


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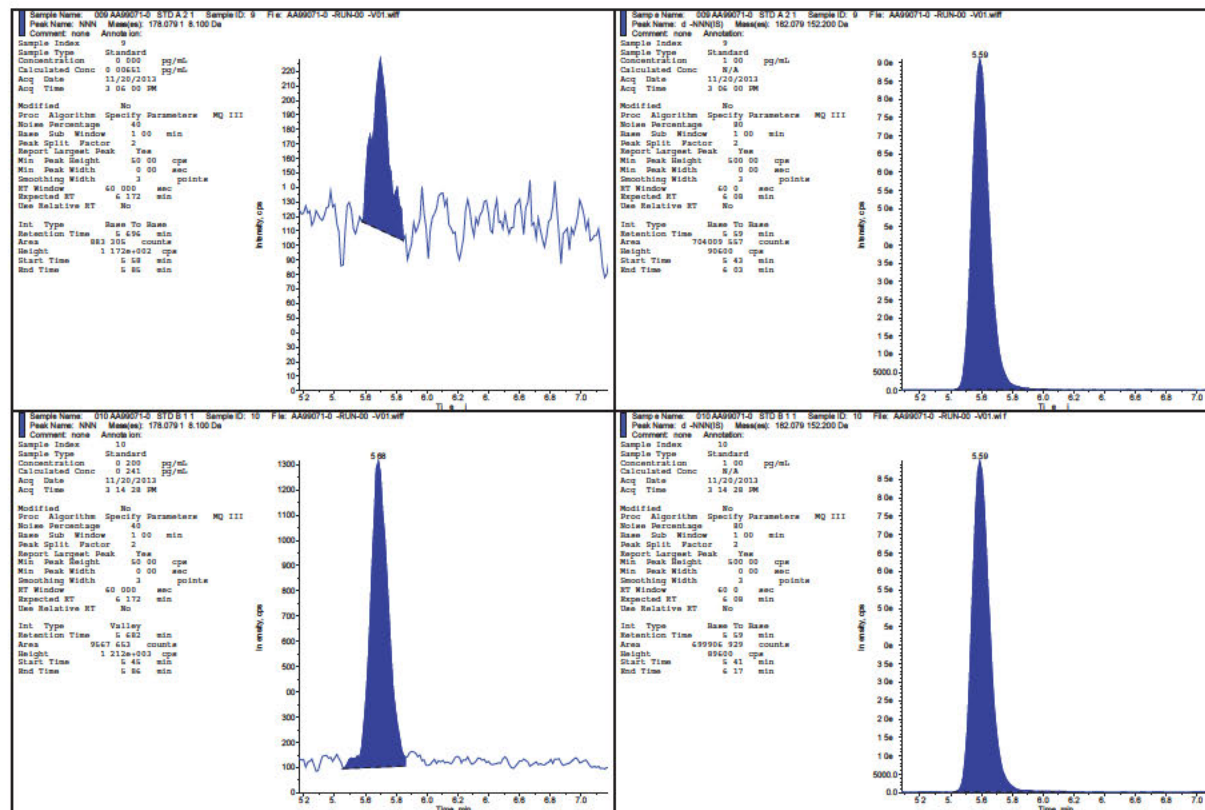


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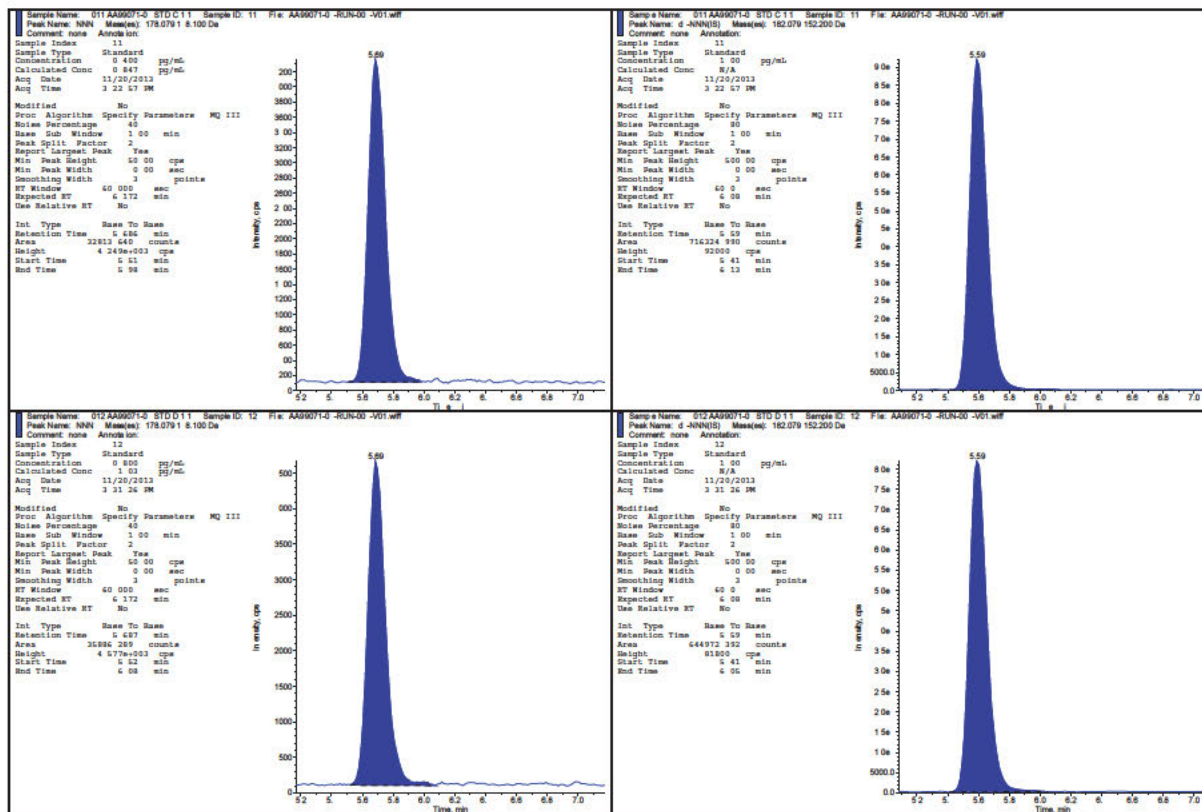


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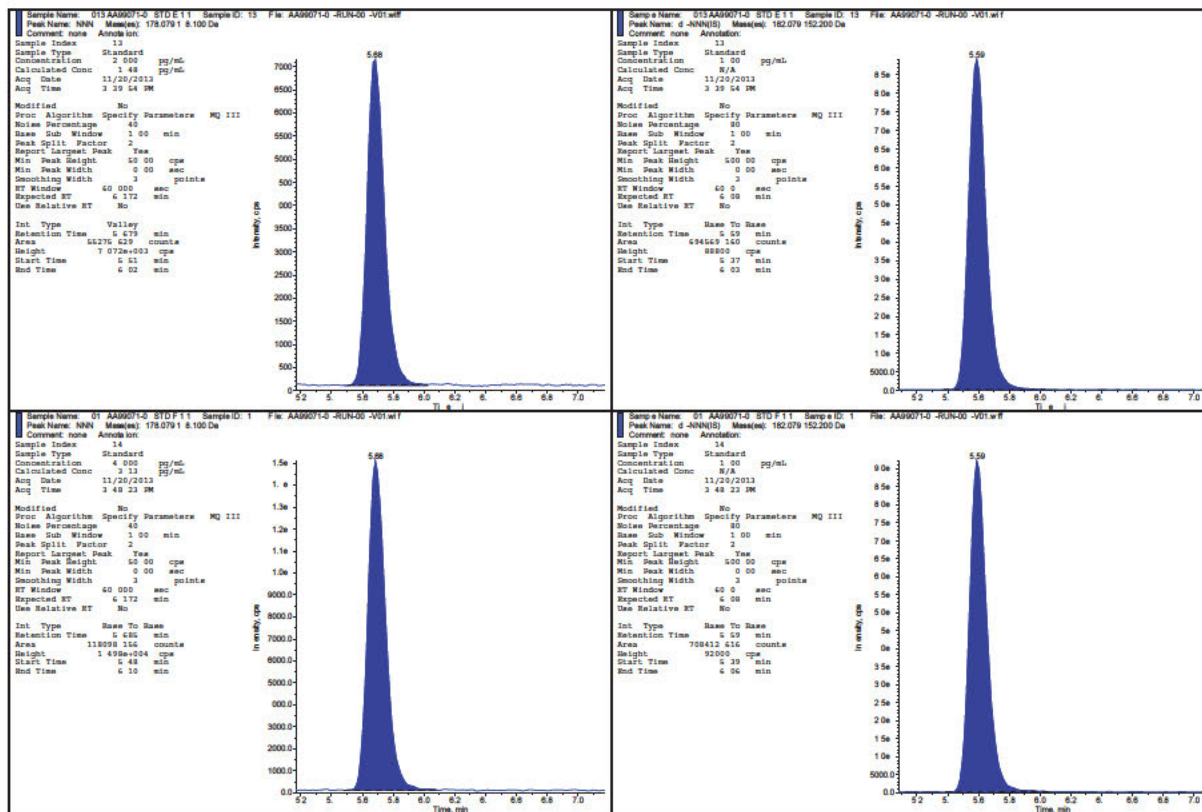


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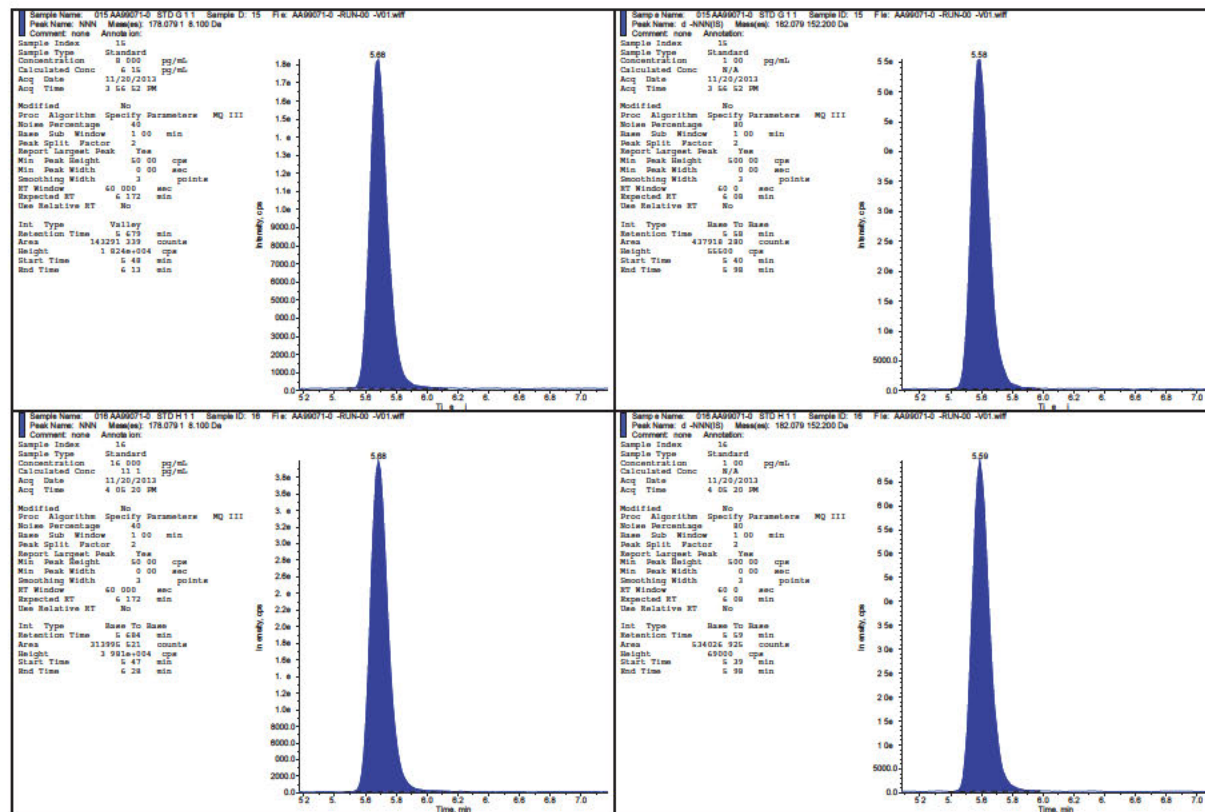


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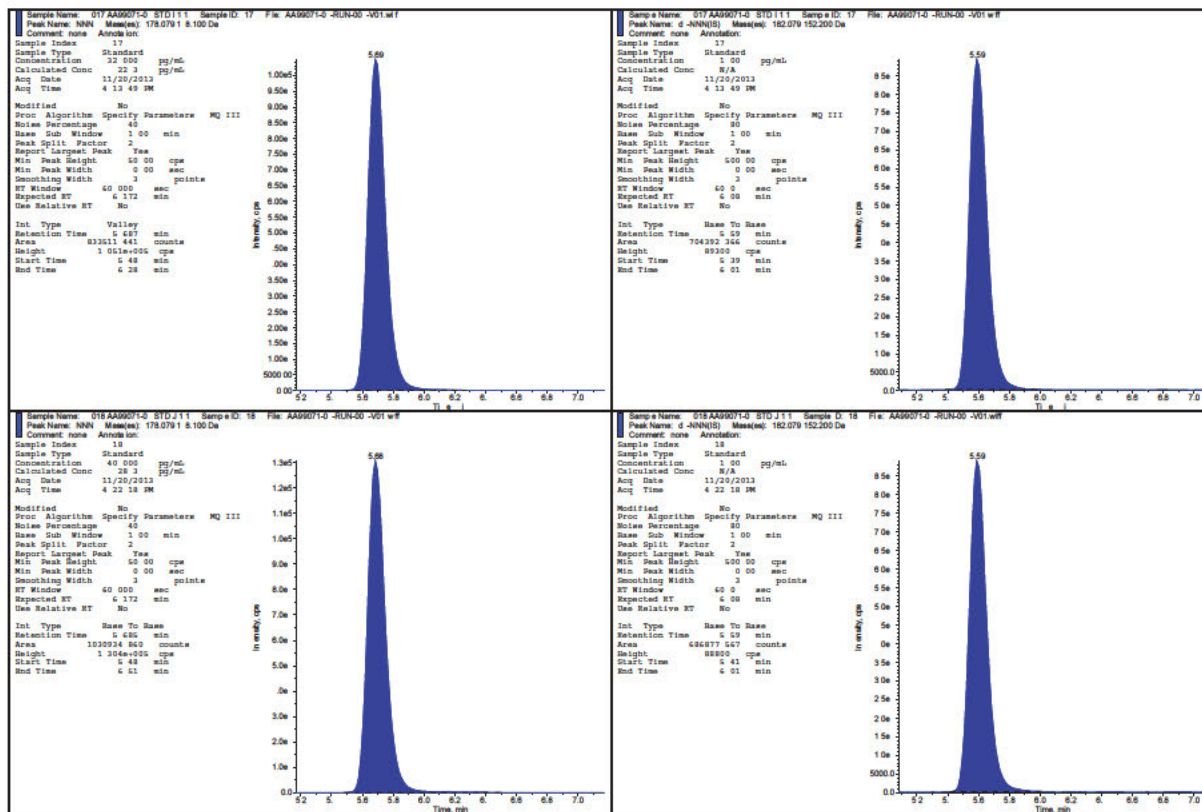


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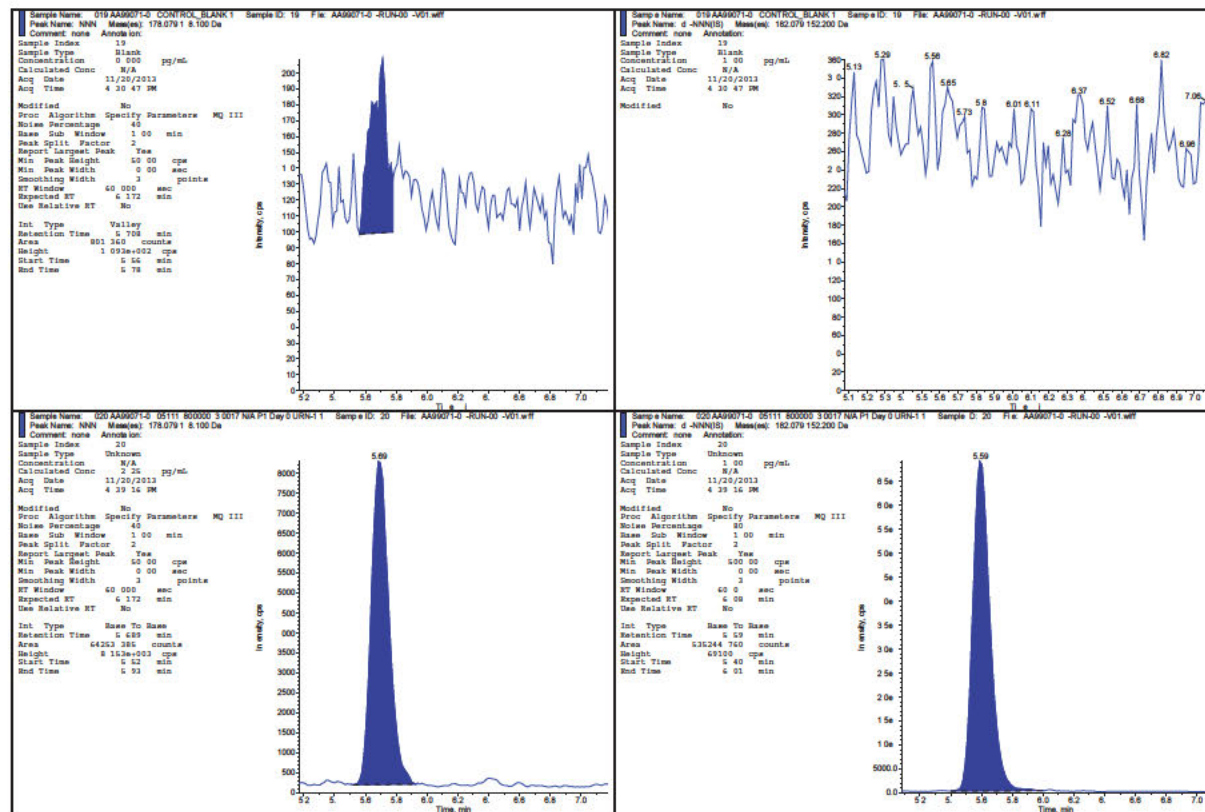


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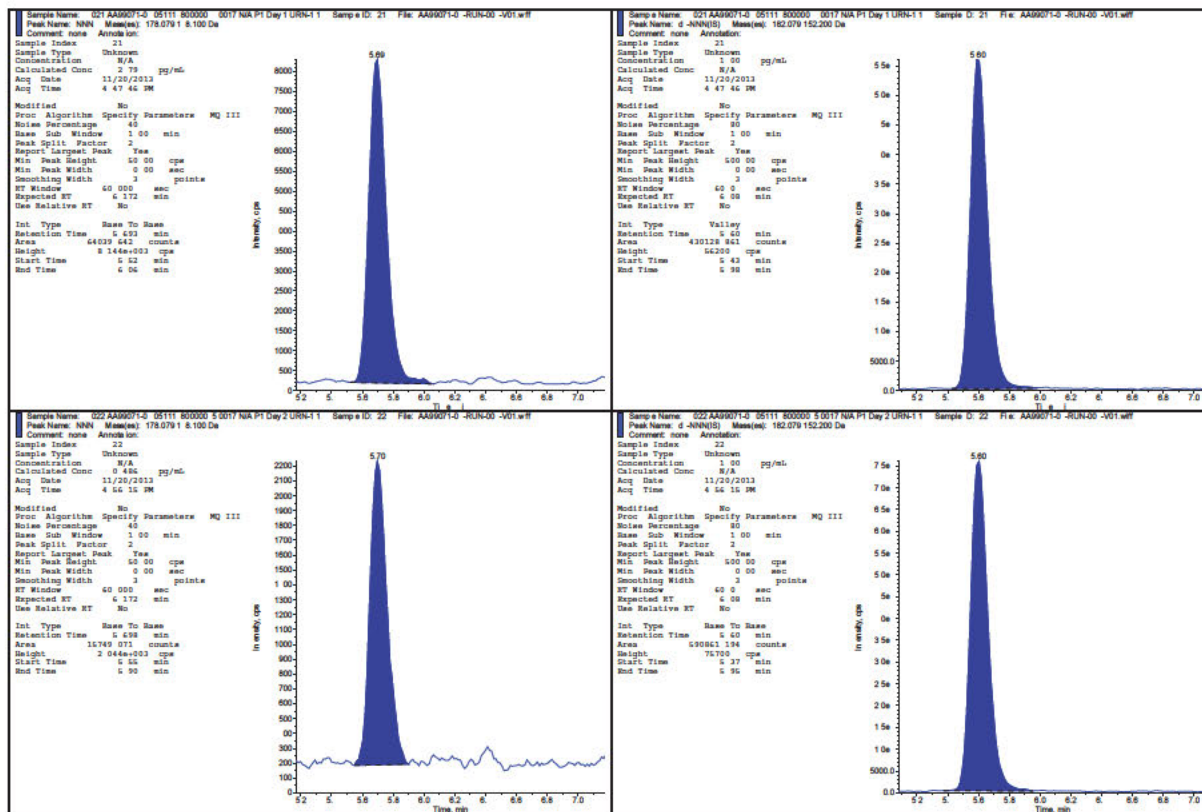


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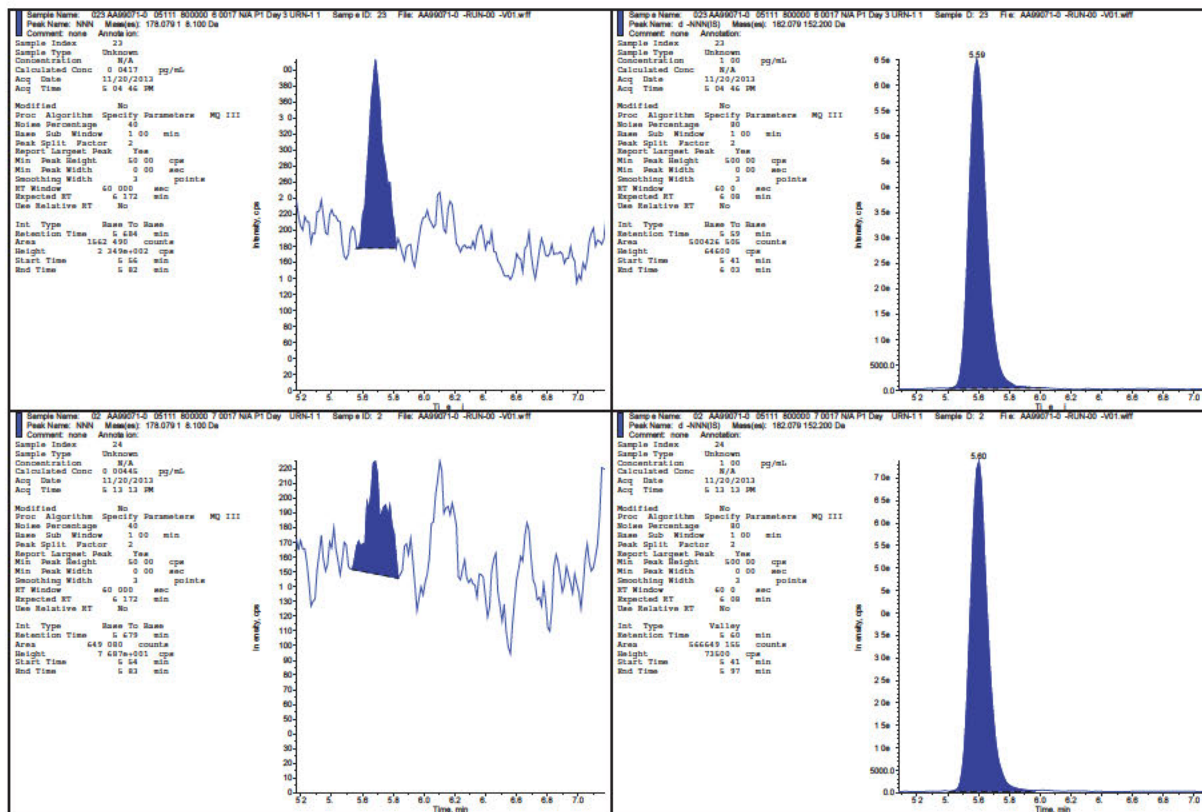


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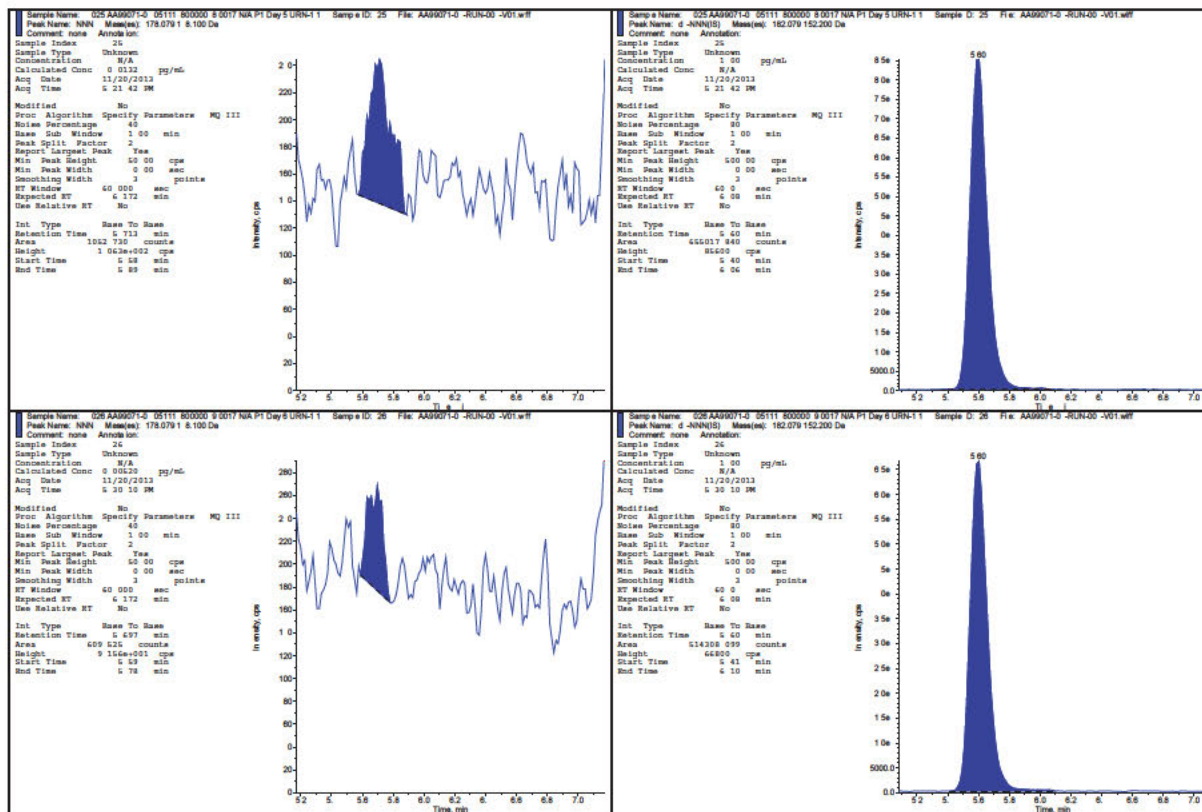


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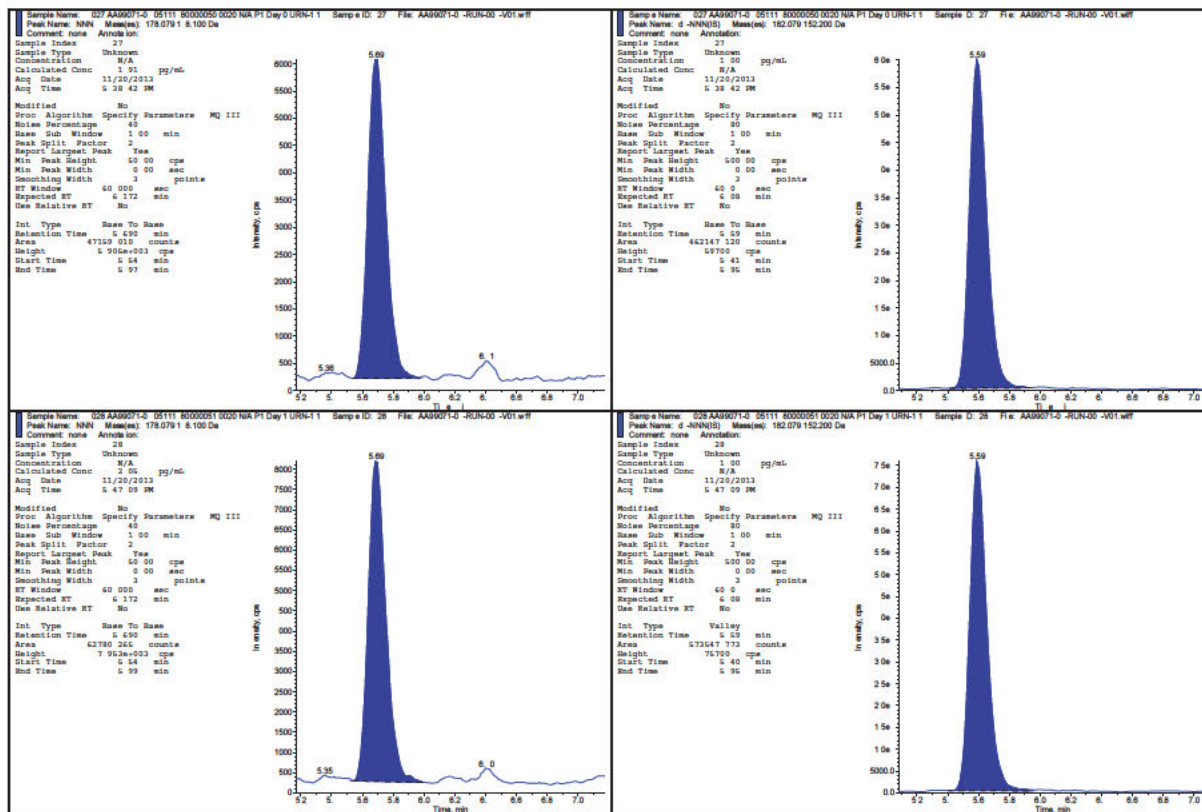


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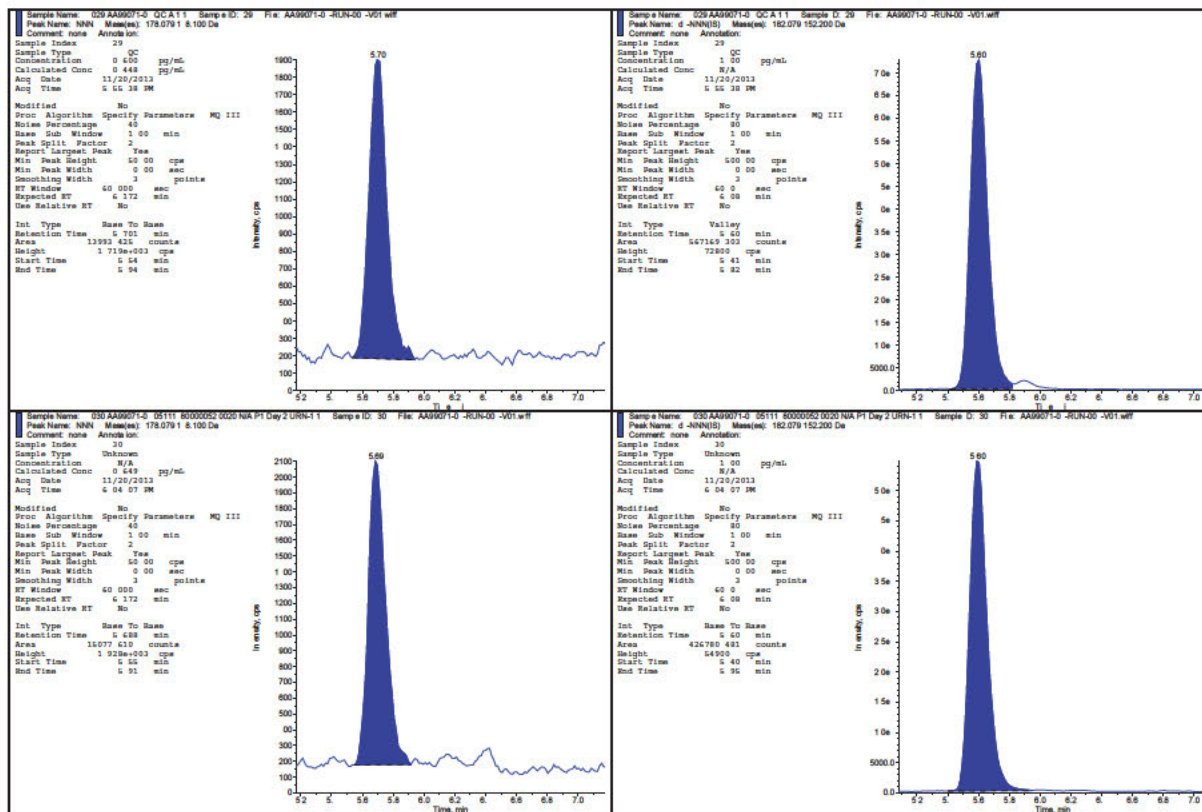


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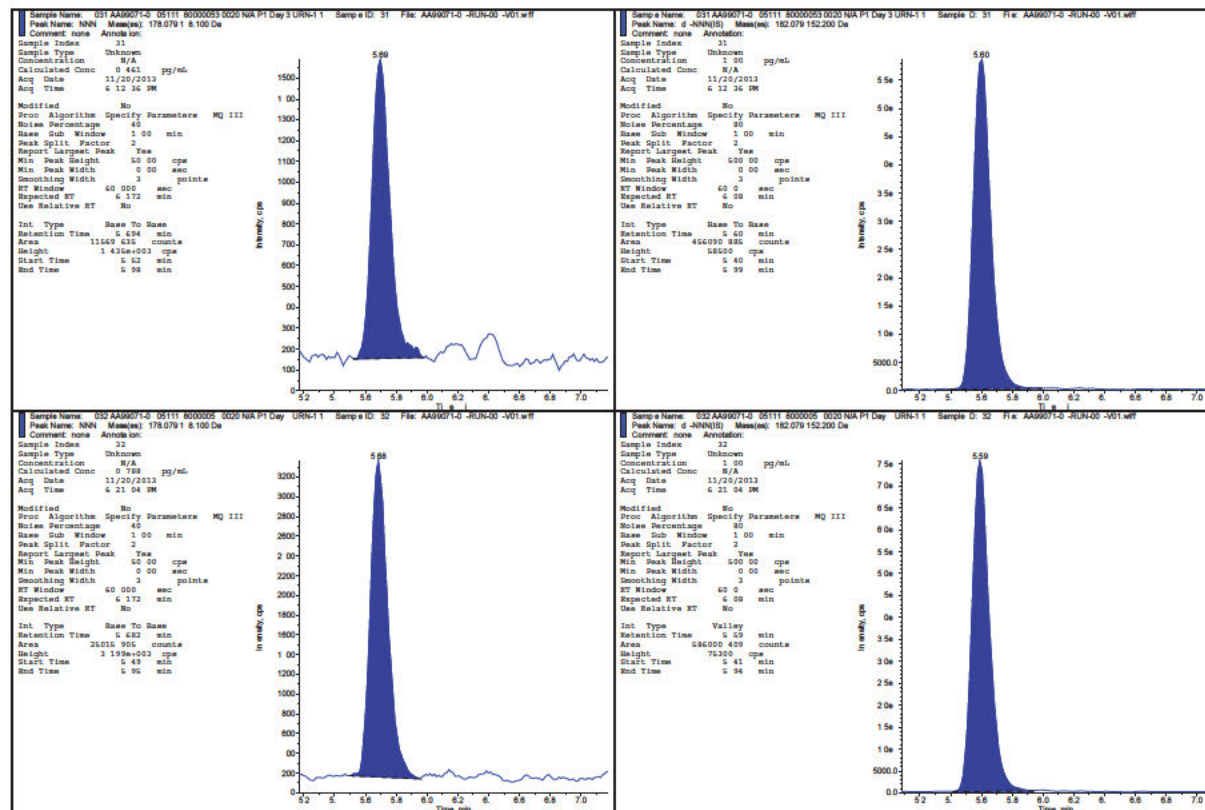


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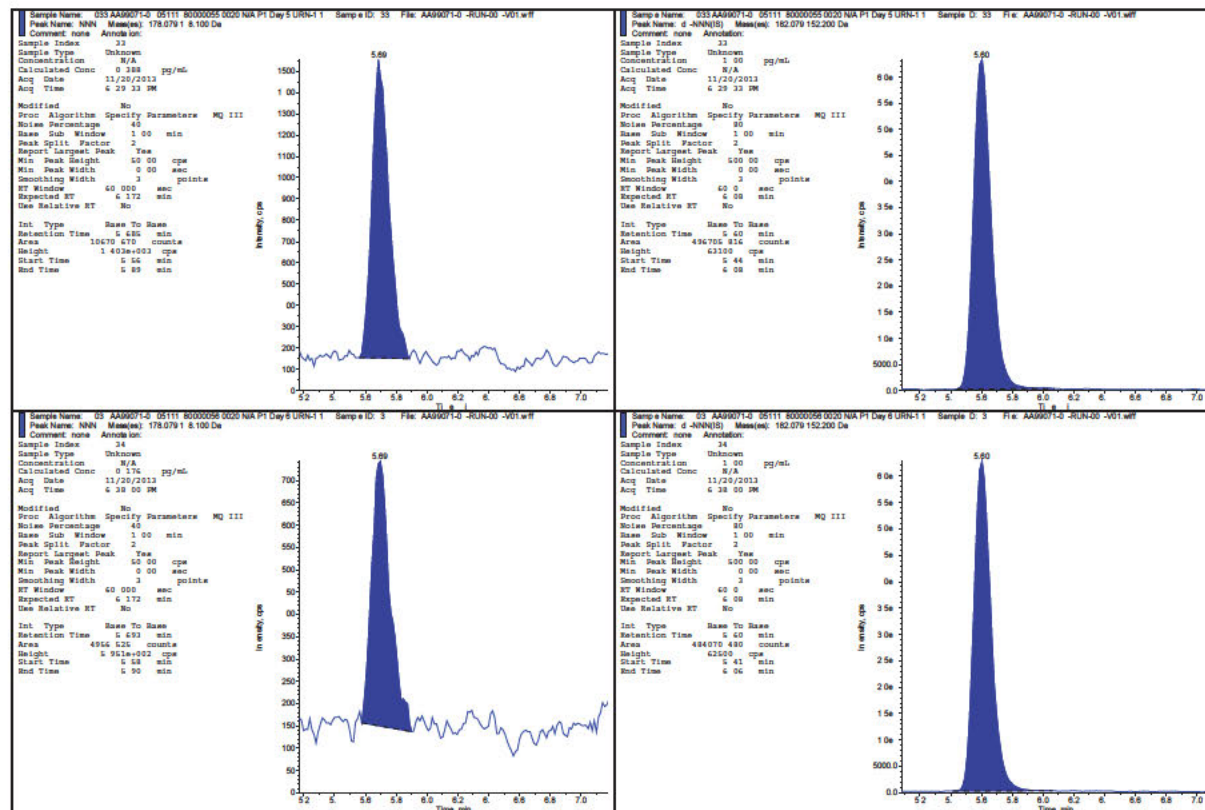


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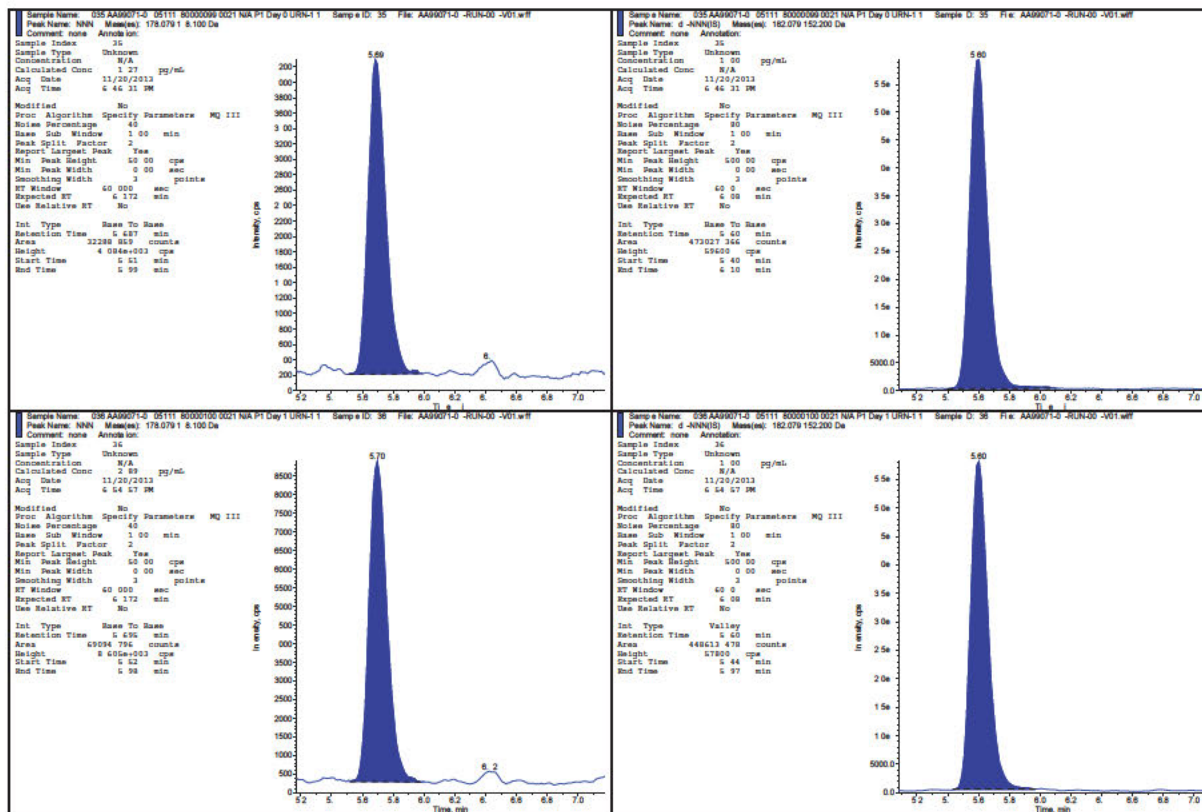


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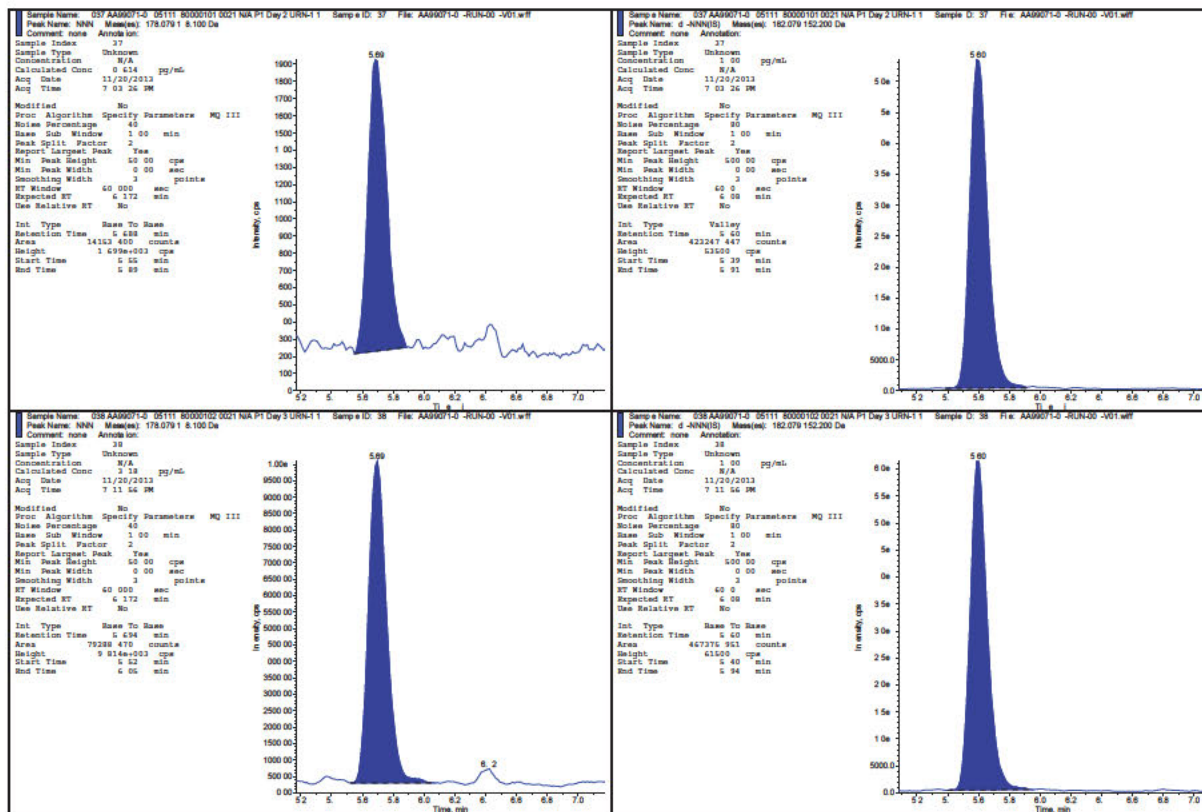


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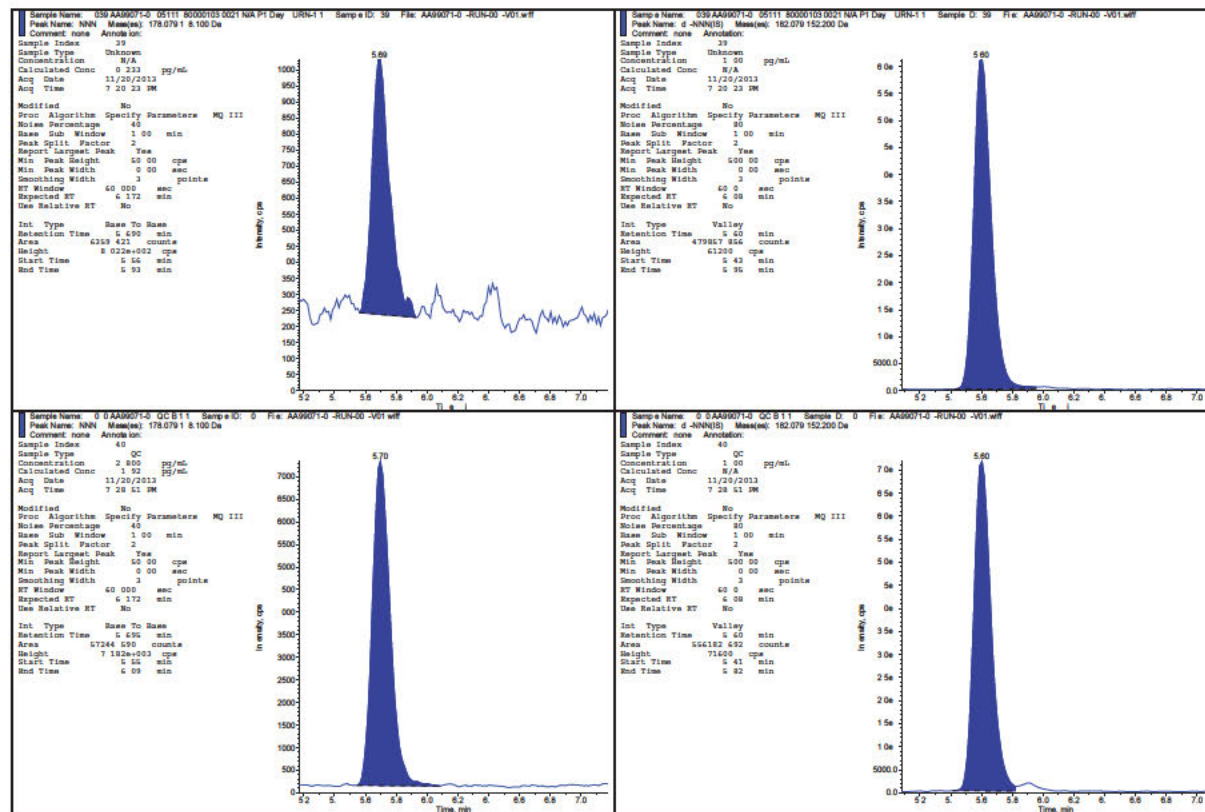


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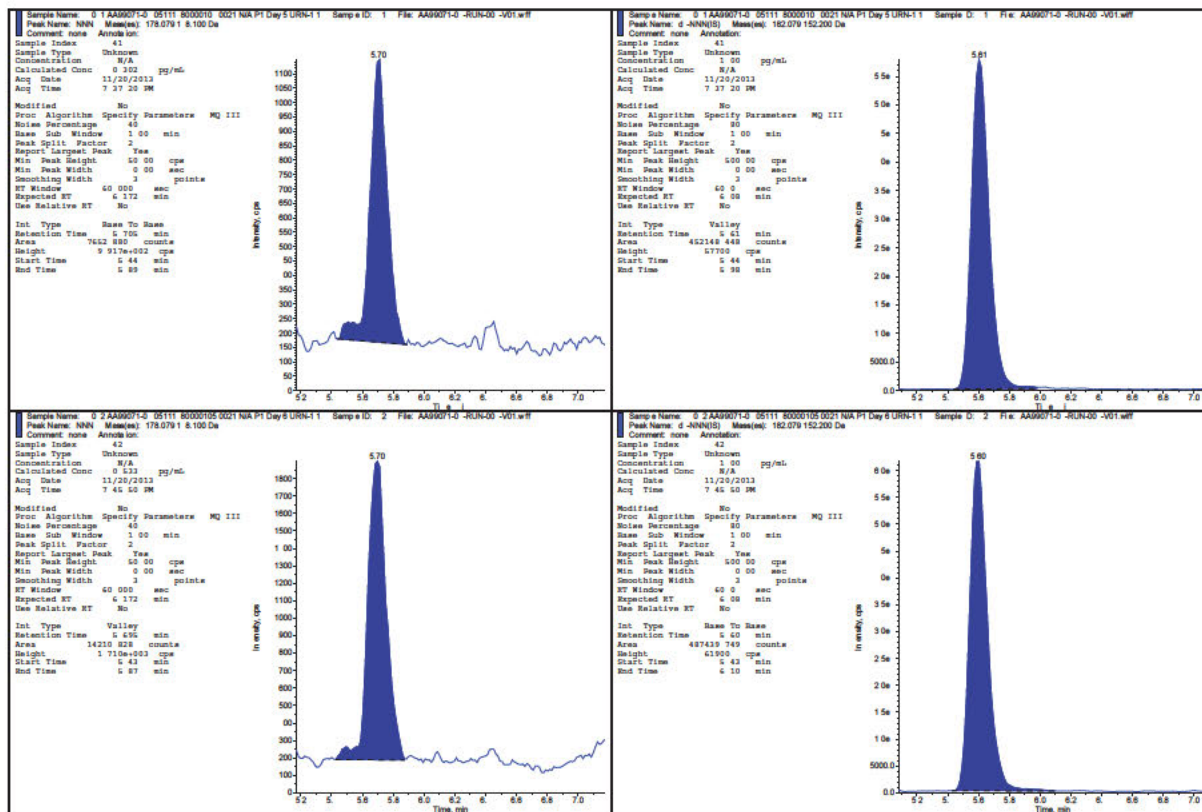


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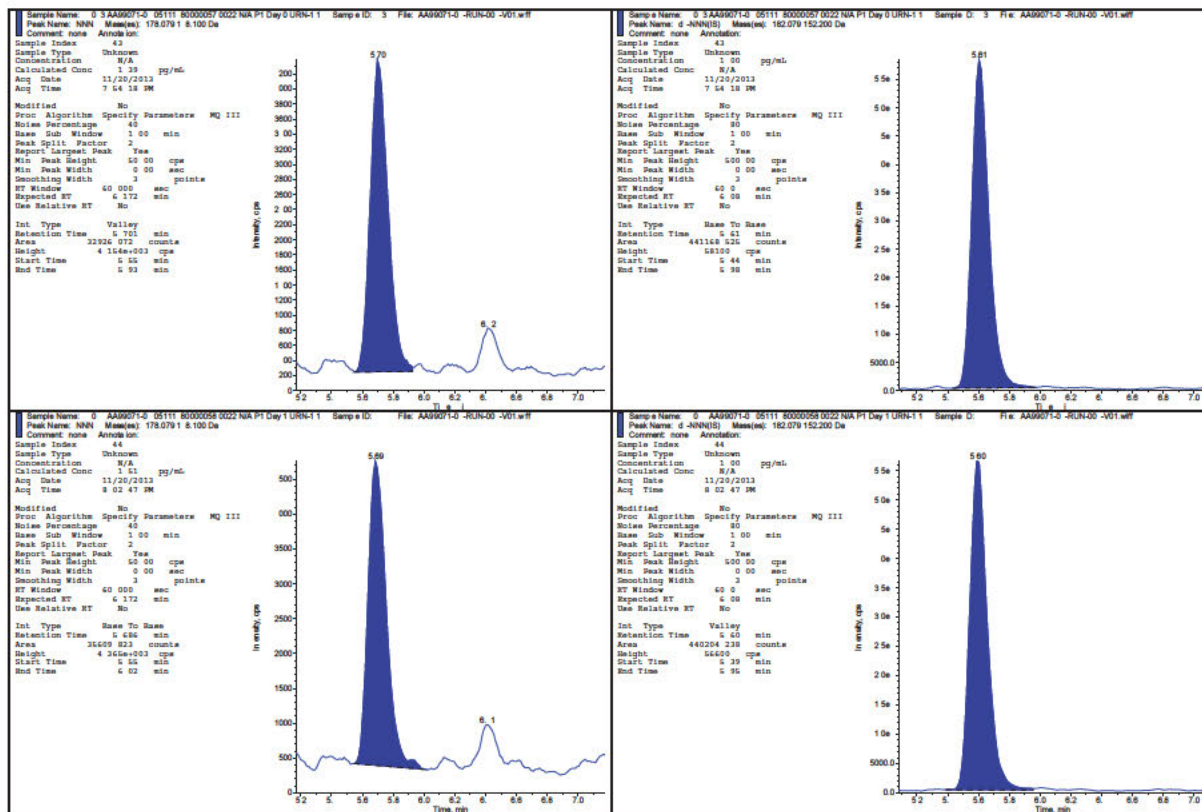


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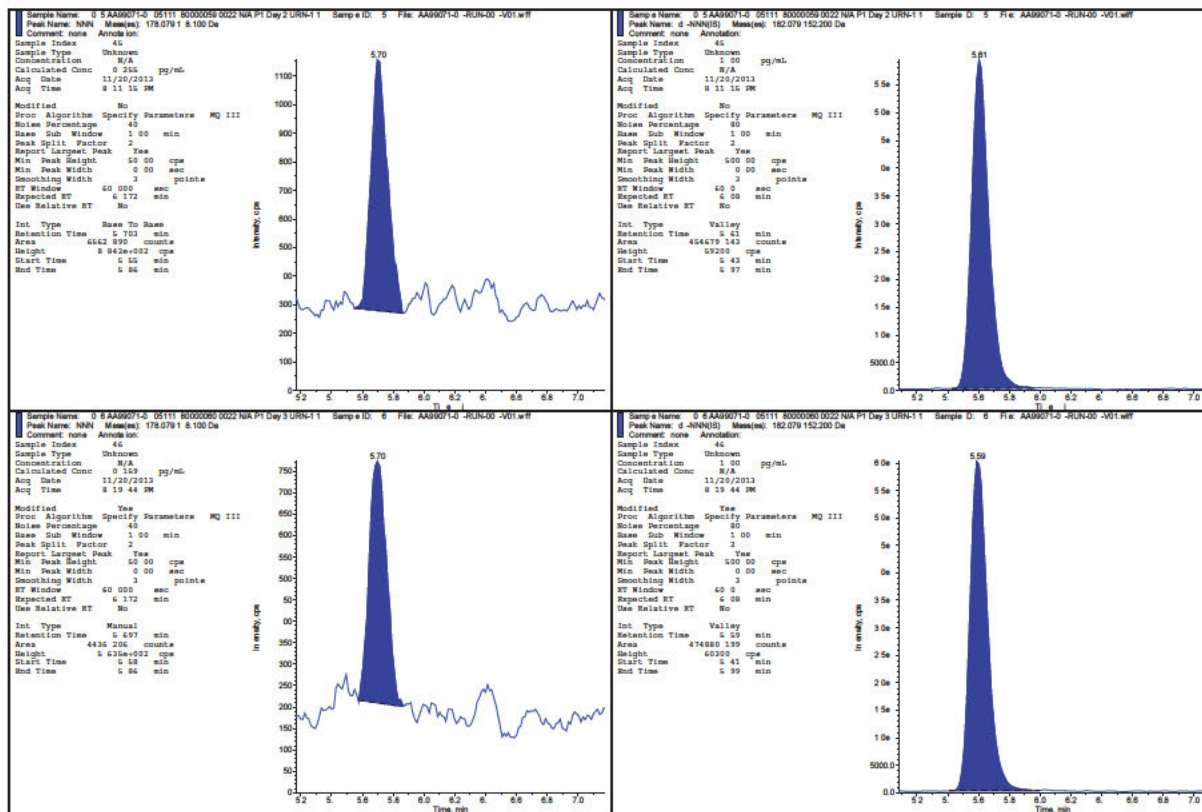


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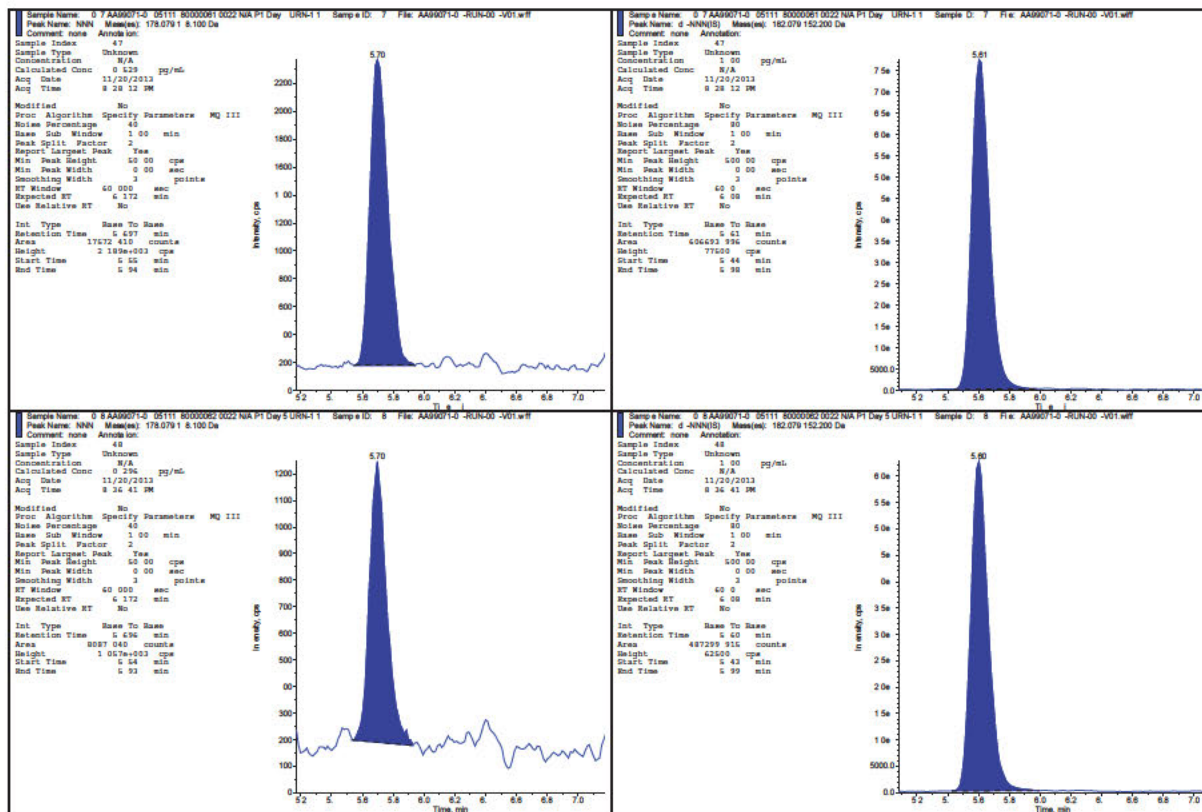


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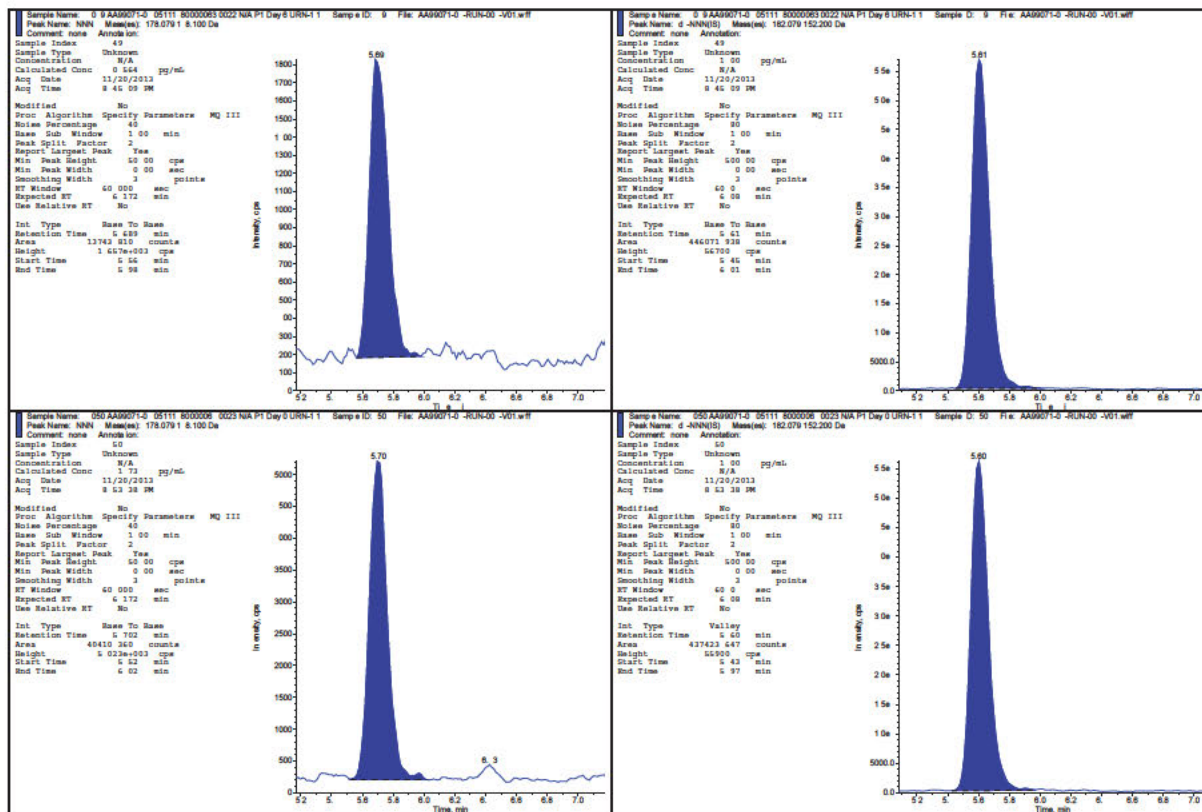


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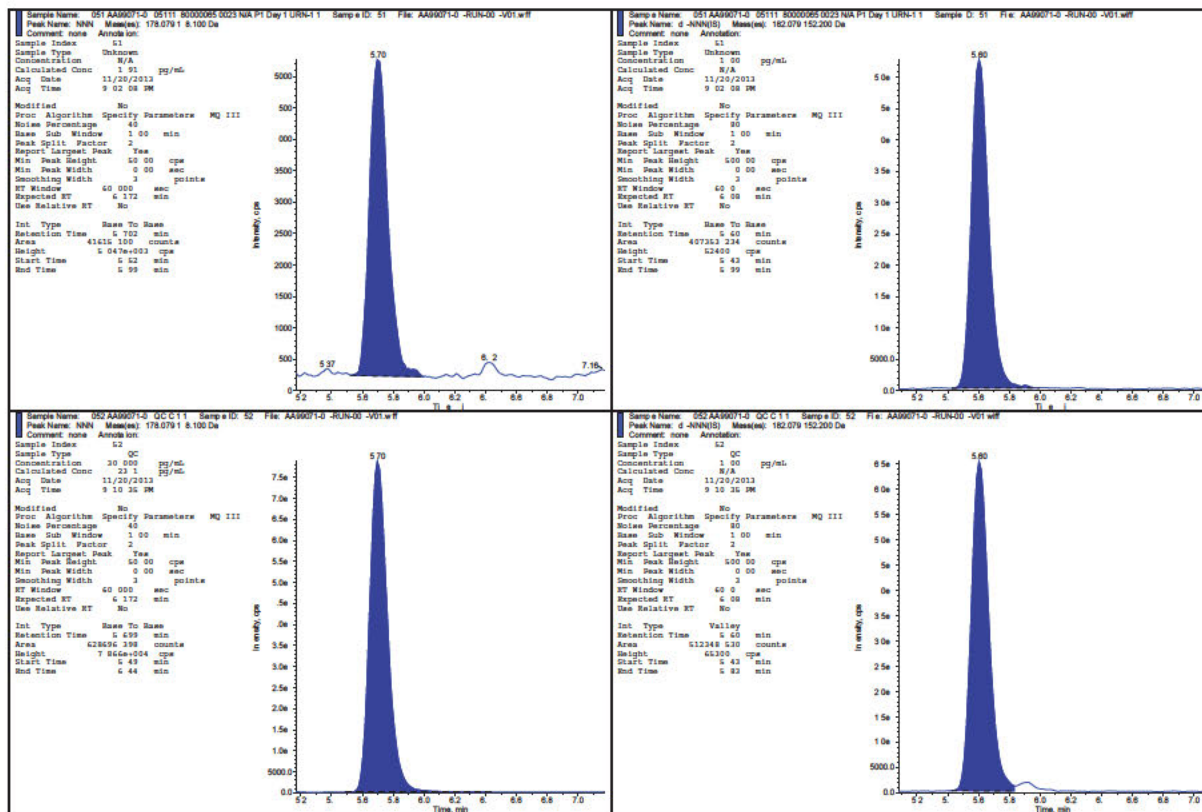


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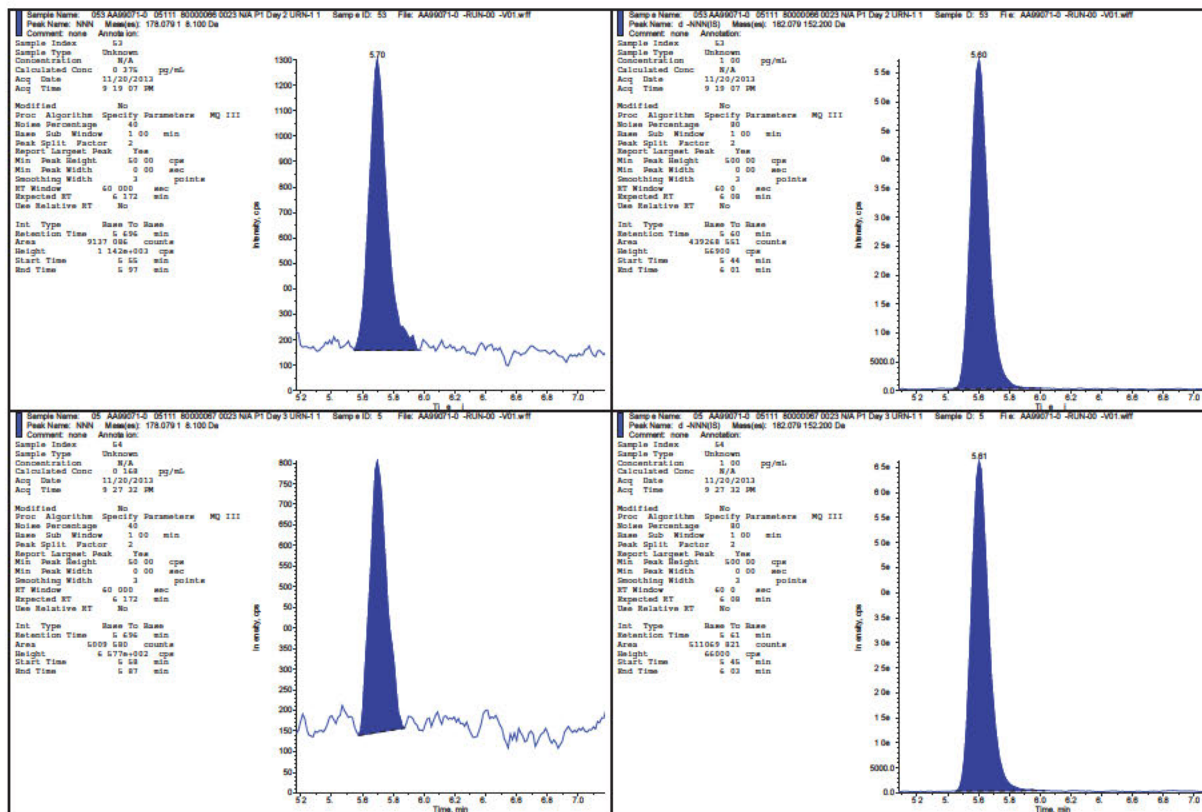


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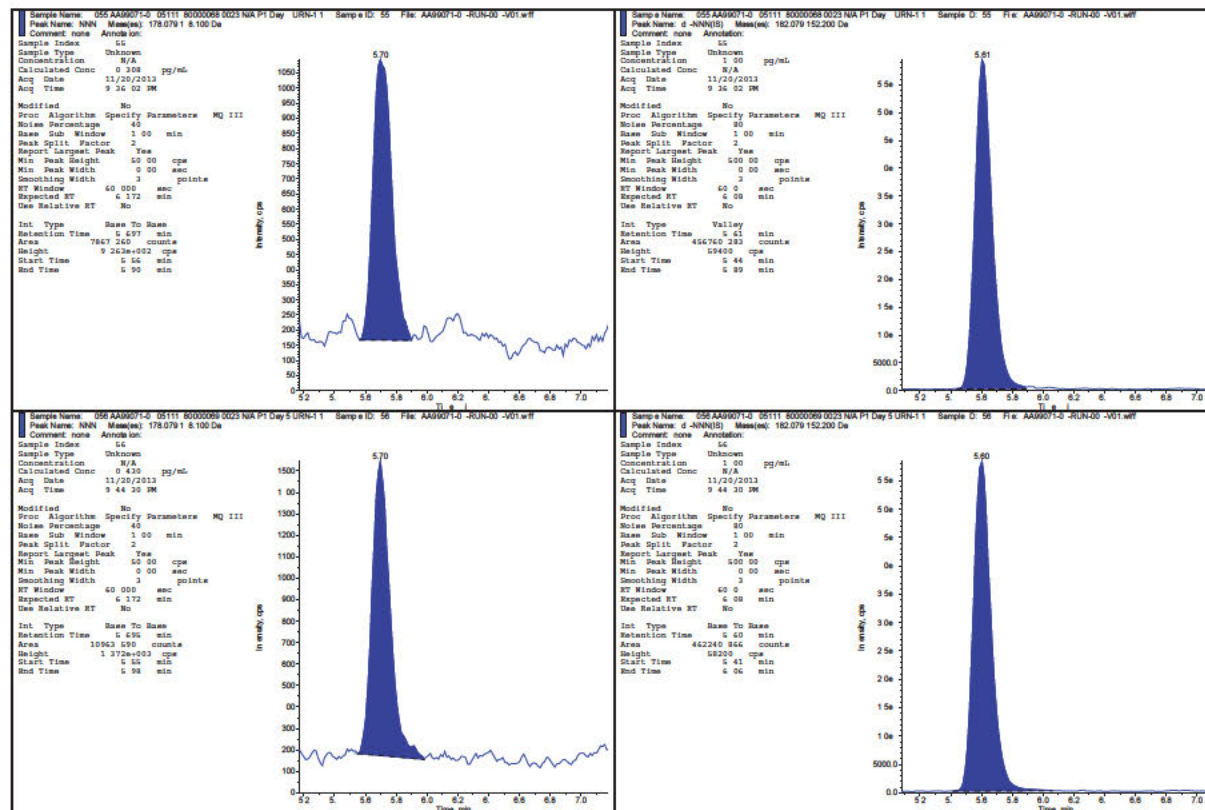


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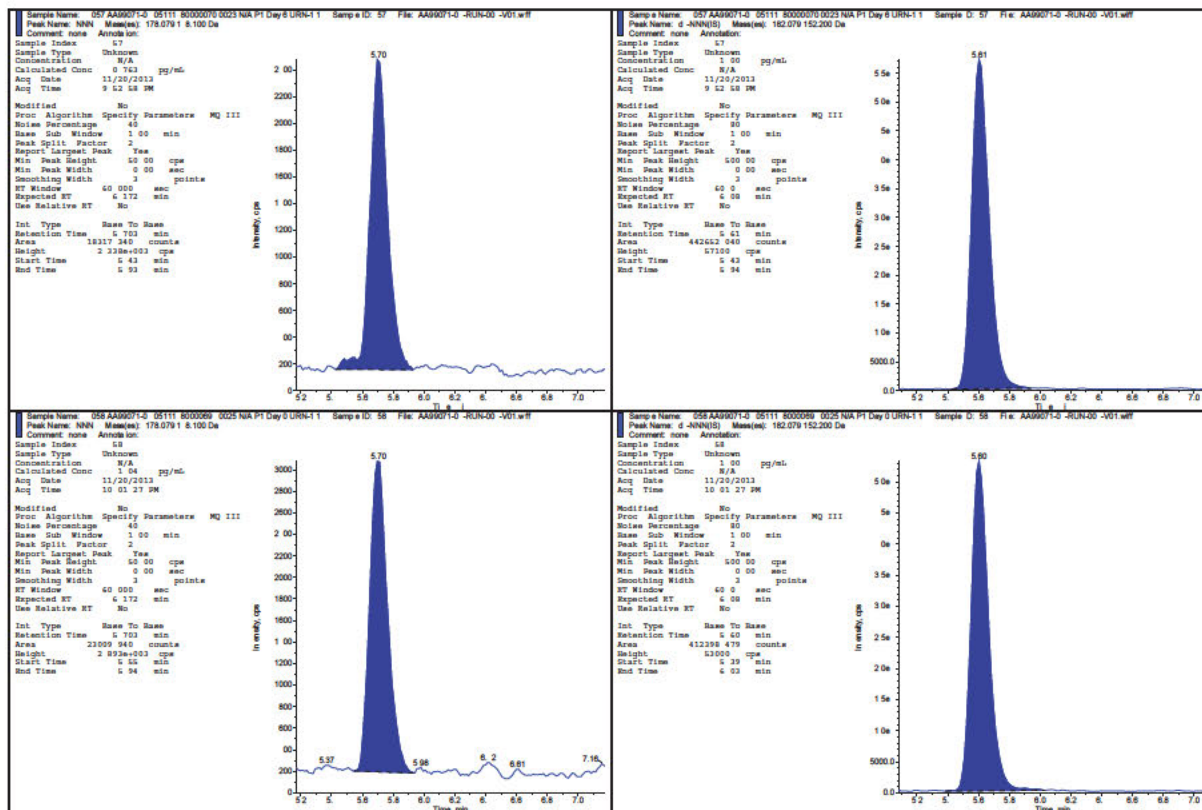


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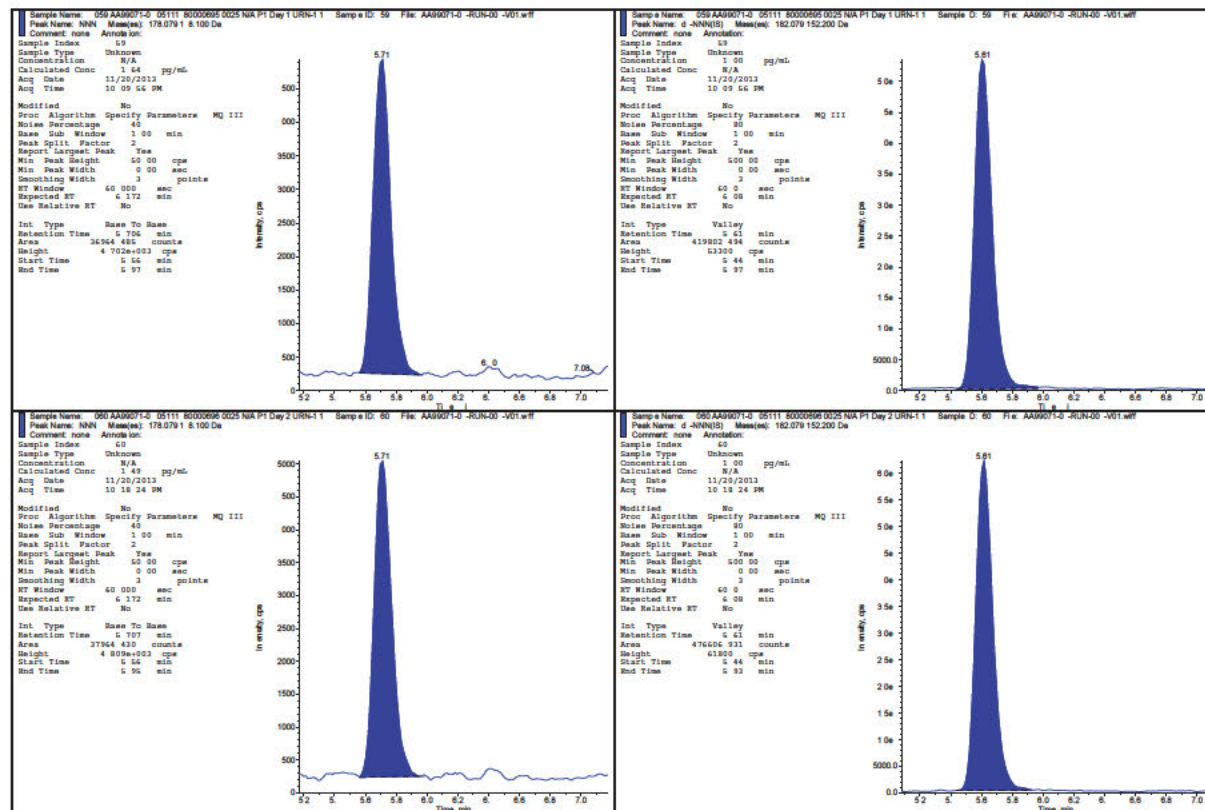


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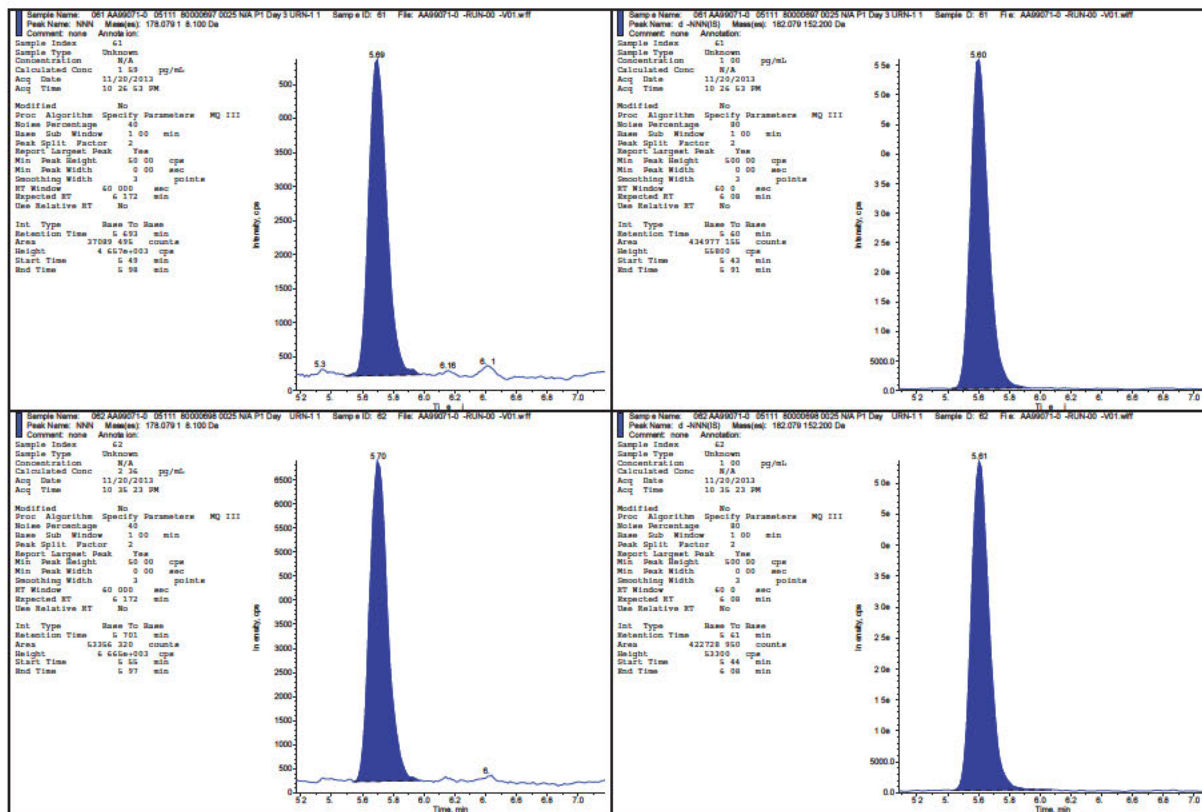


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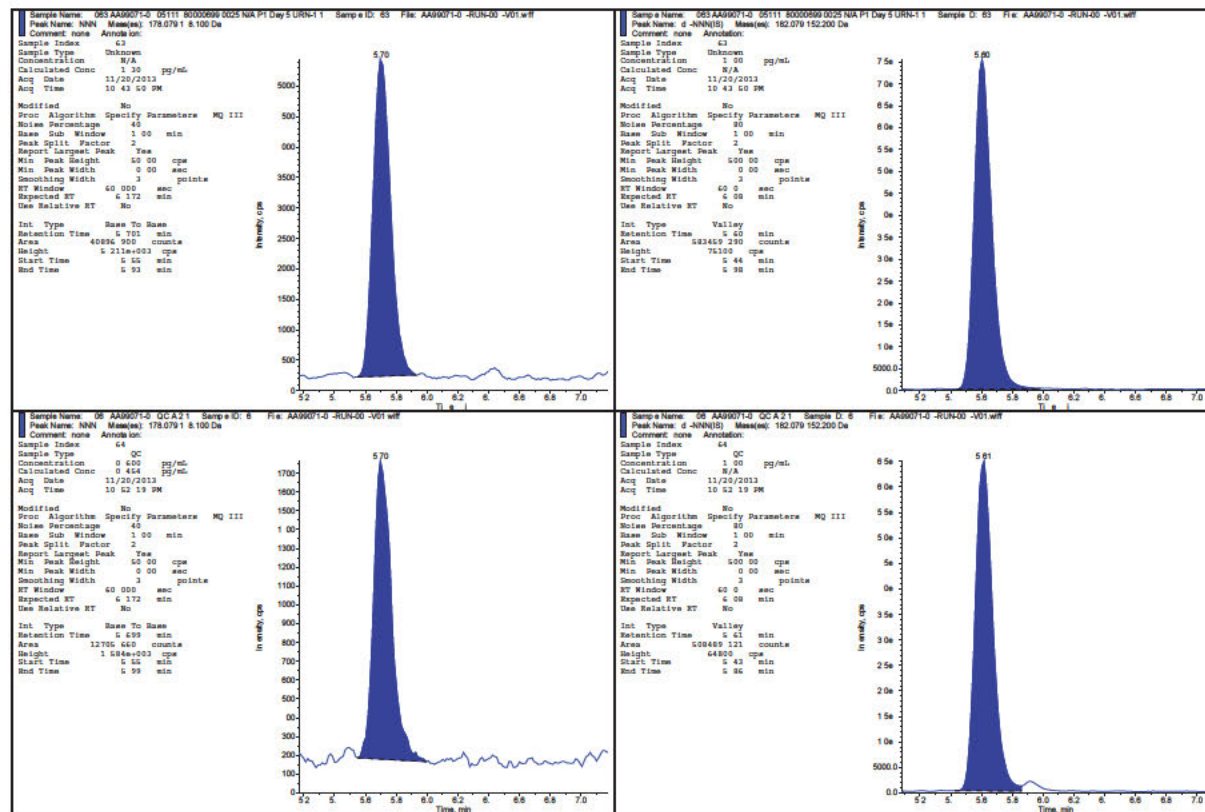


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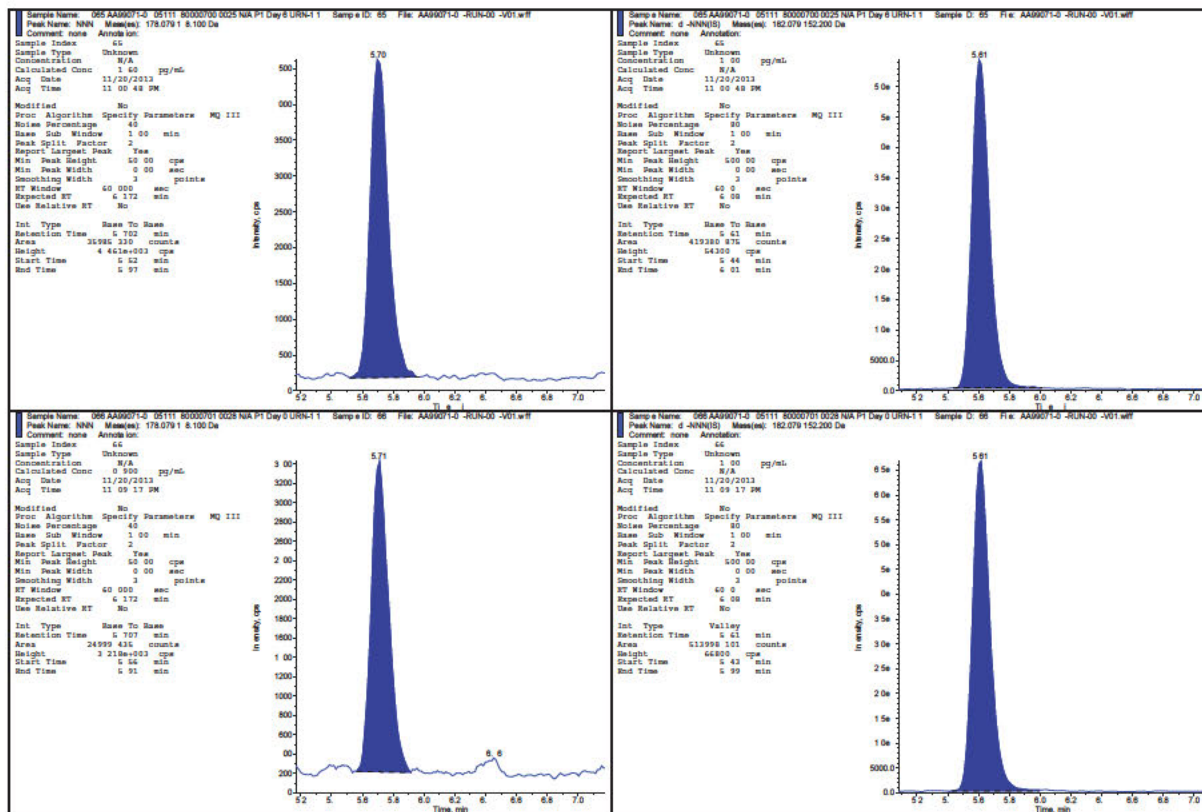


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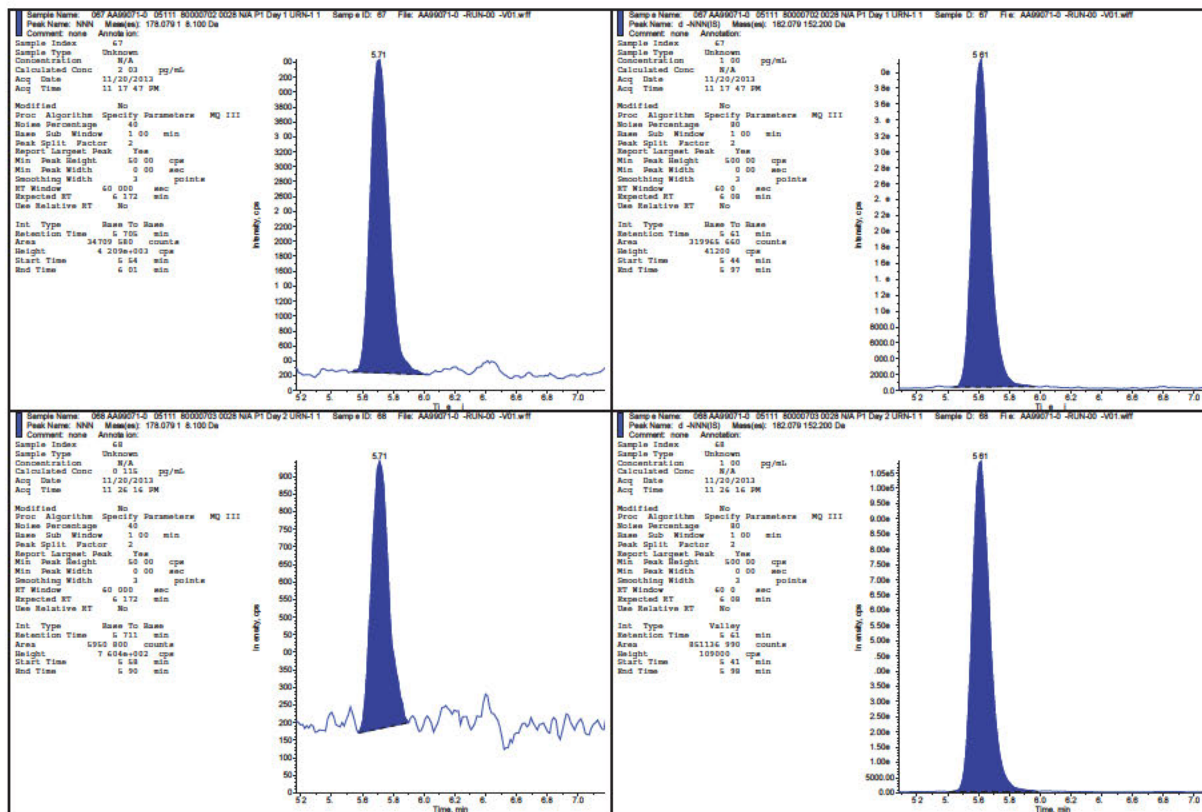


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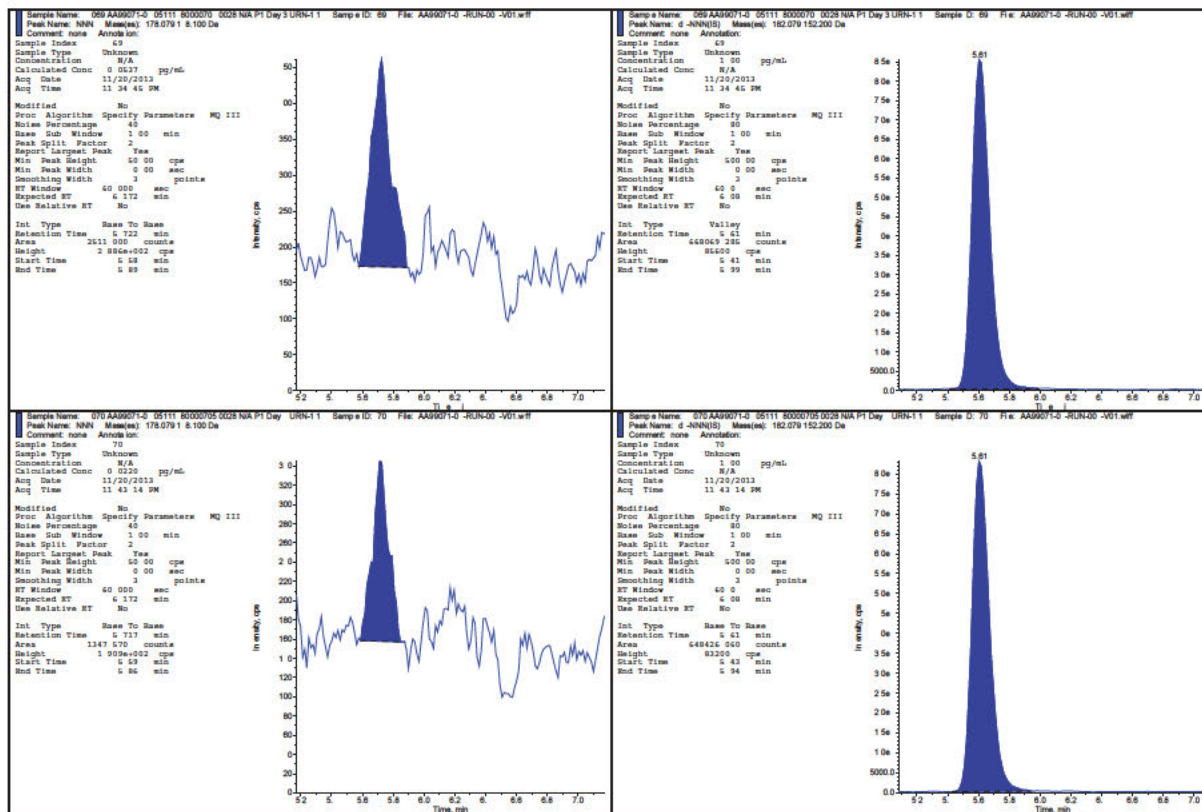


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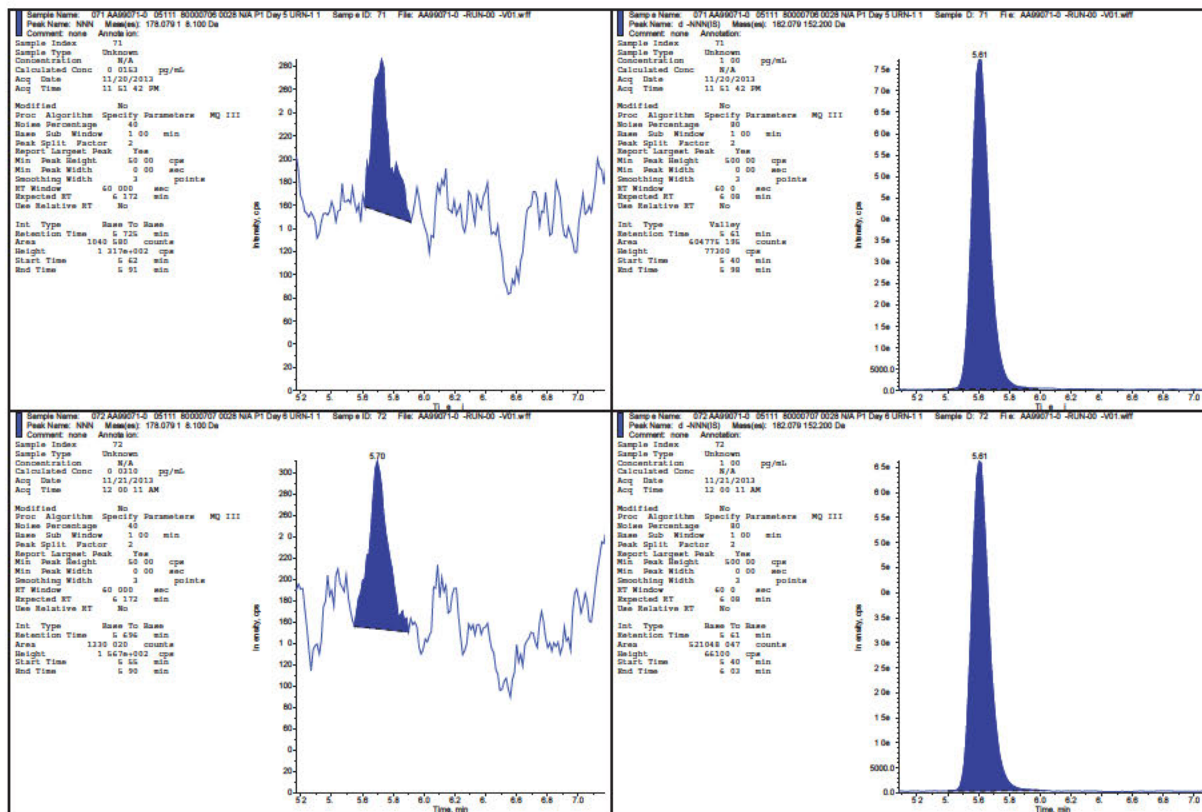


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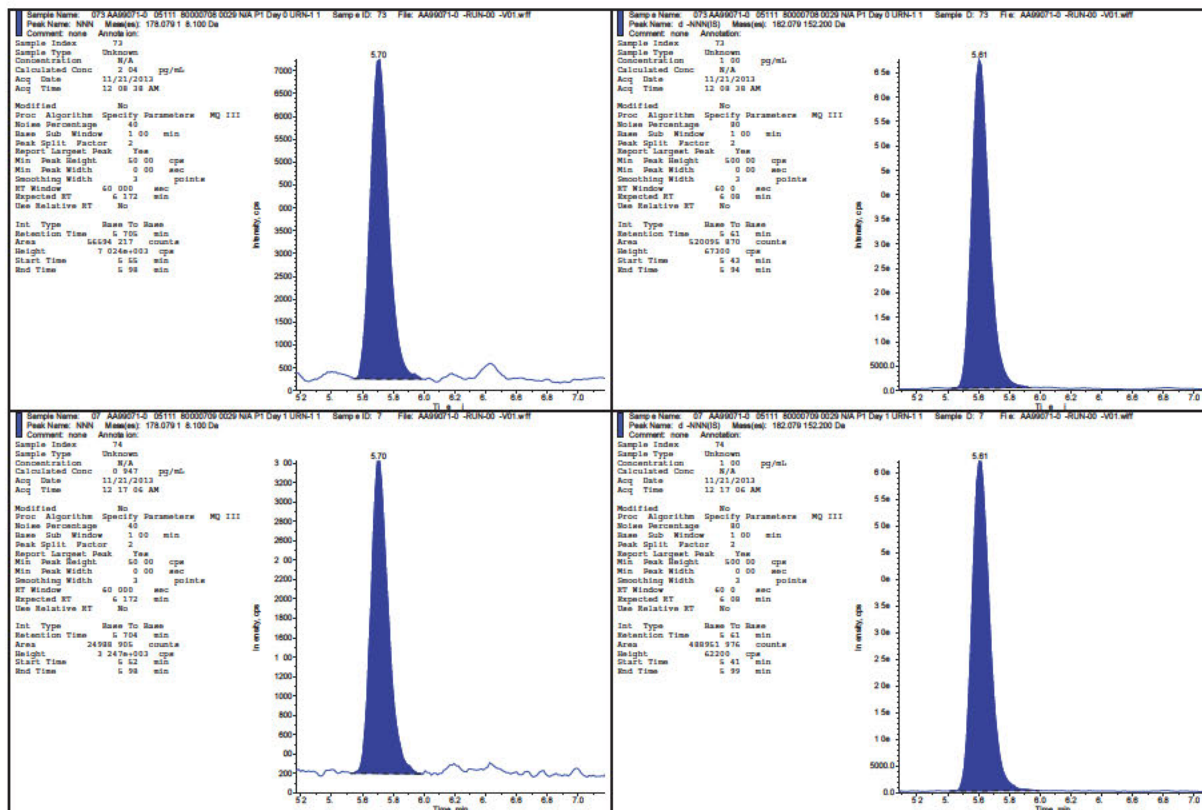


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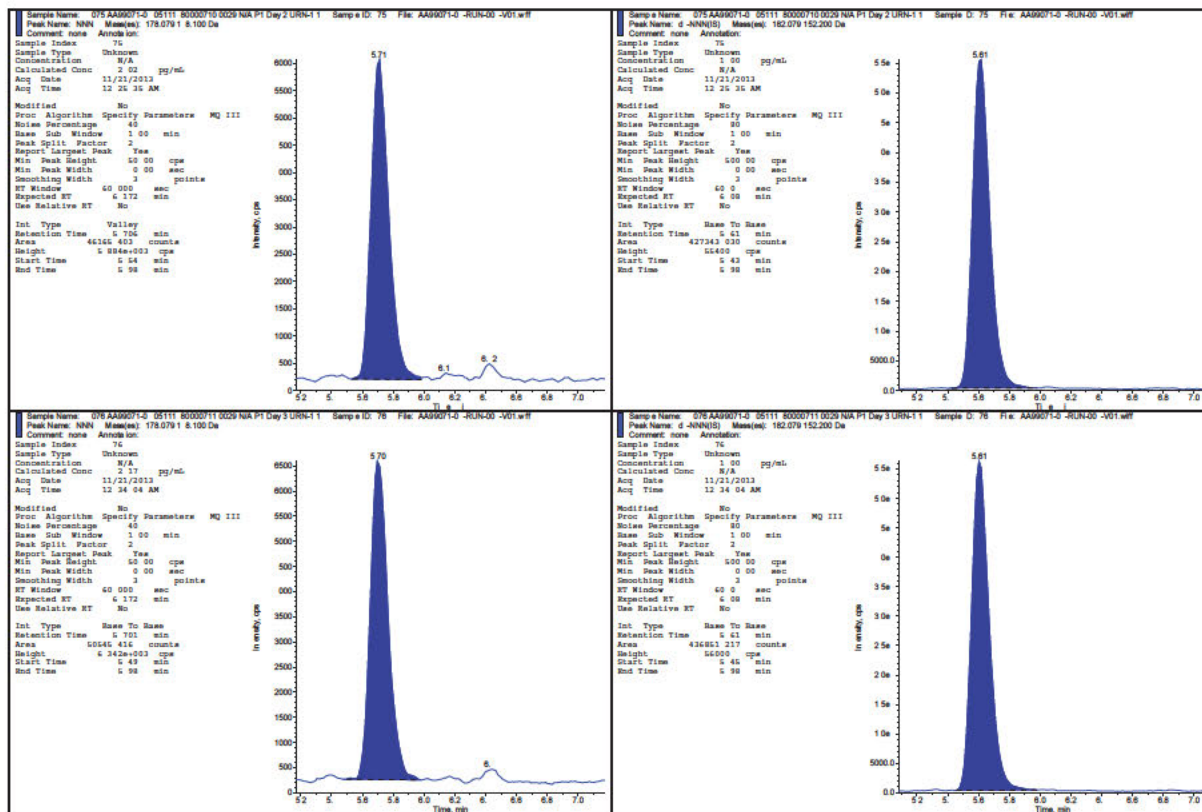


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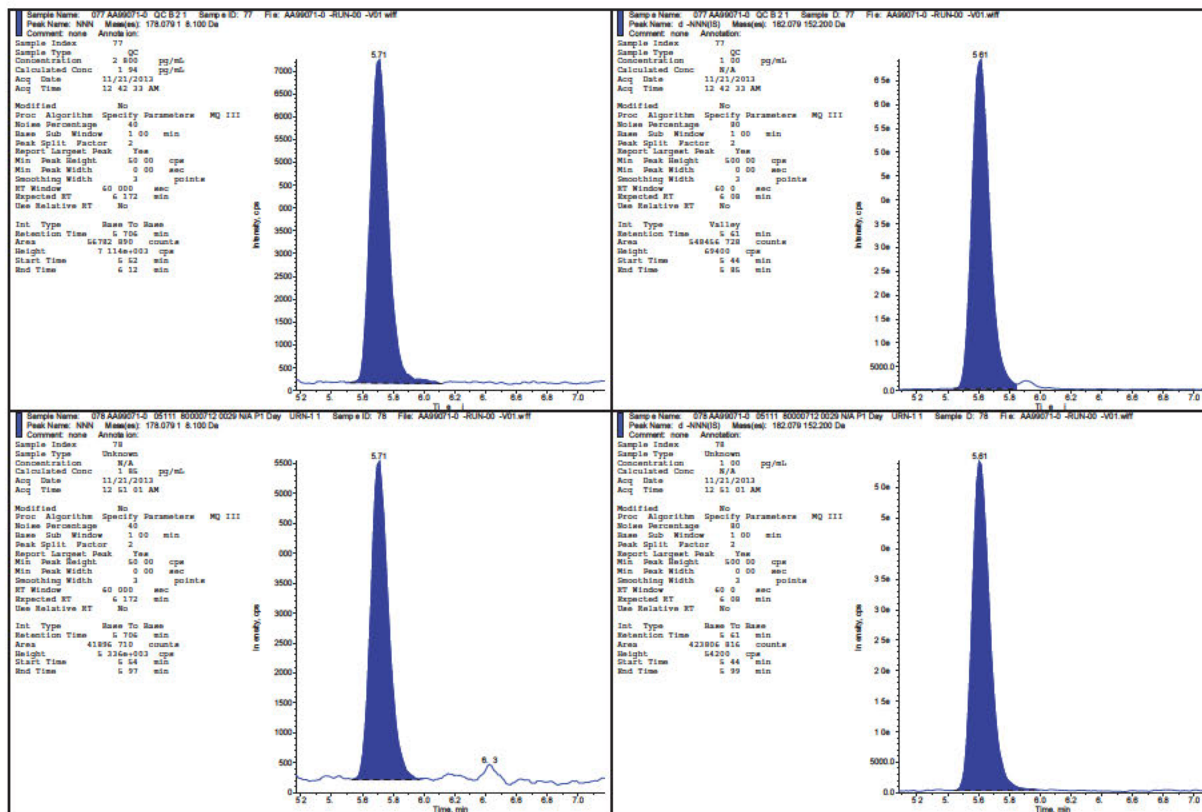


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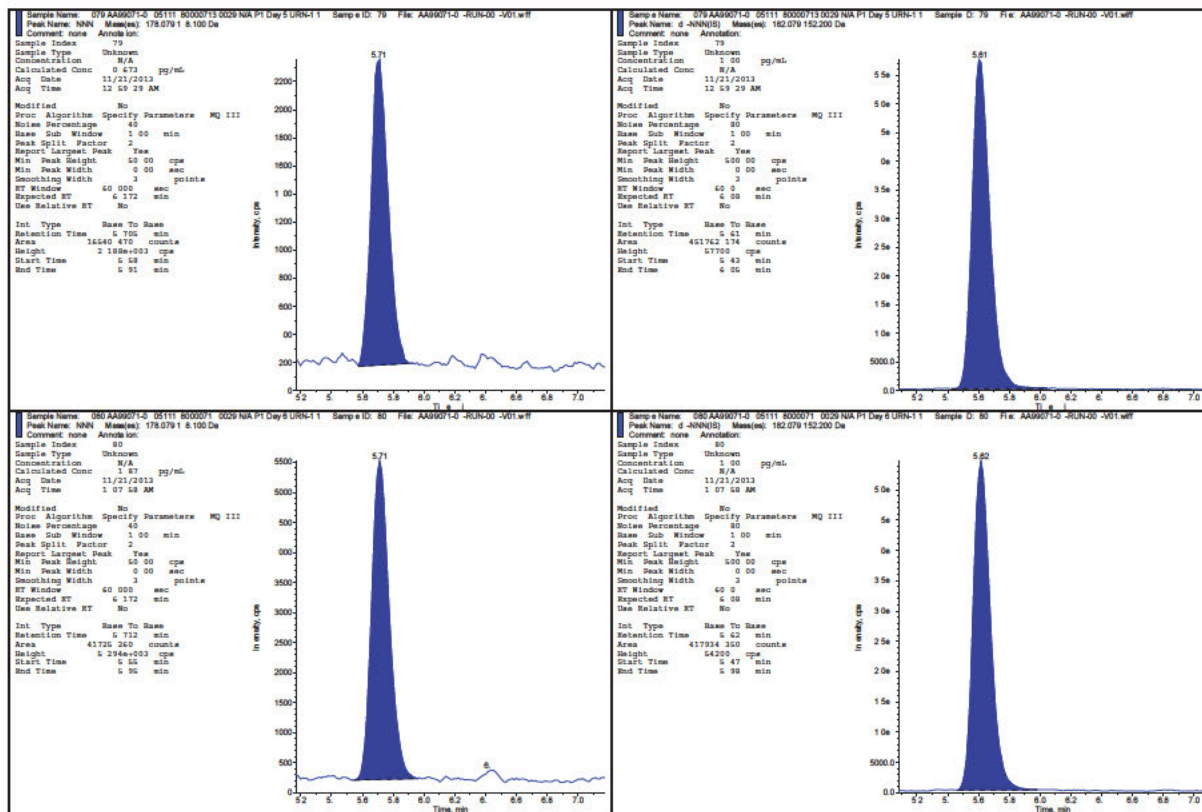


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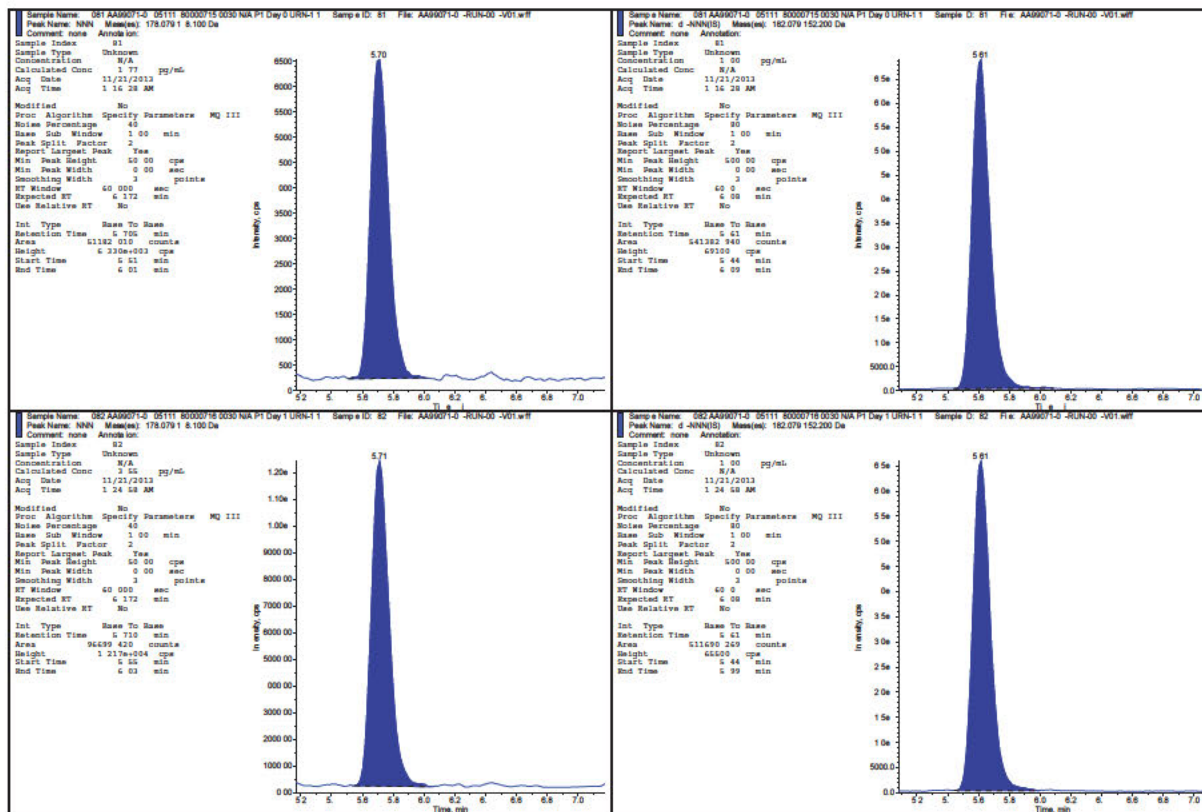


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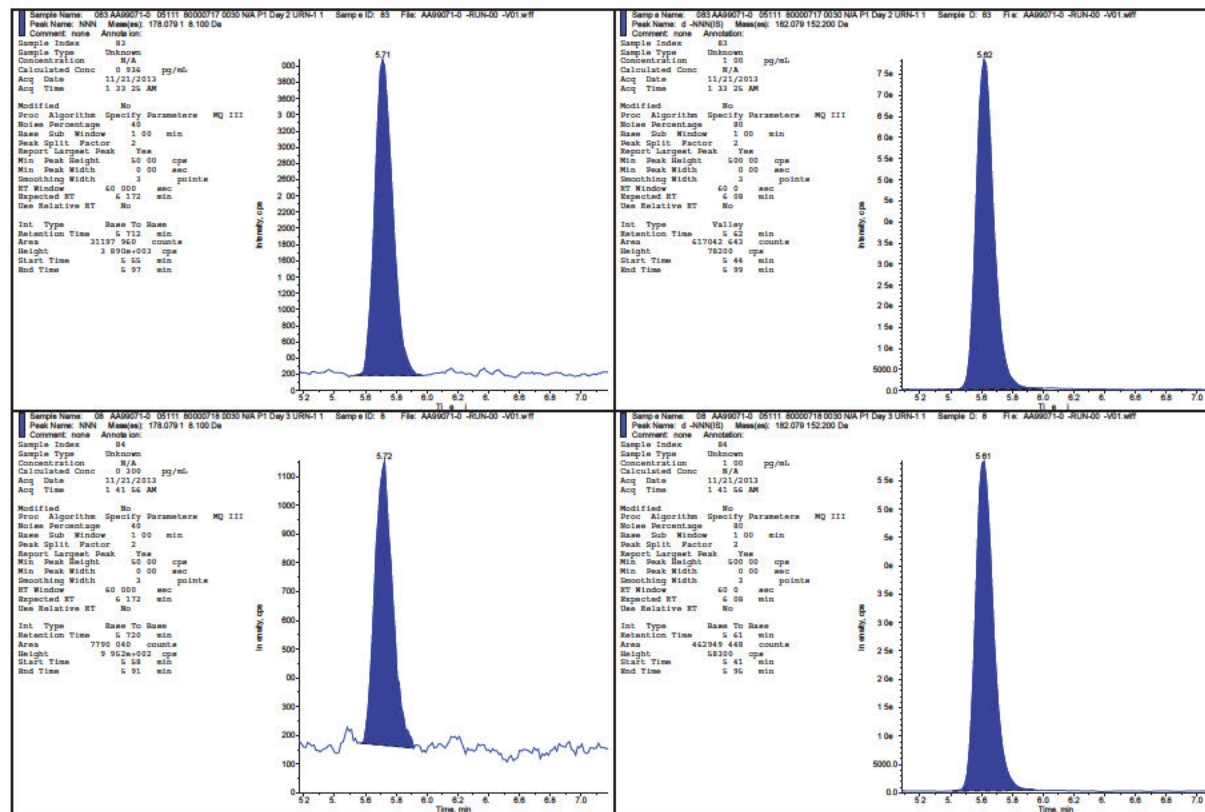


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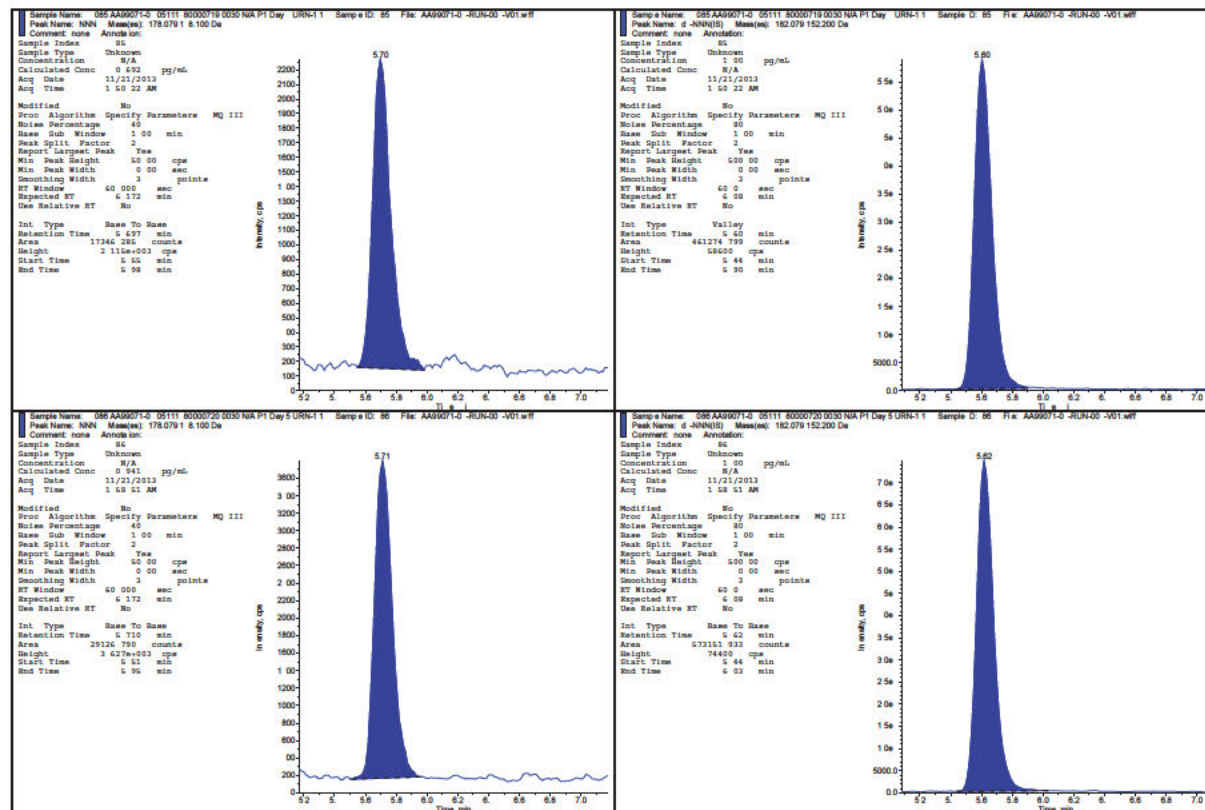


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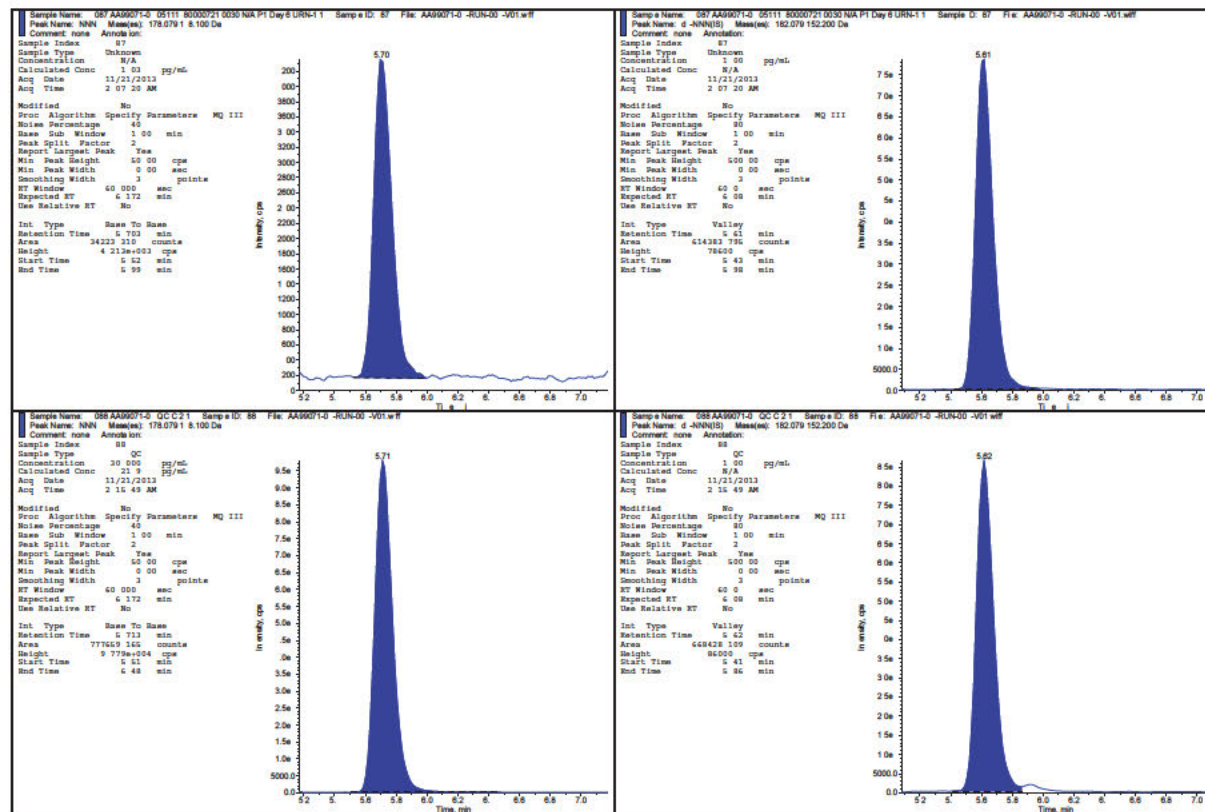


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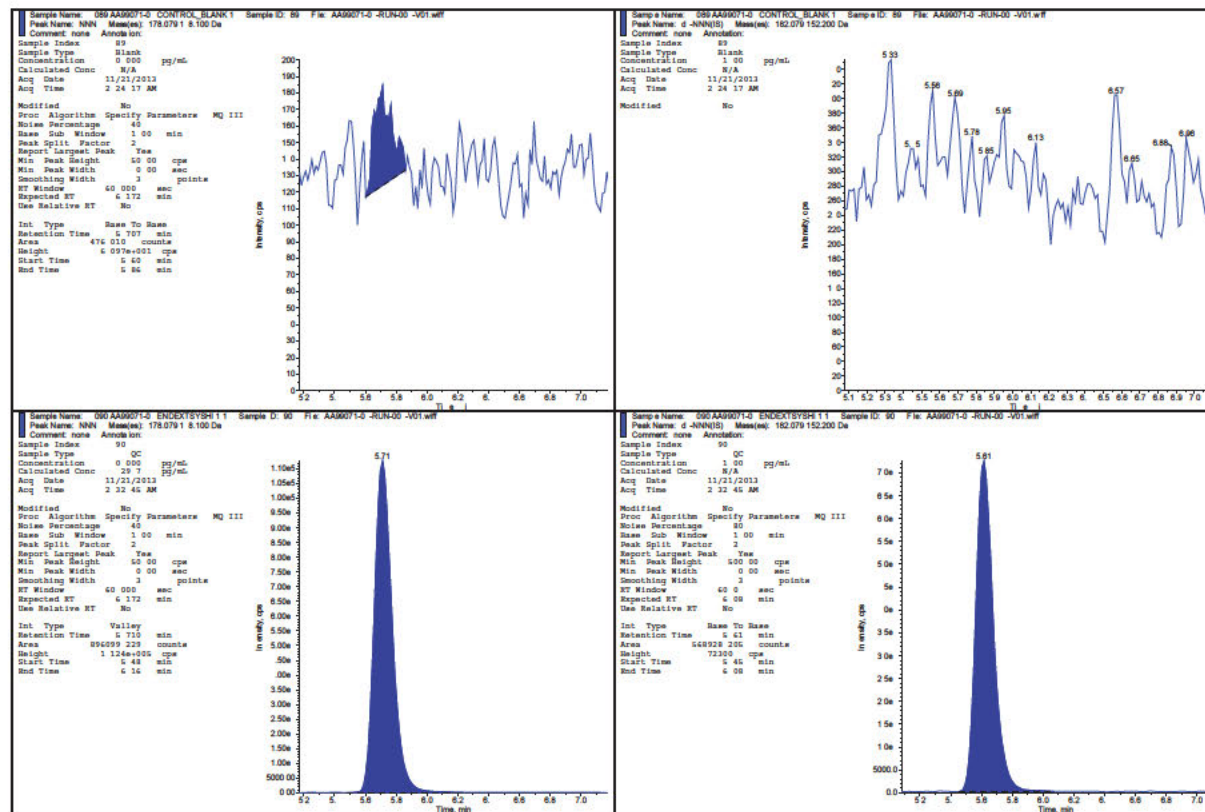


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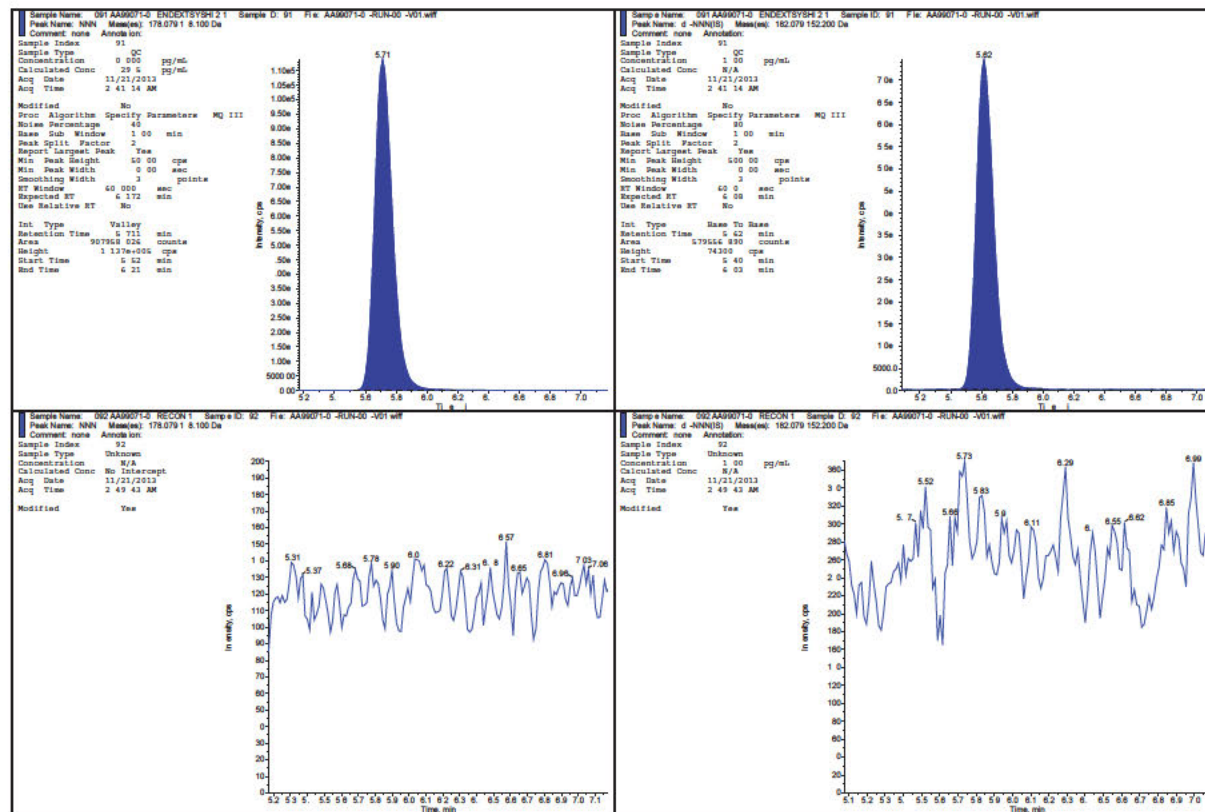


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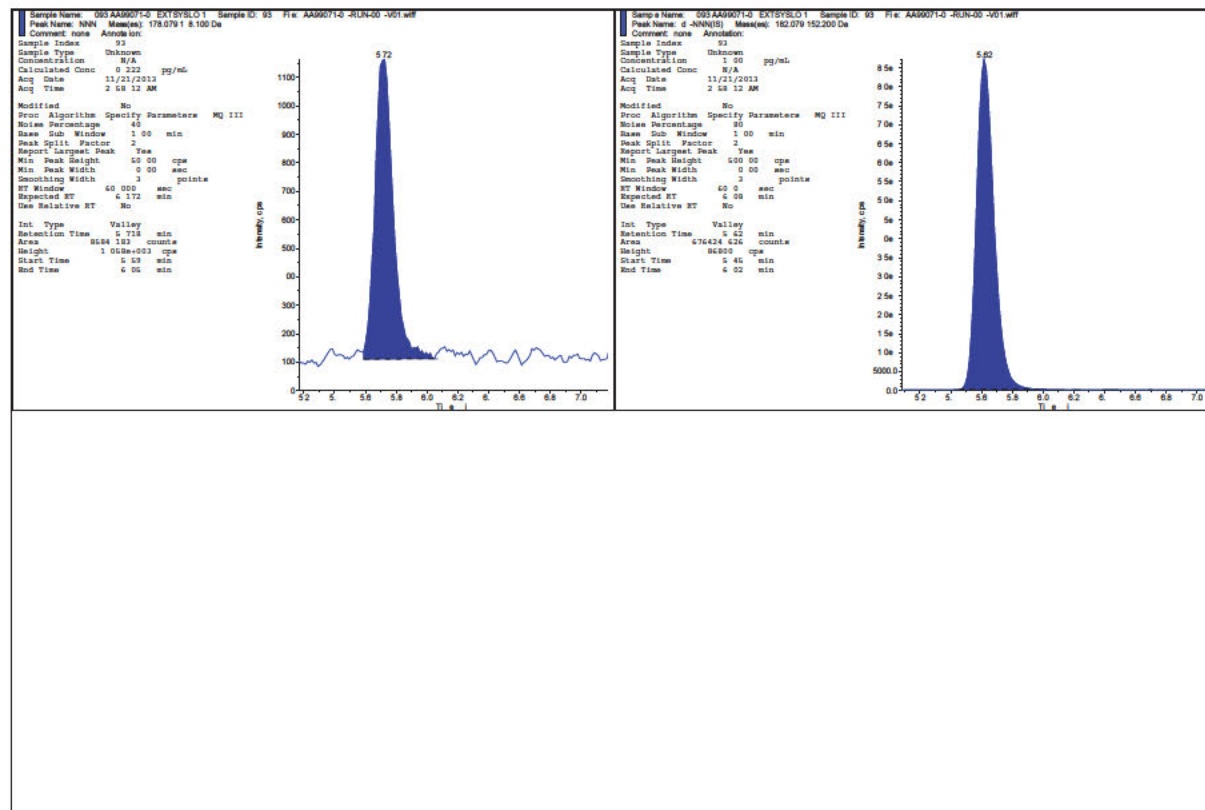


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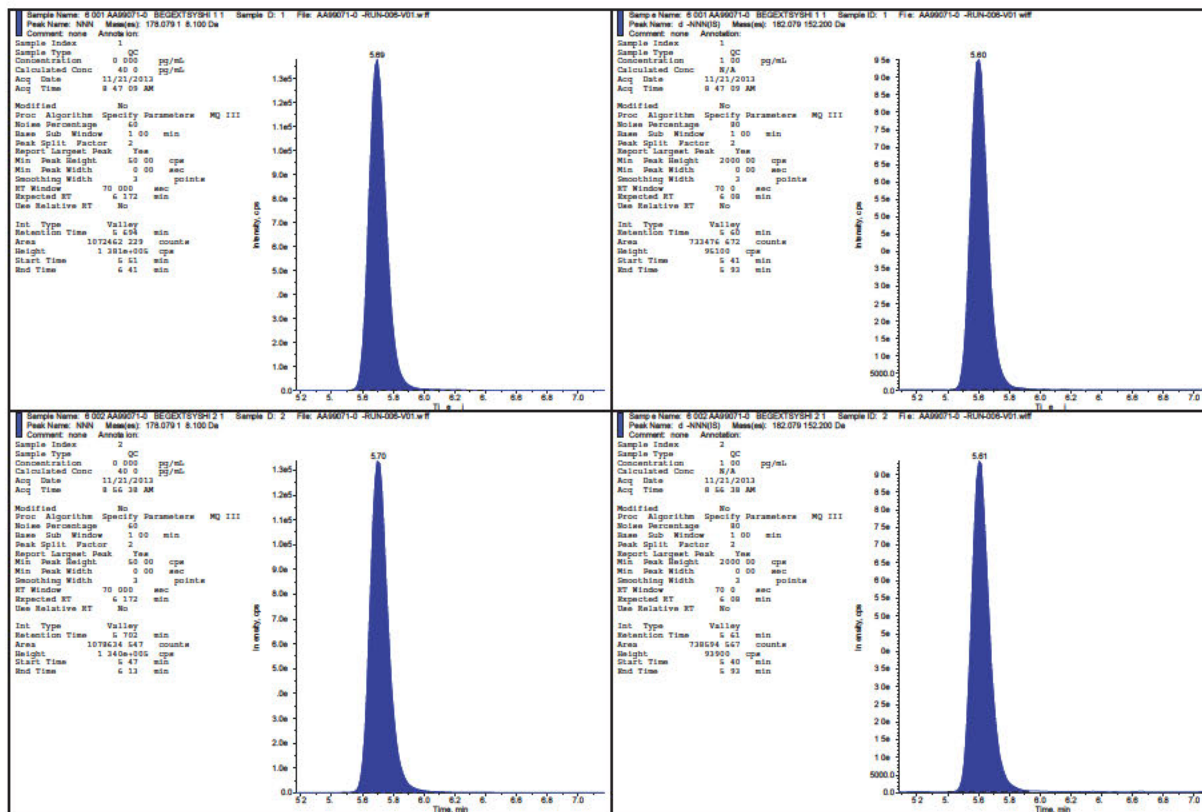


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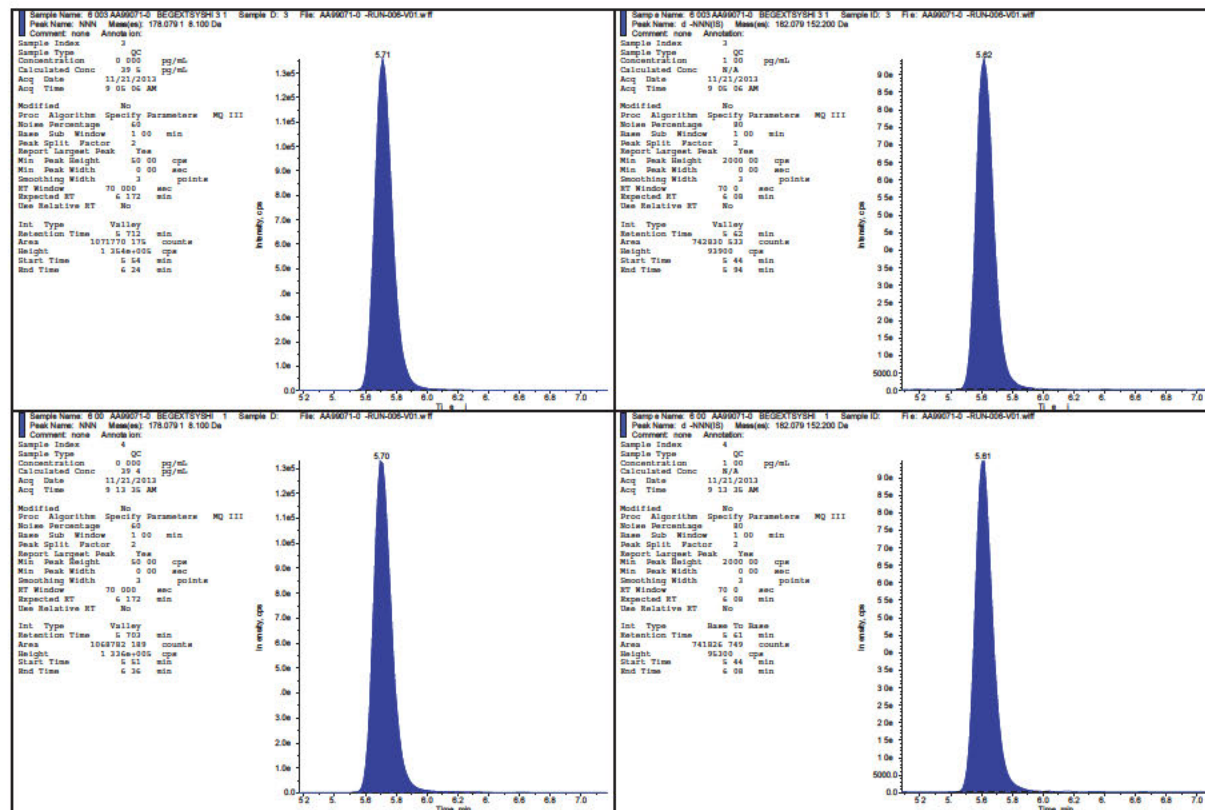


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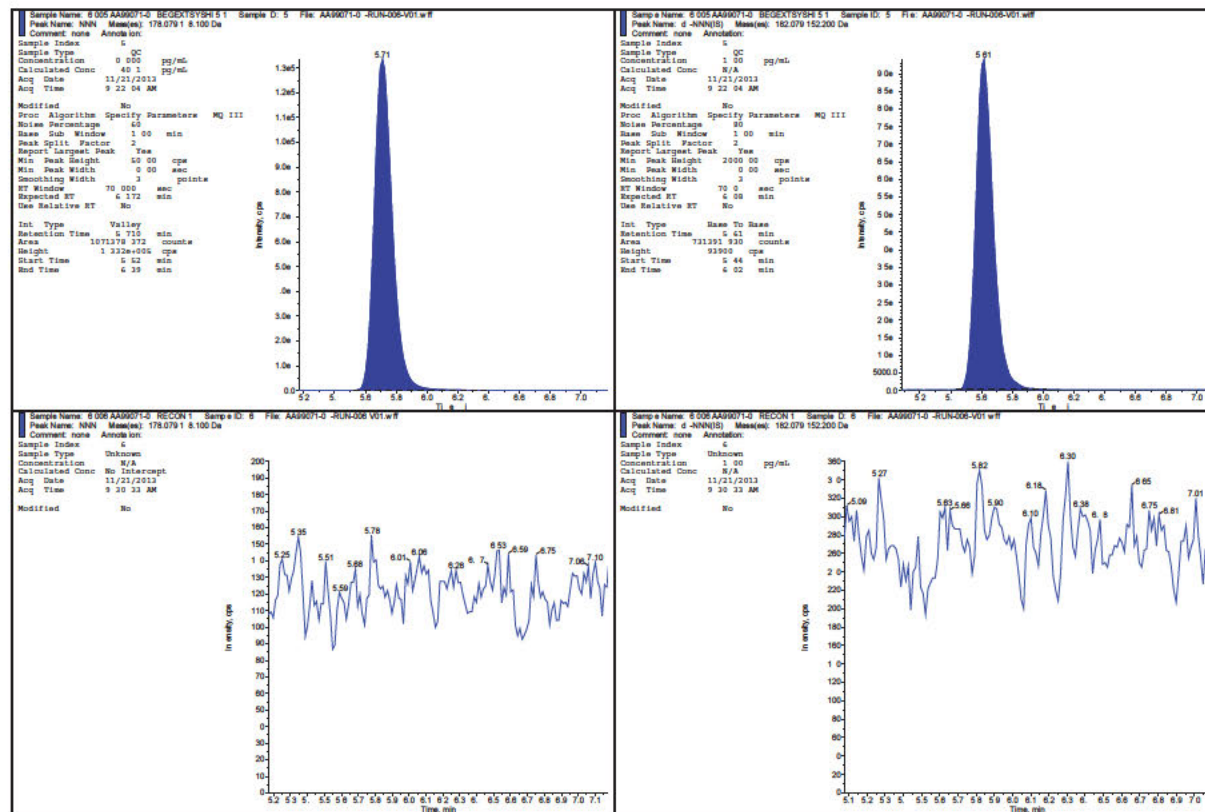


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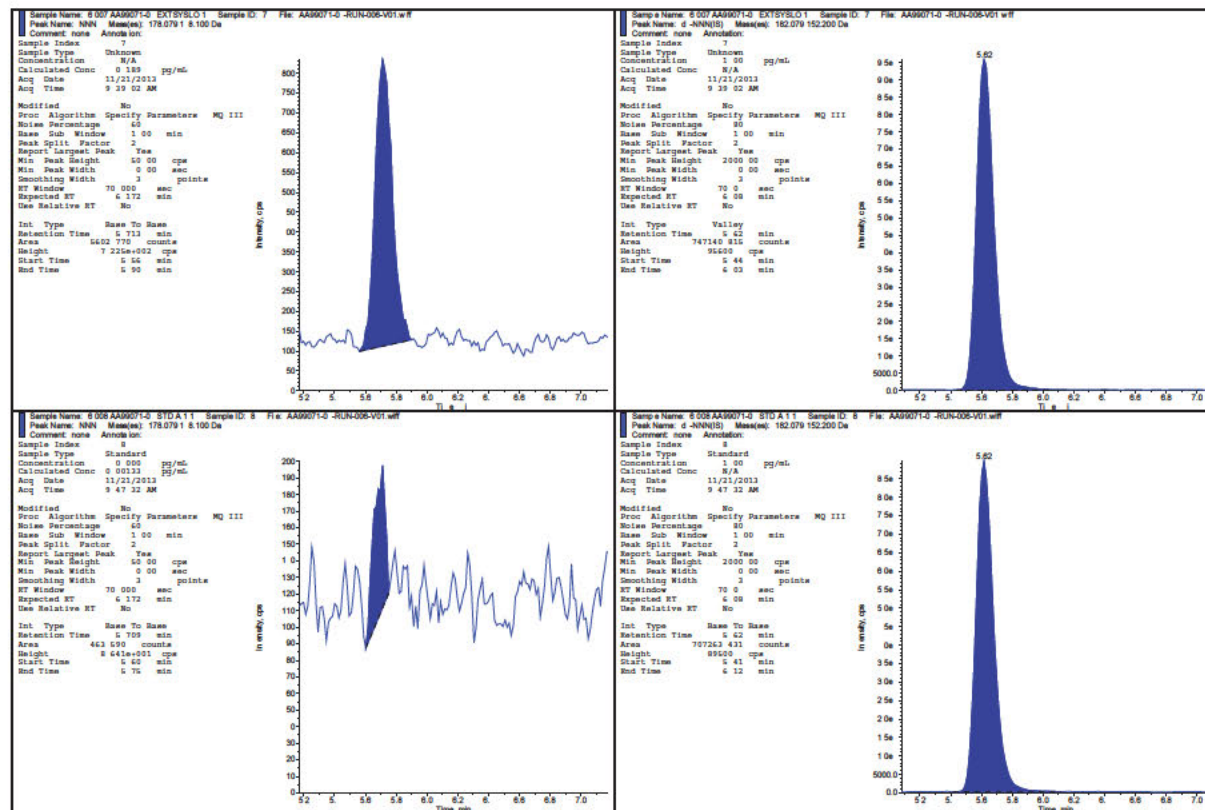


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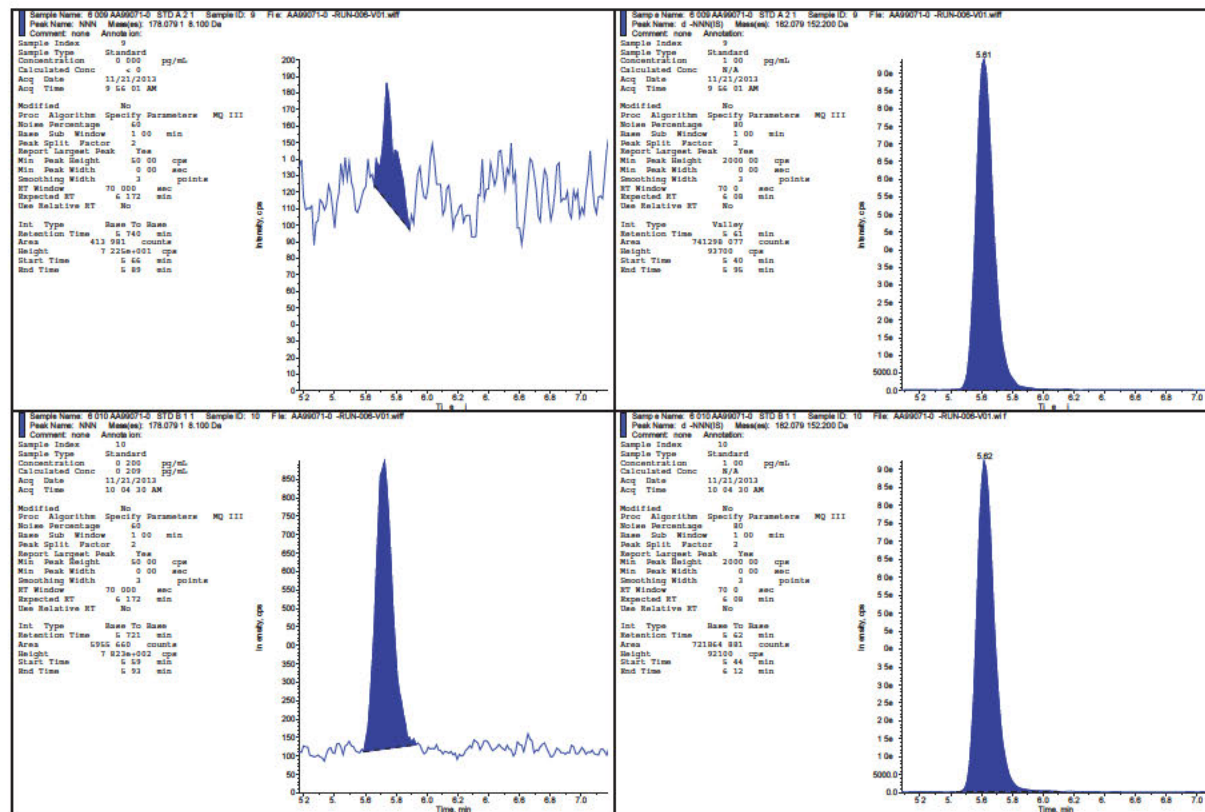


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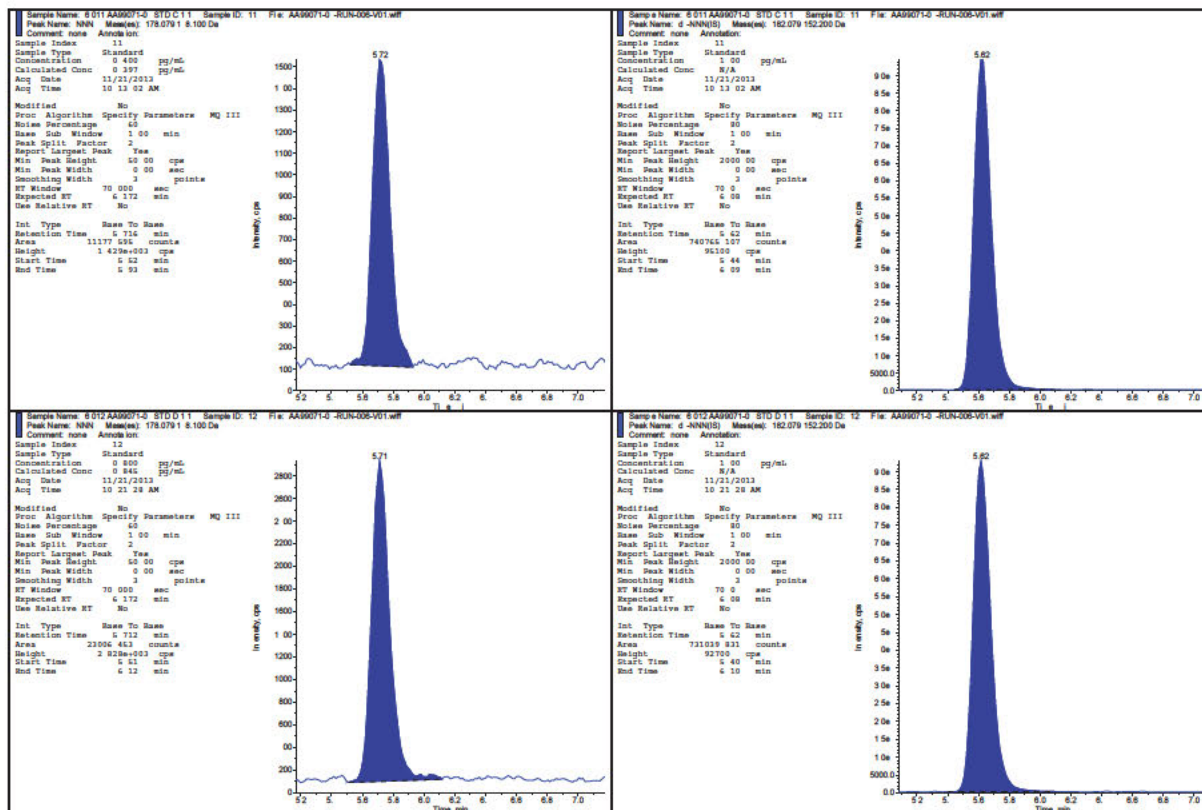


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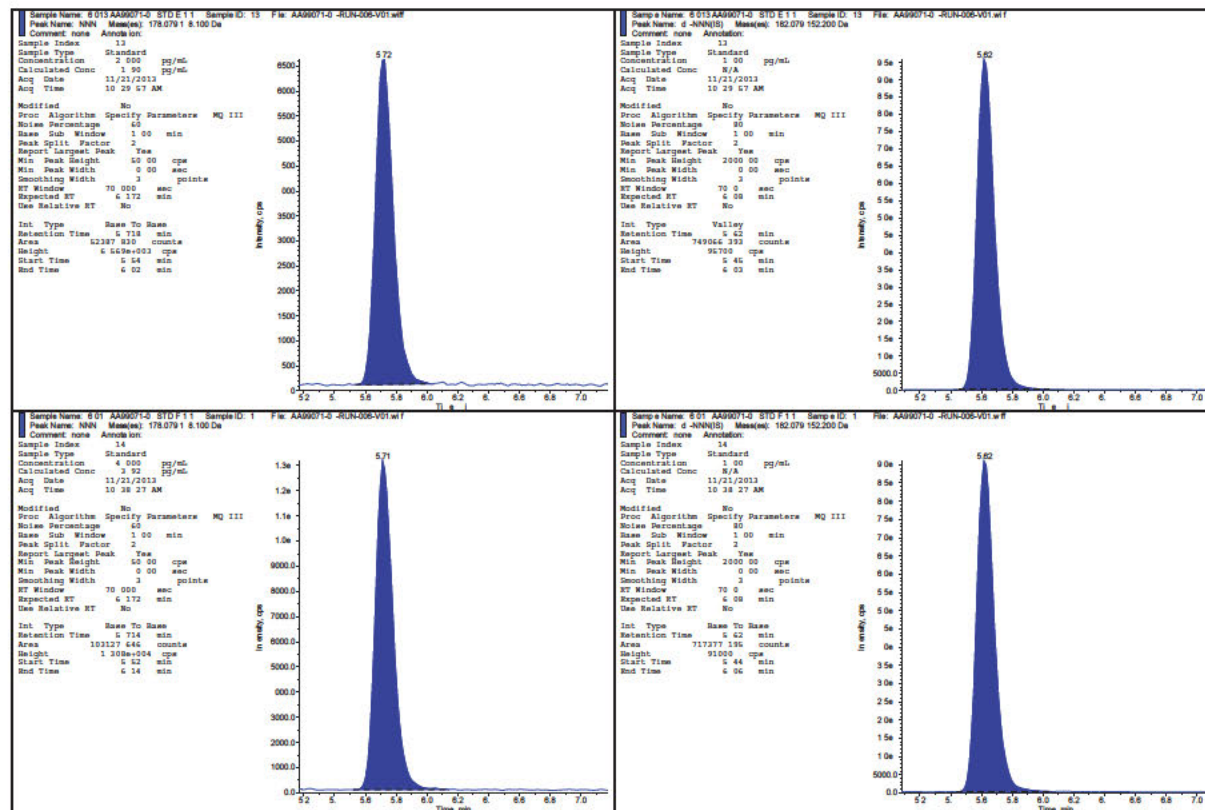


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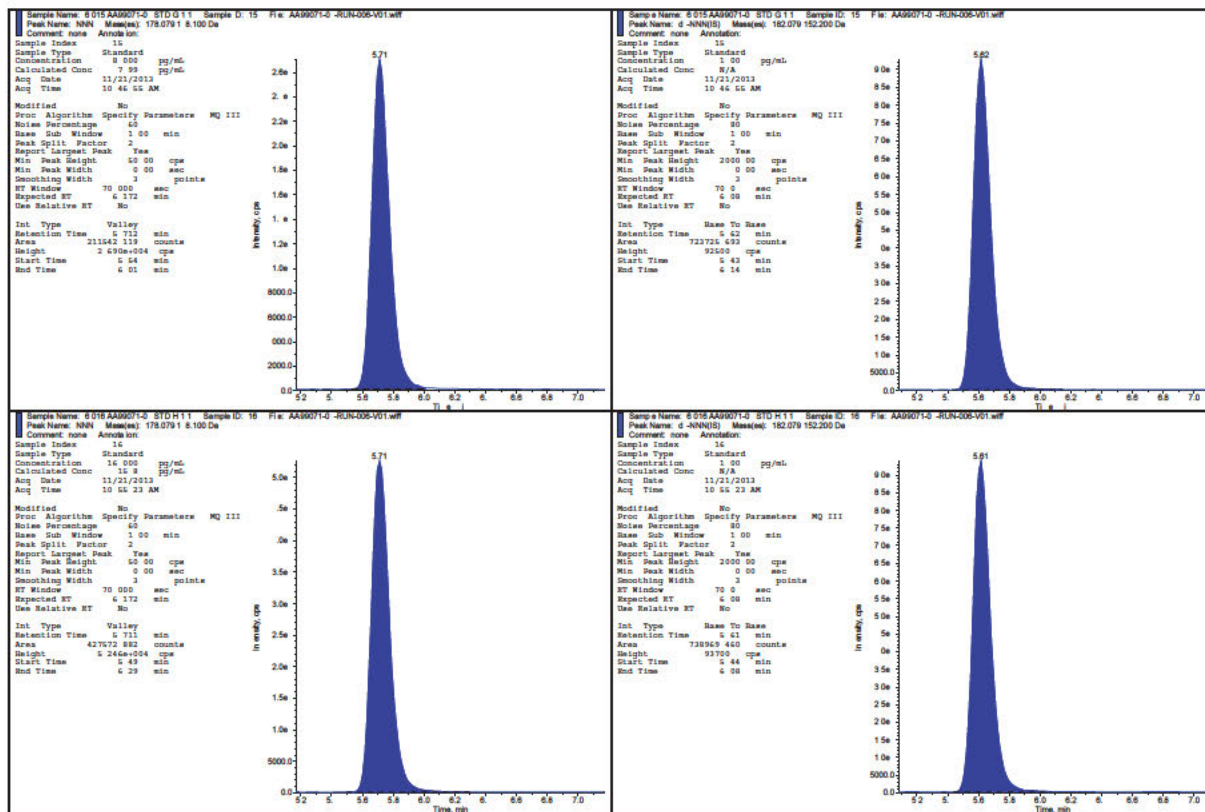


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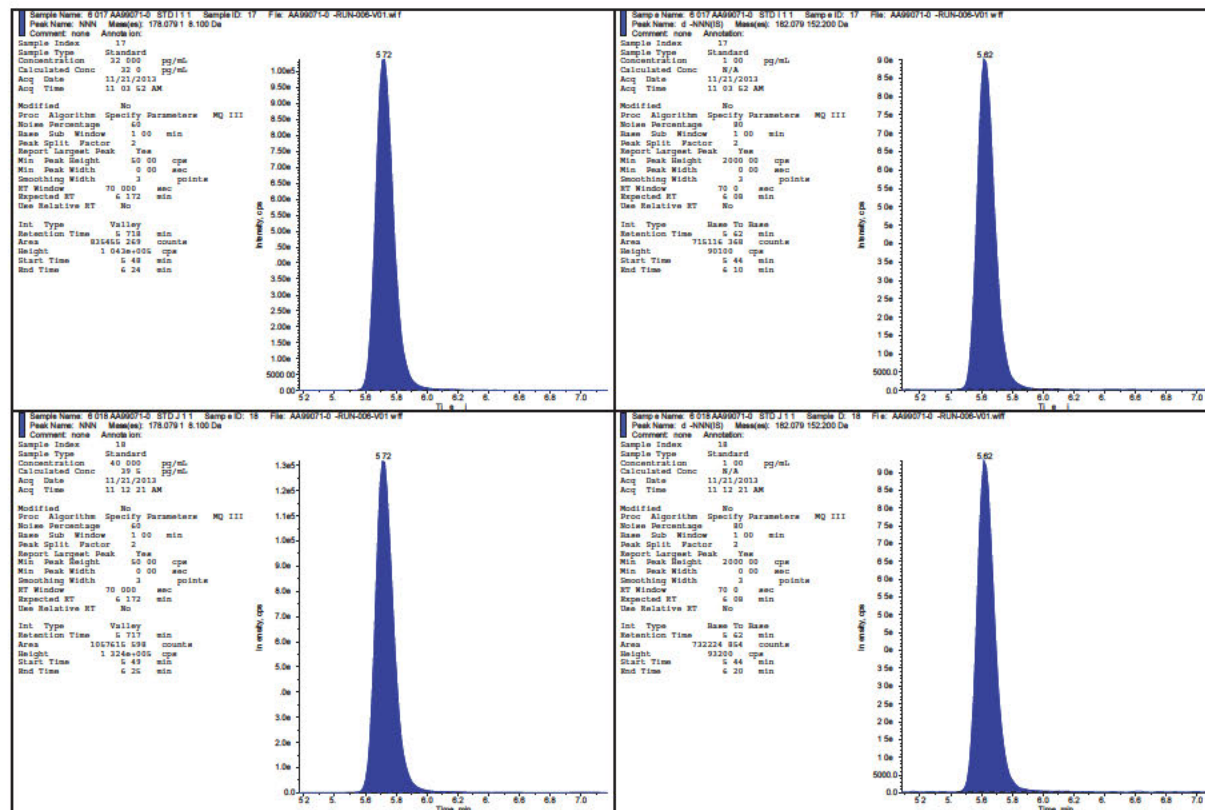


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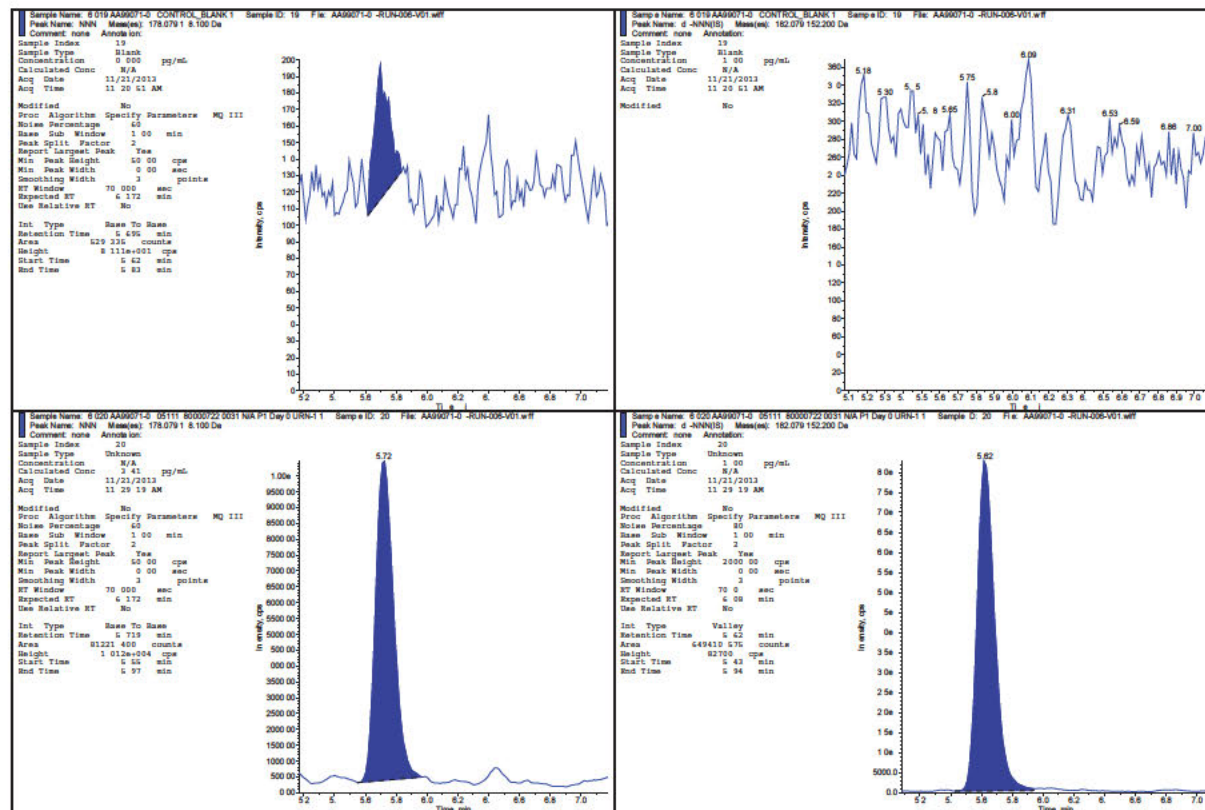


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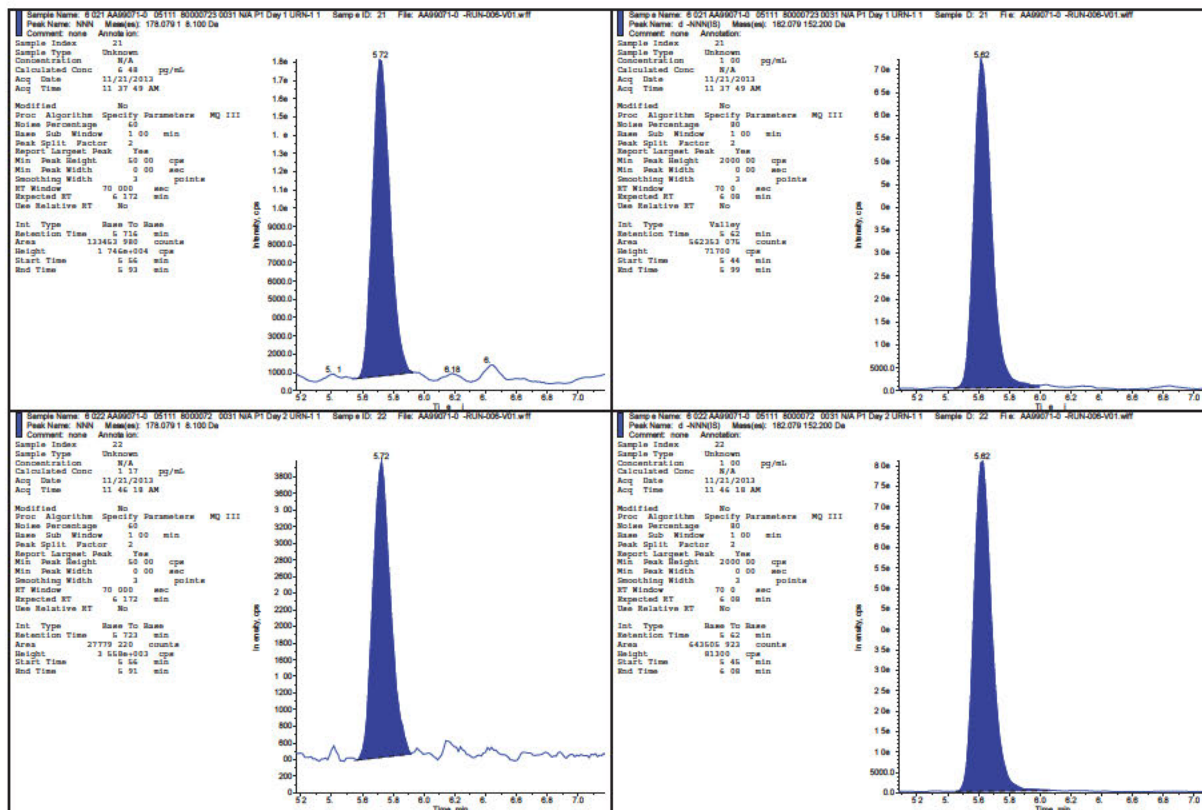


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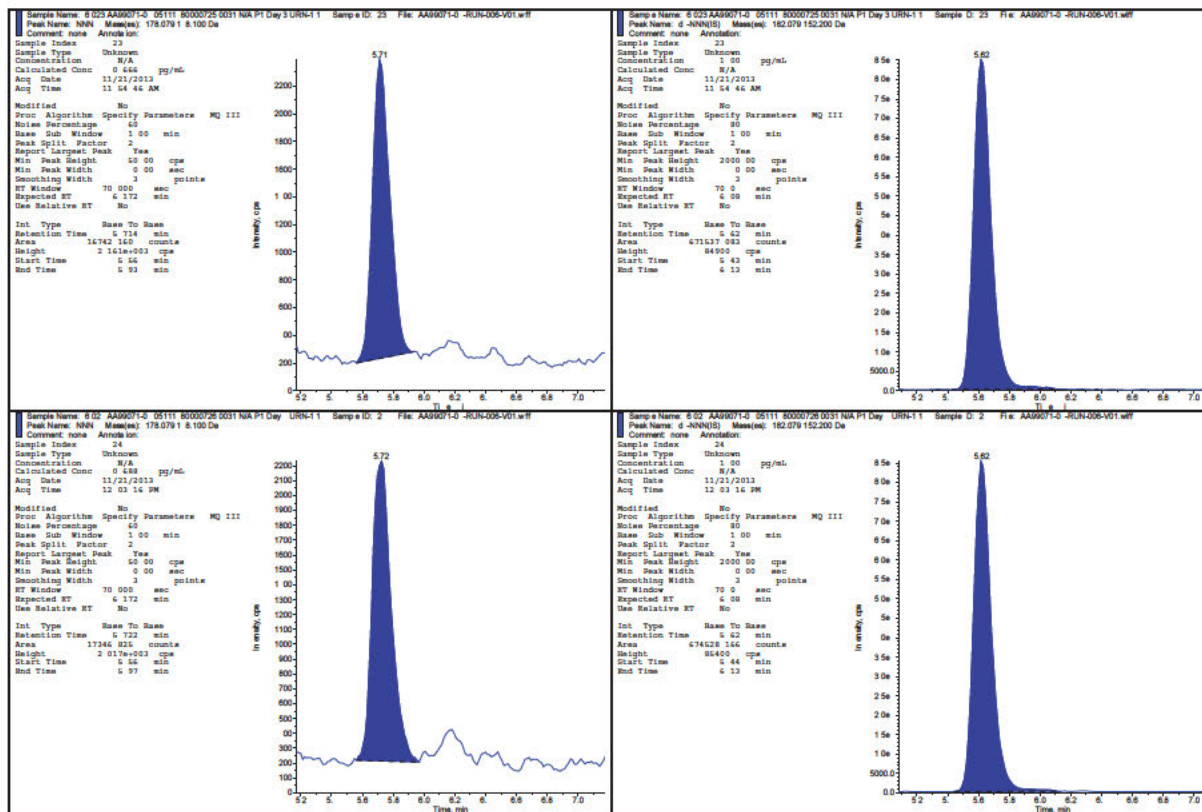


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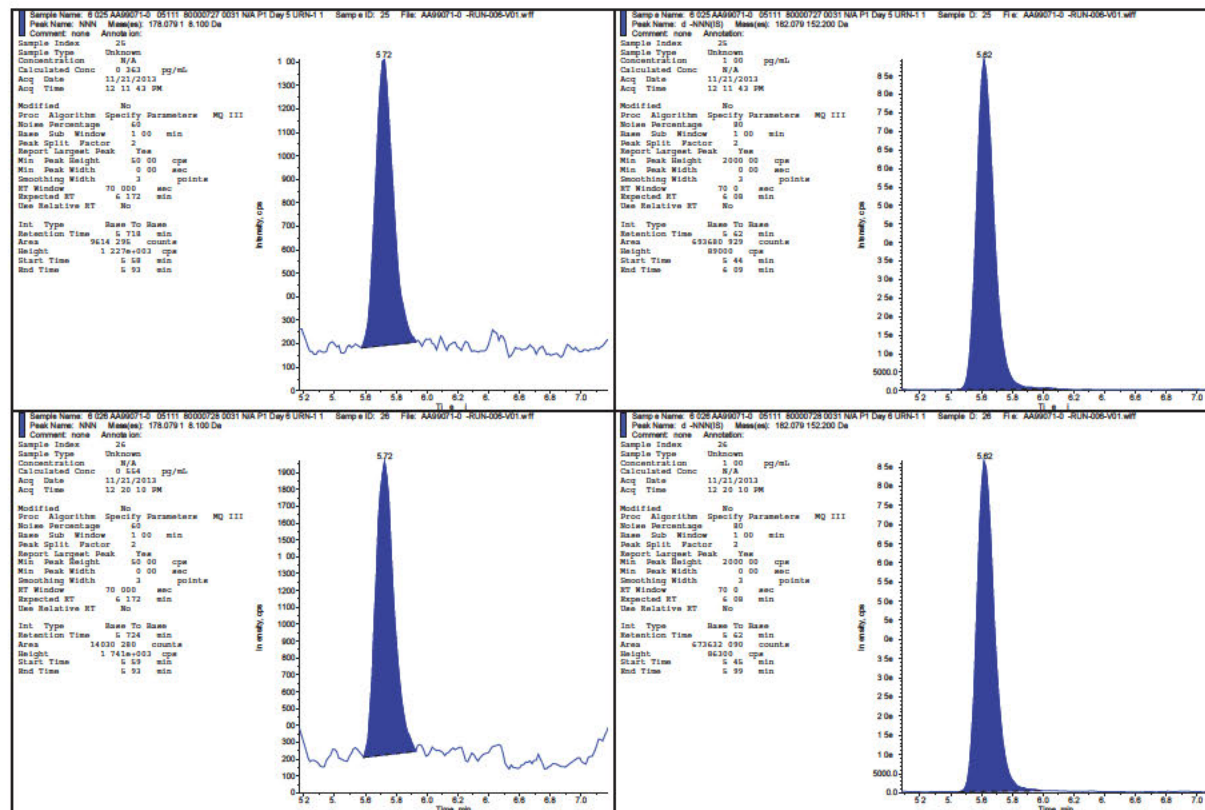


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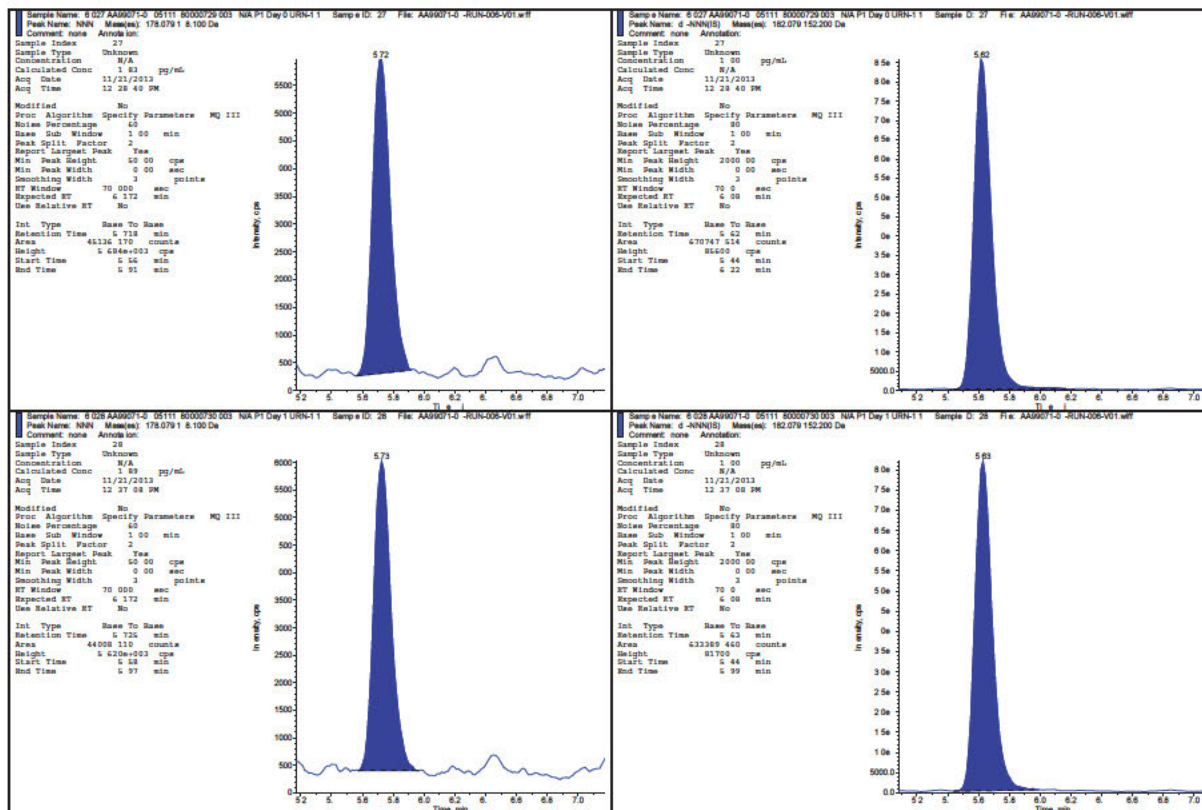


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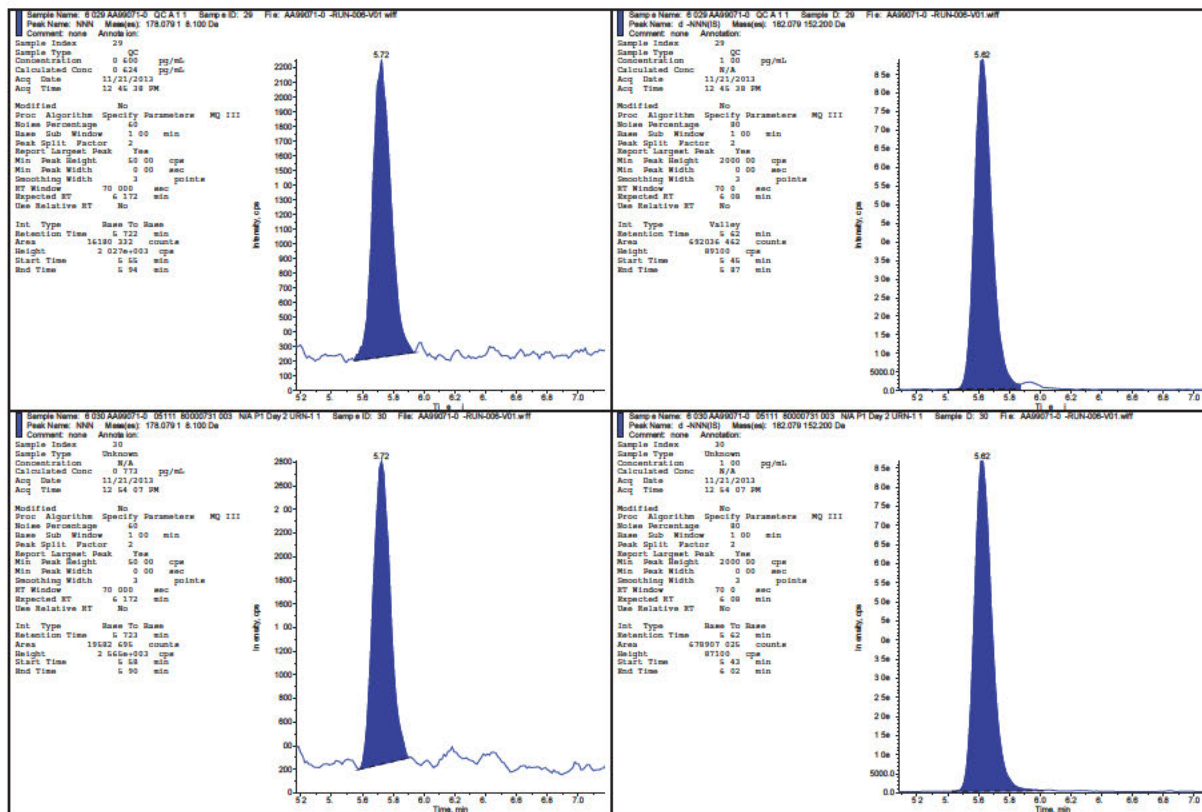


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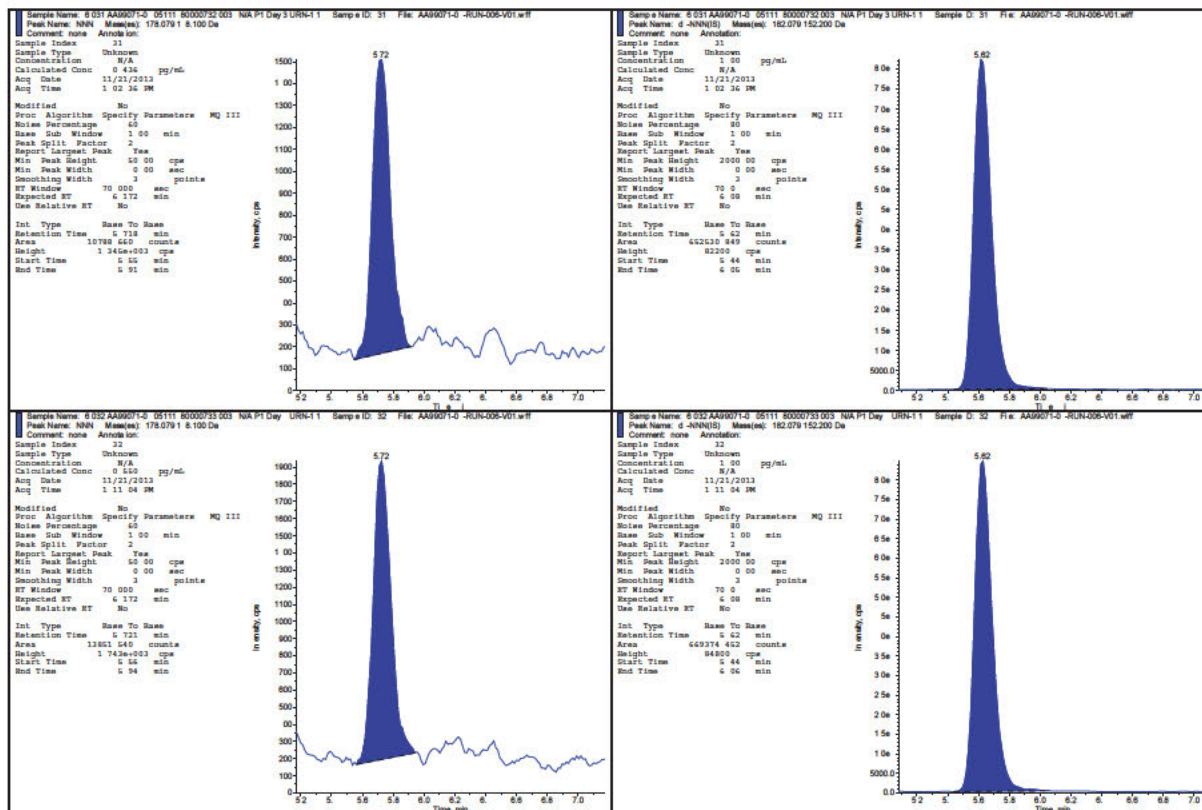


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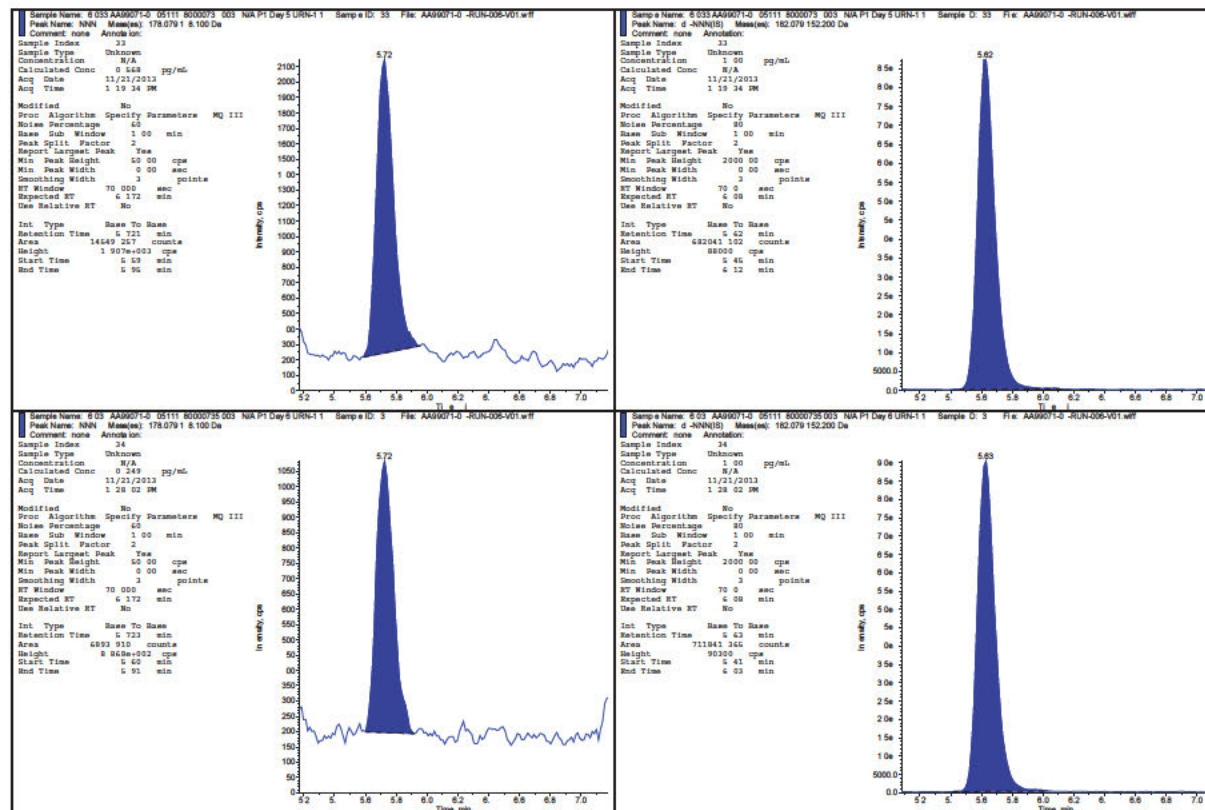


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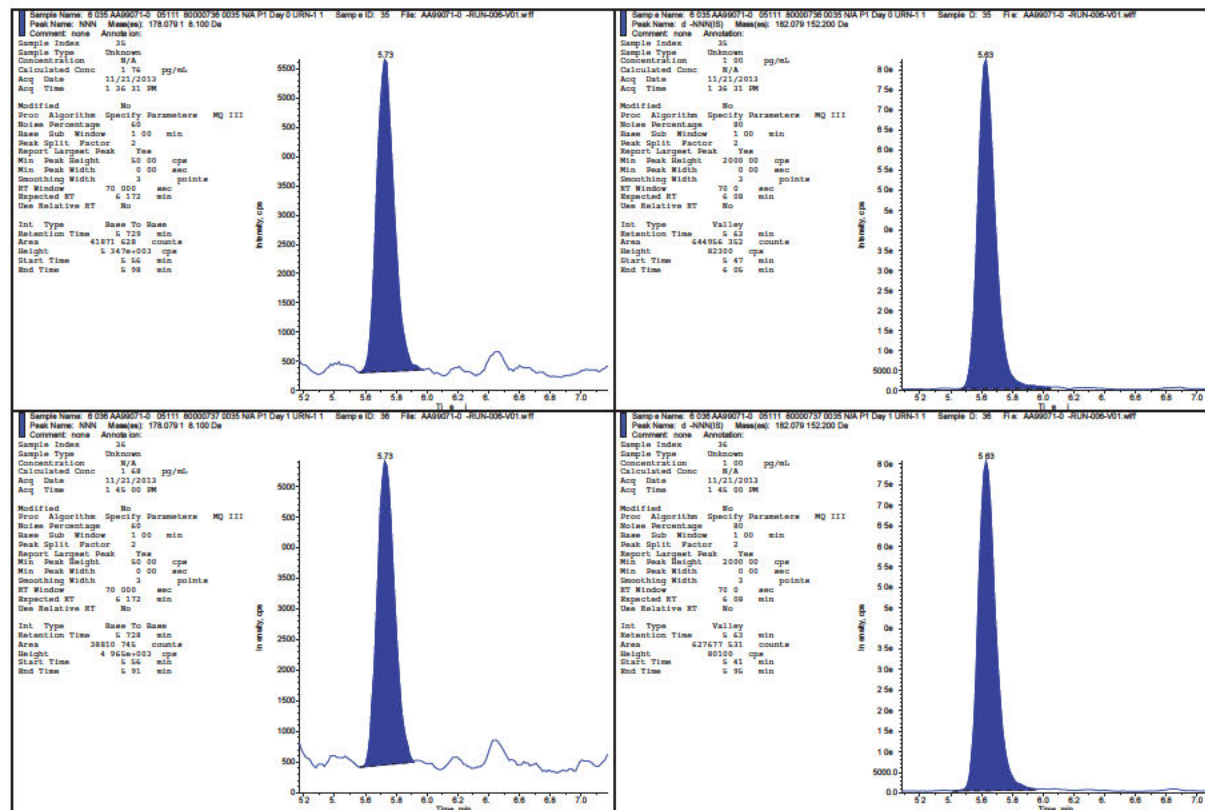


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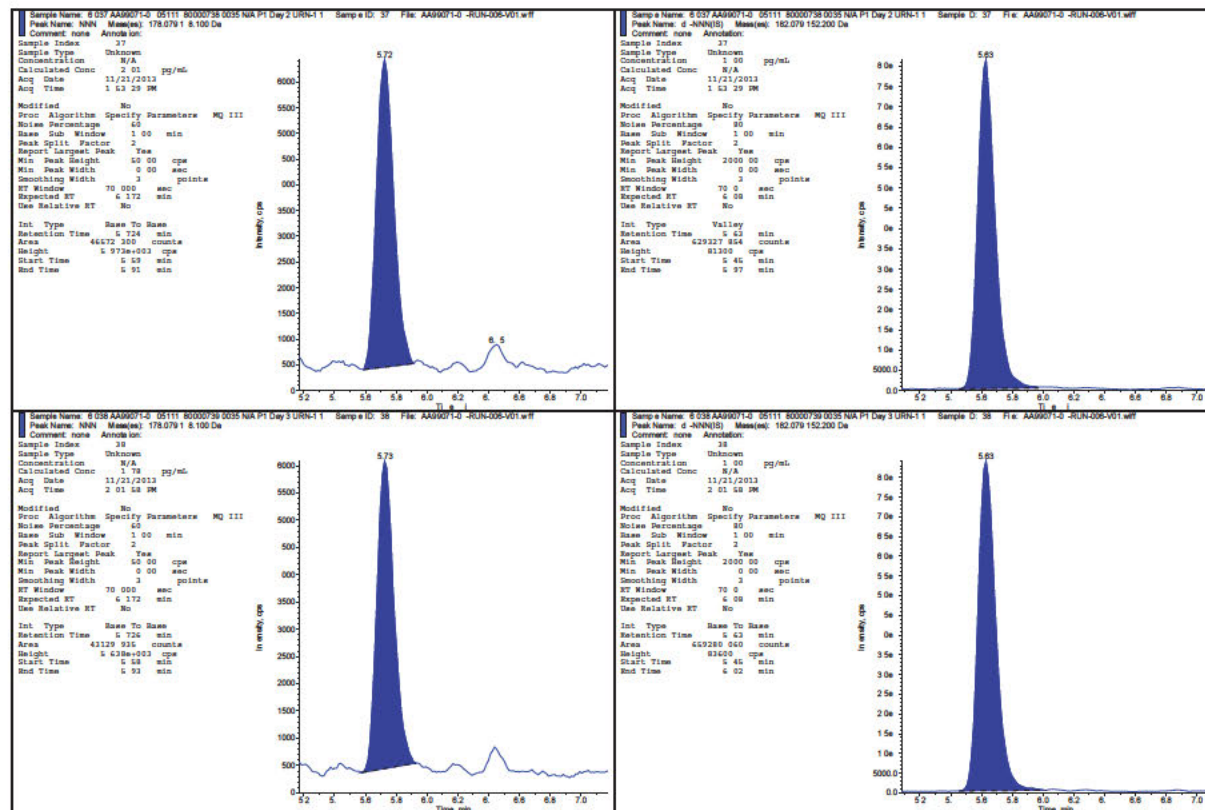


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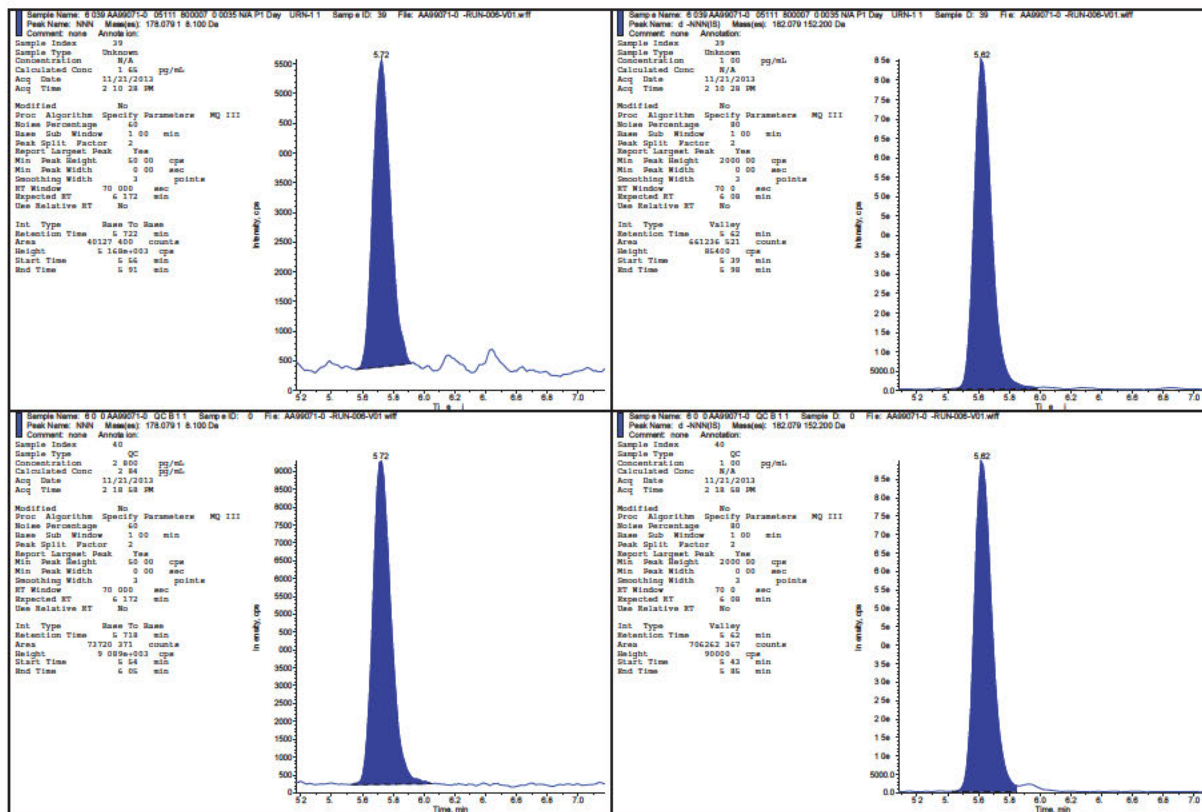


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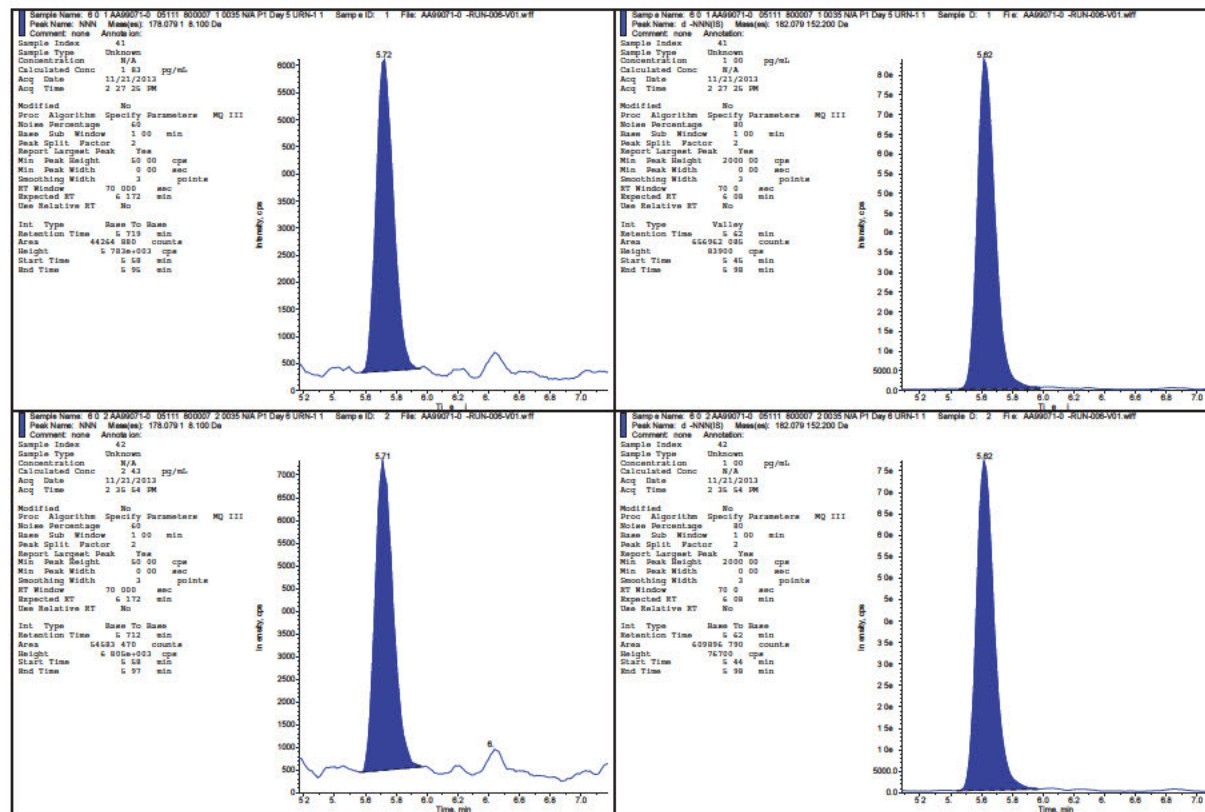


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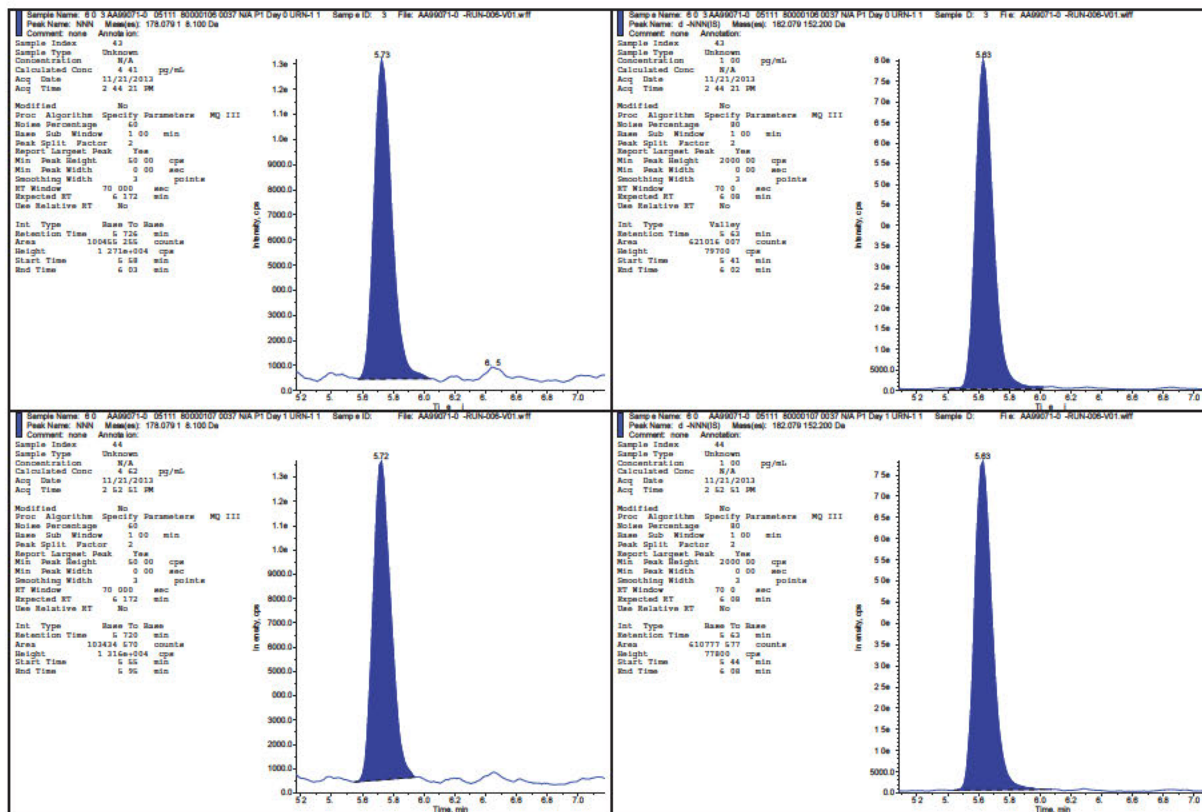


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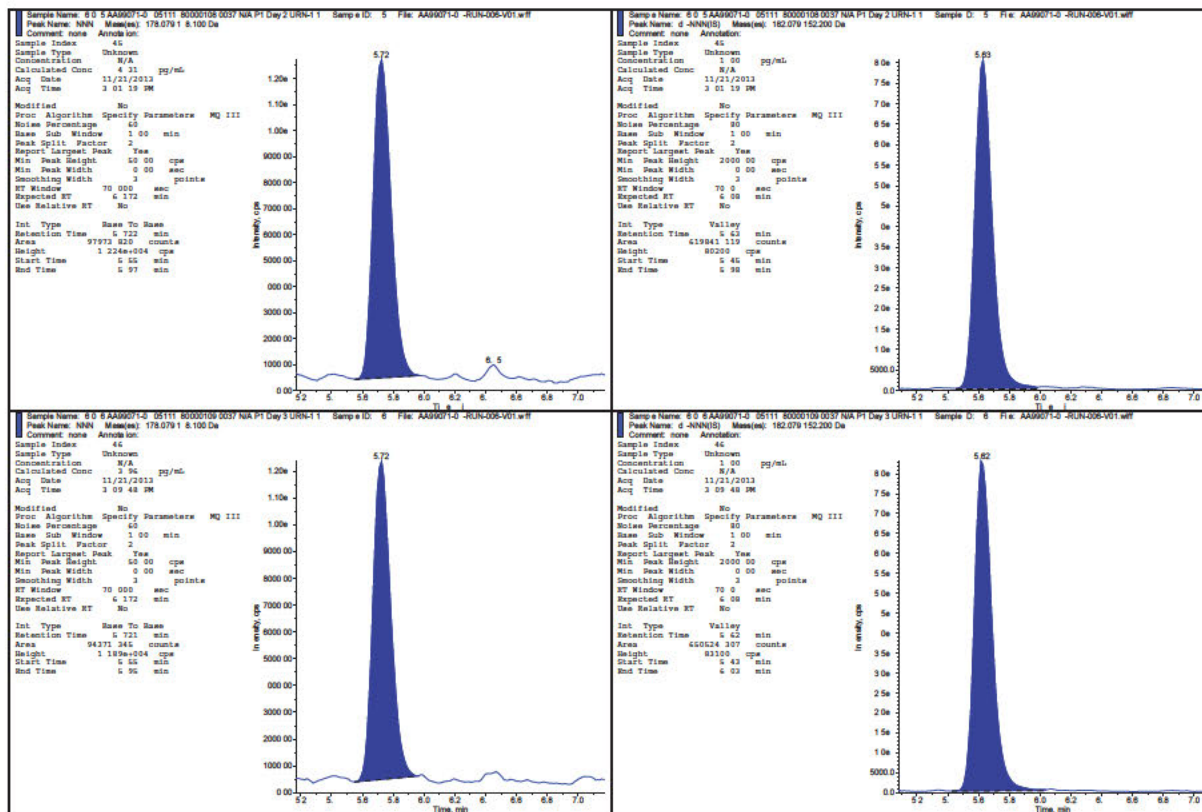


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Celention Study AA99071-04



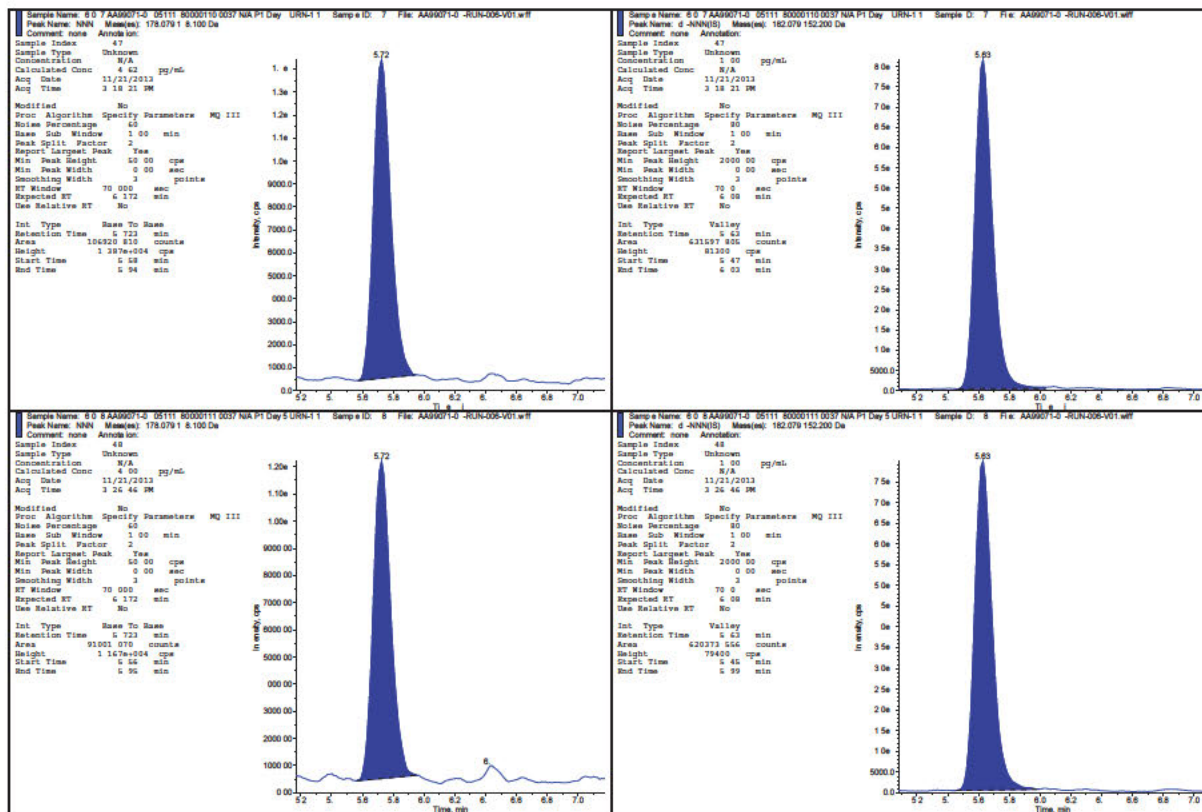


Total NNAL and Total NNN in Human Urine
Celcerion Study AA99071-04



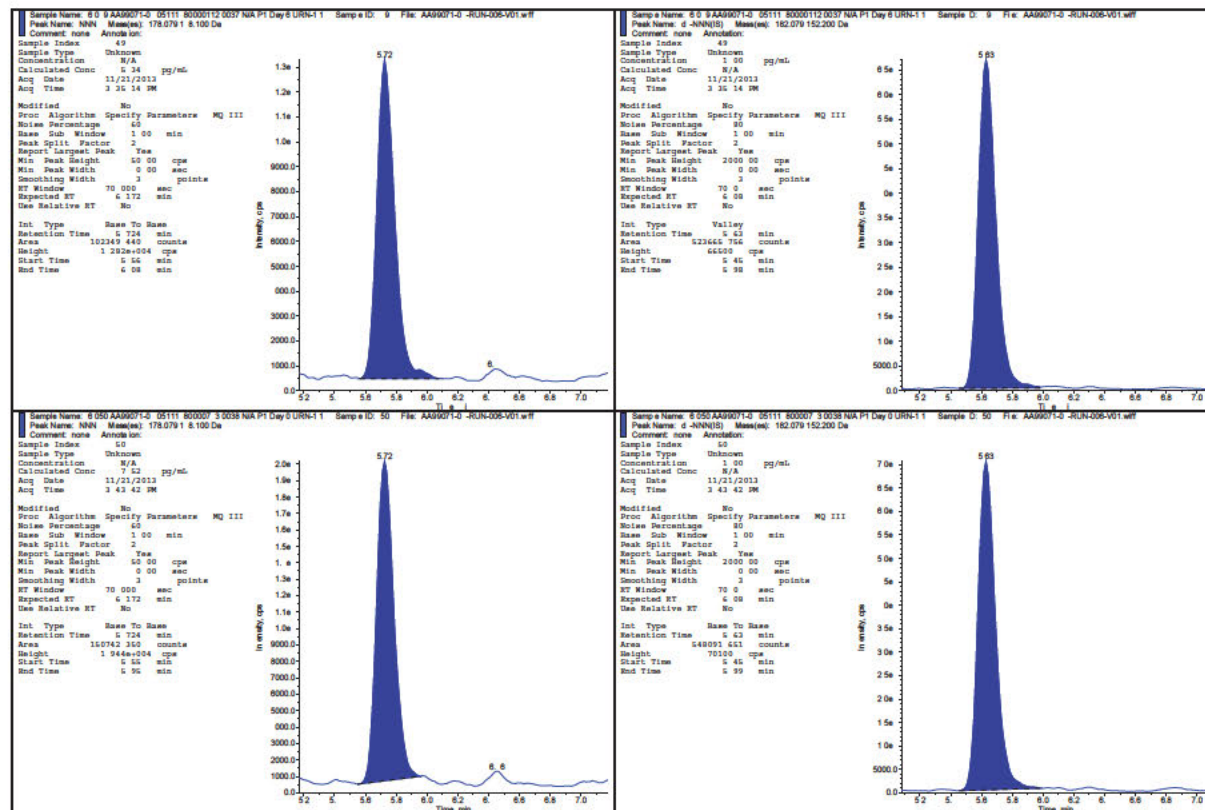


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Celention Study AA99071-04



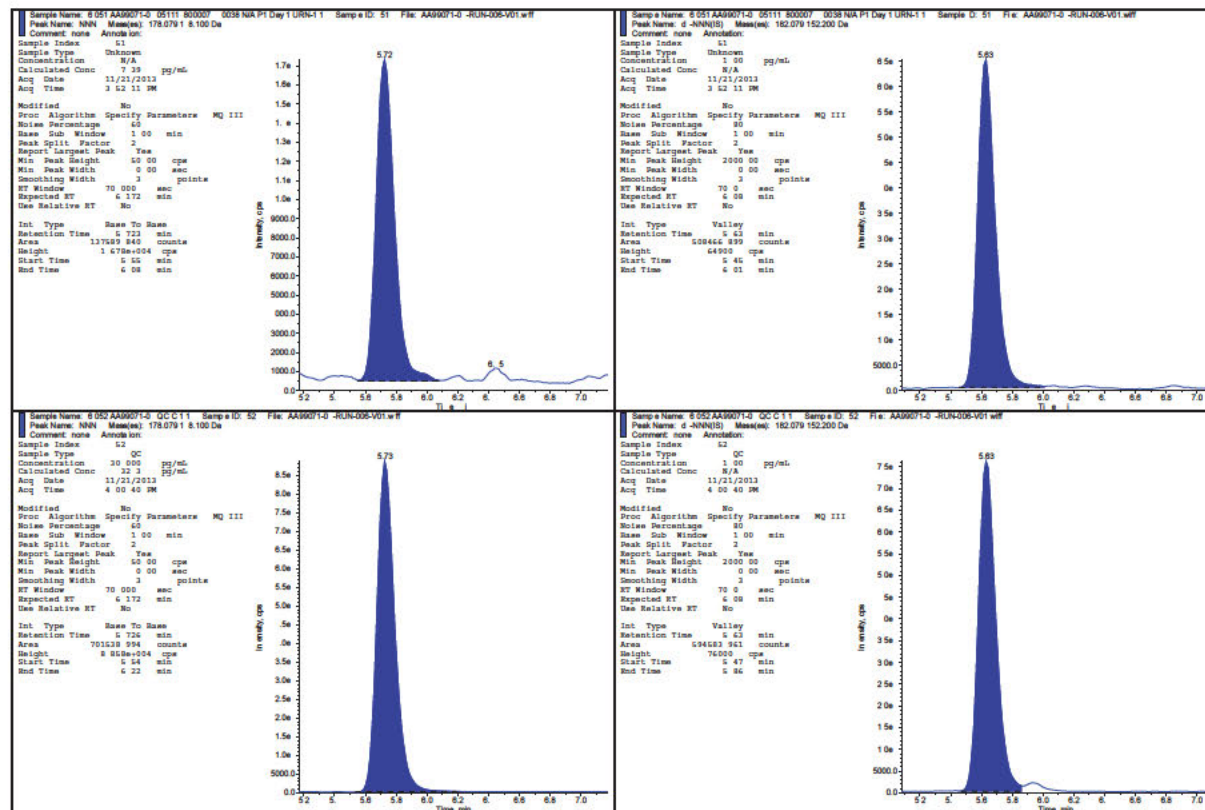


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Celcorion Study AA99071-04



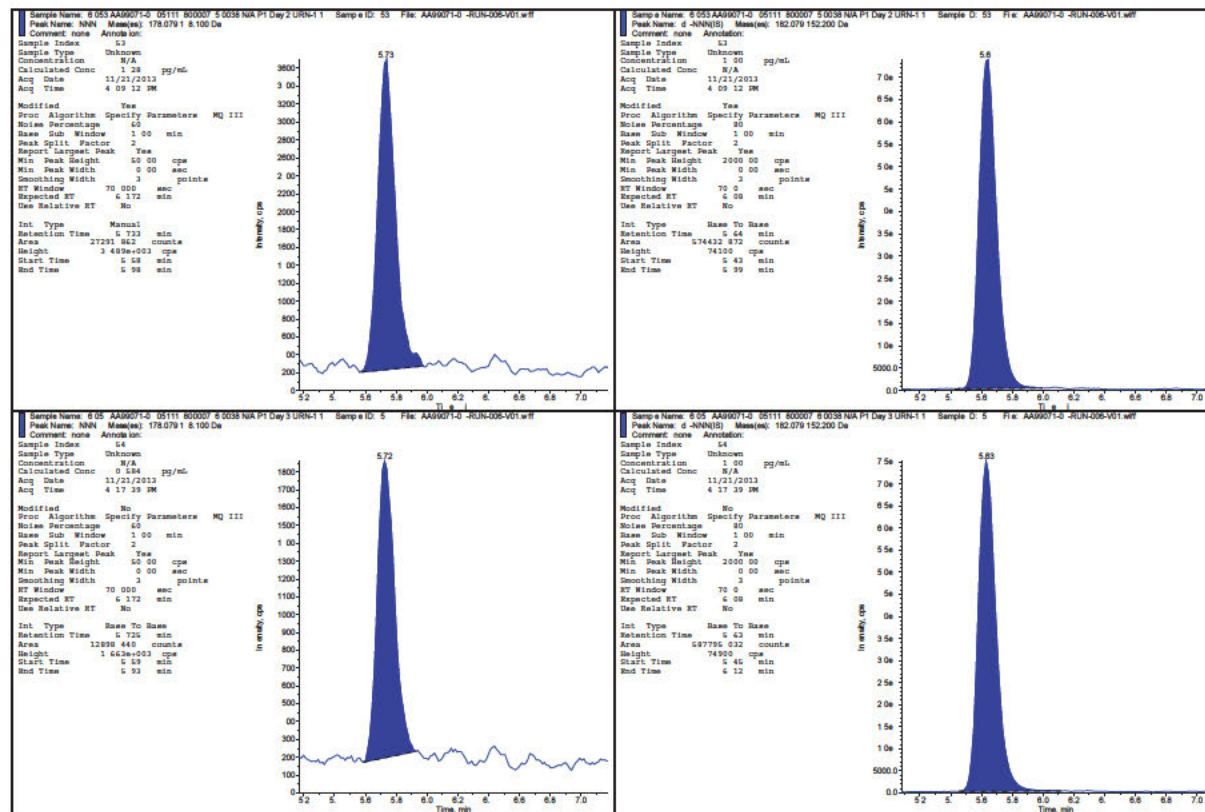


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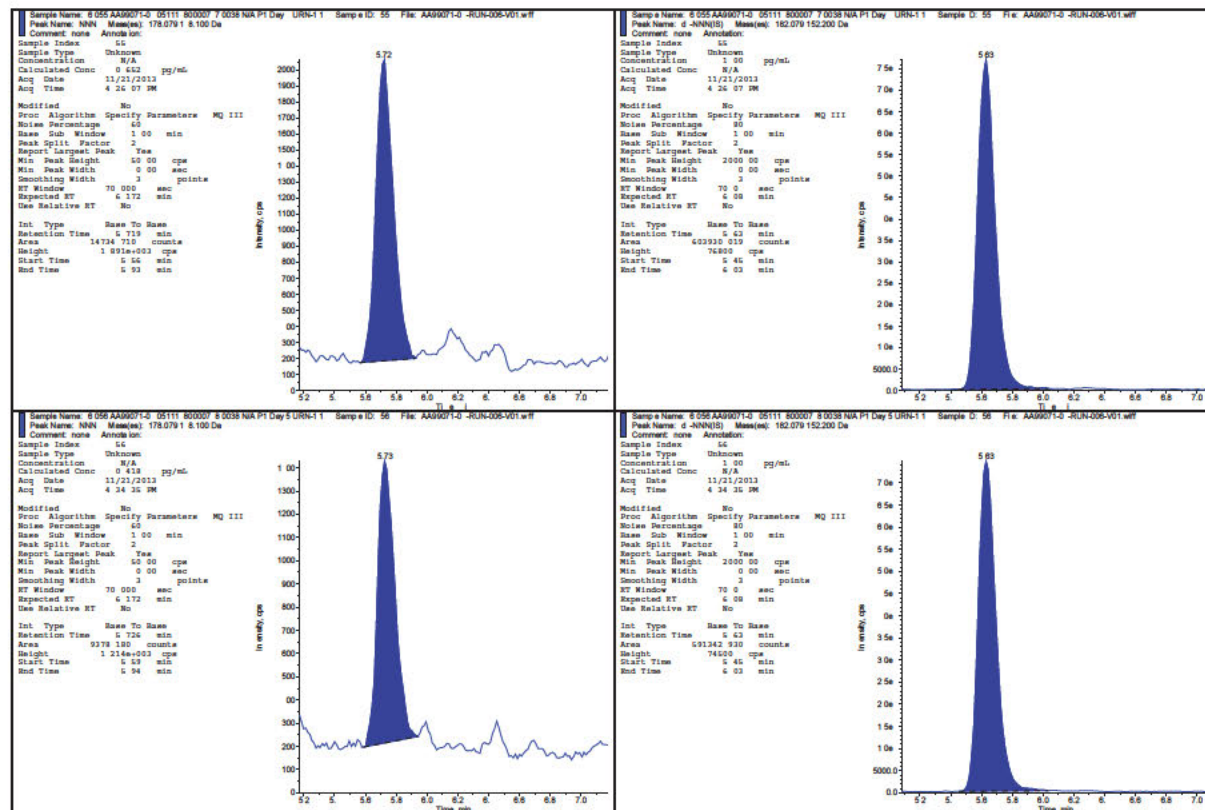


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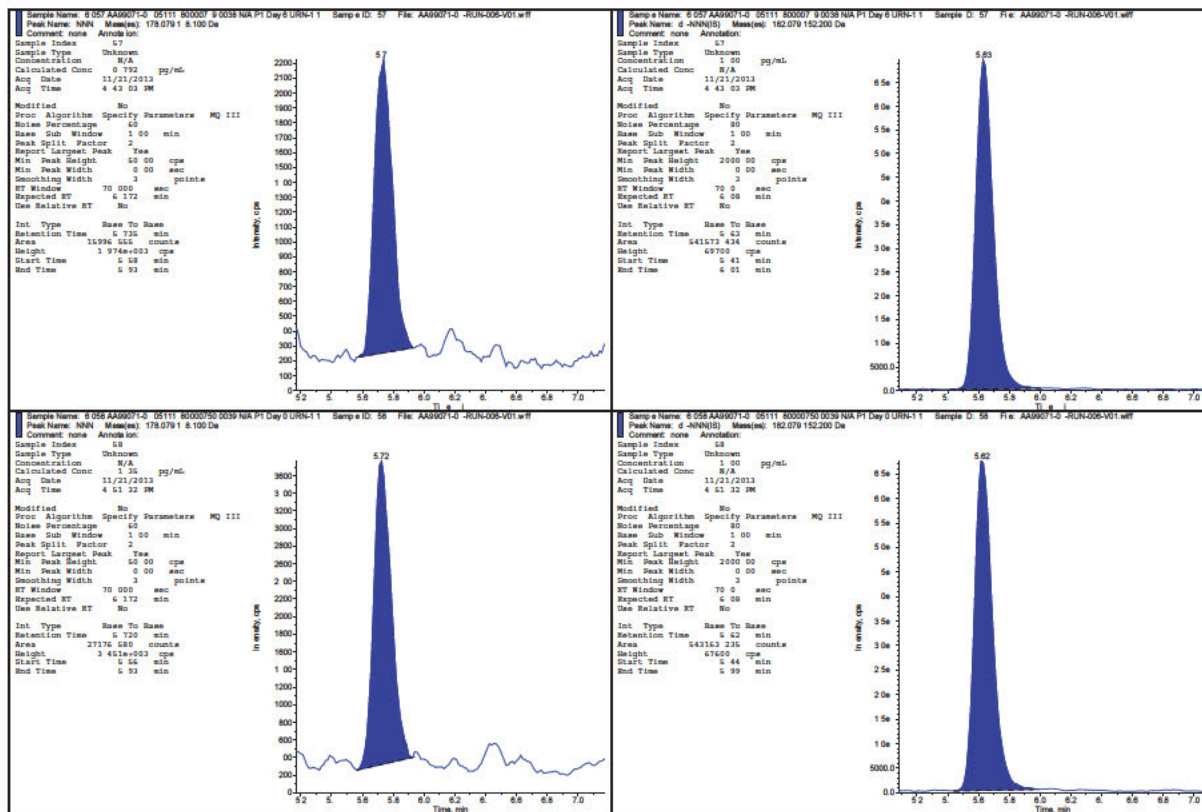


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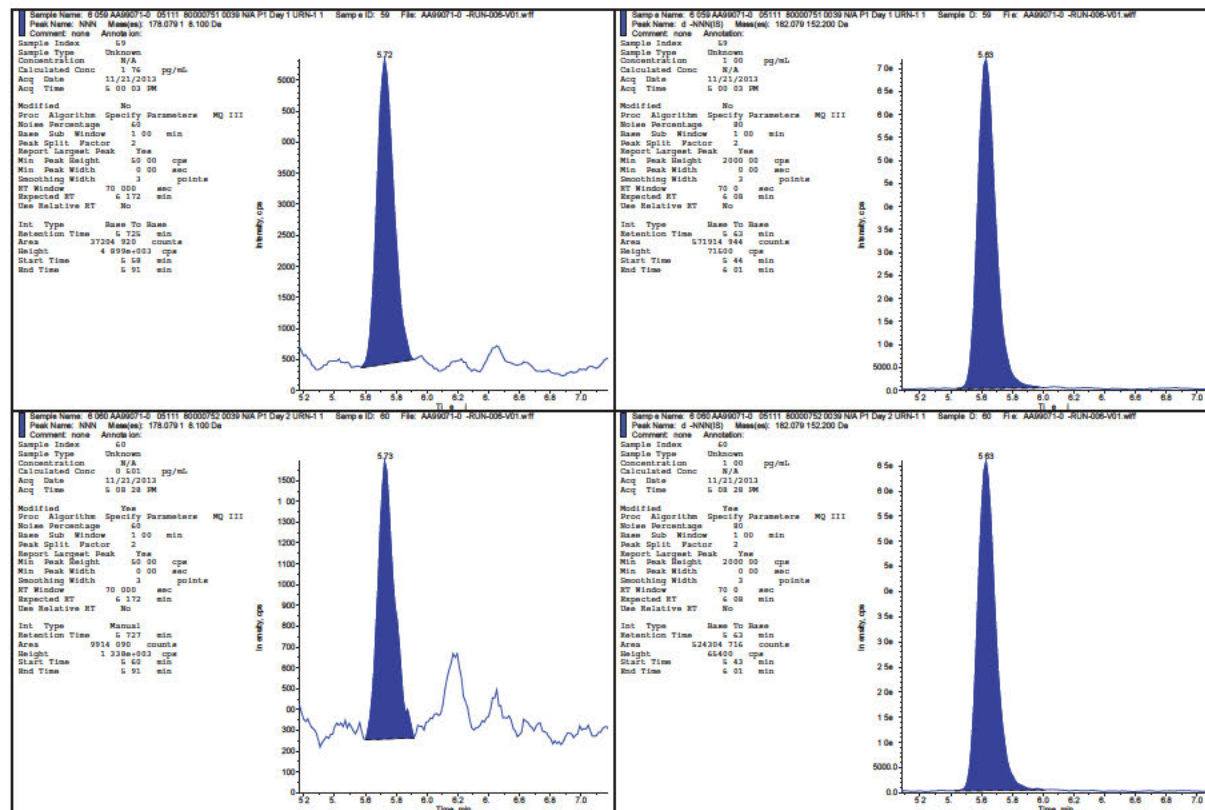


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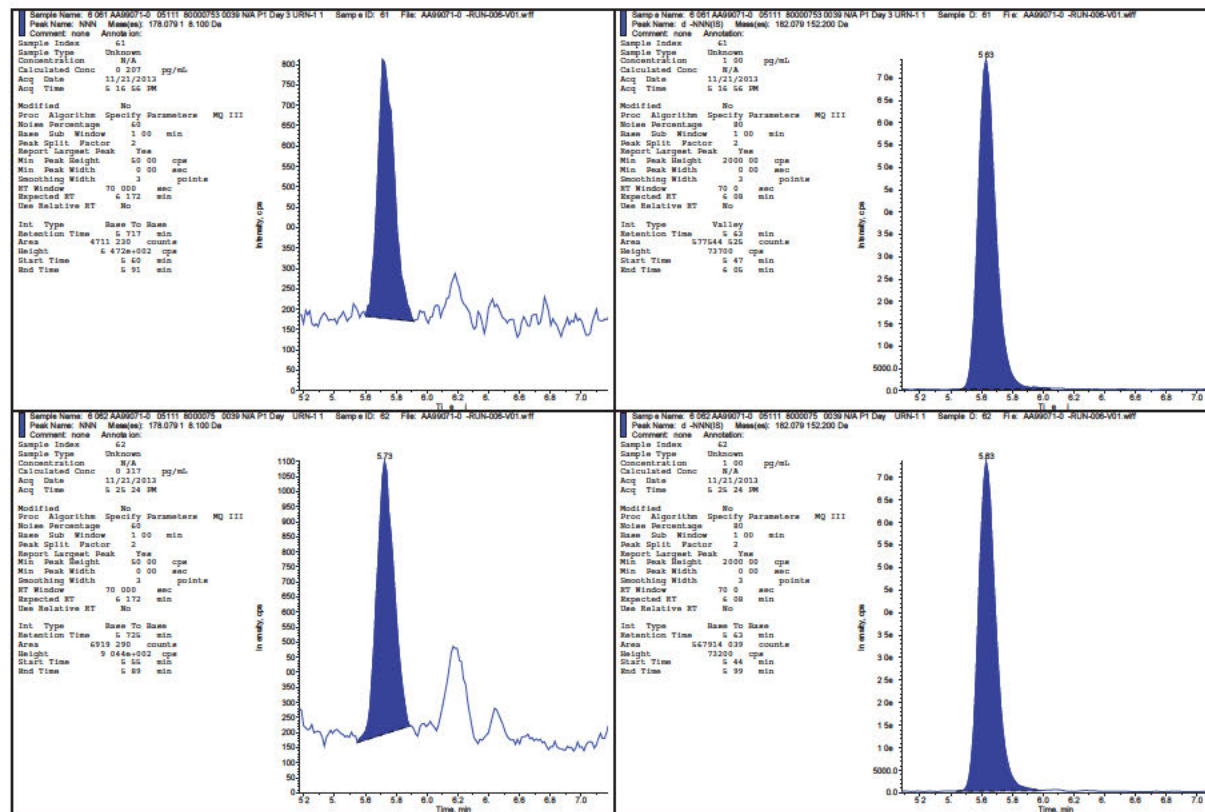


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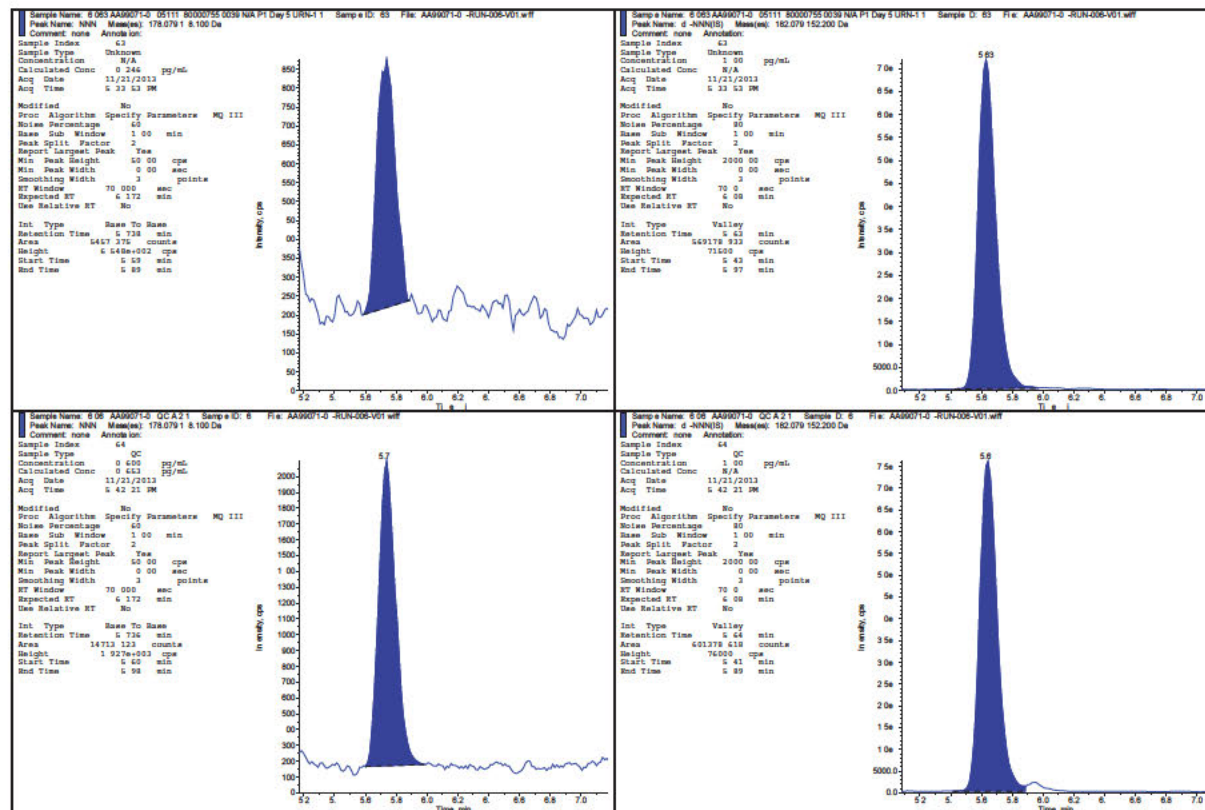


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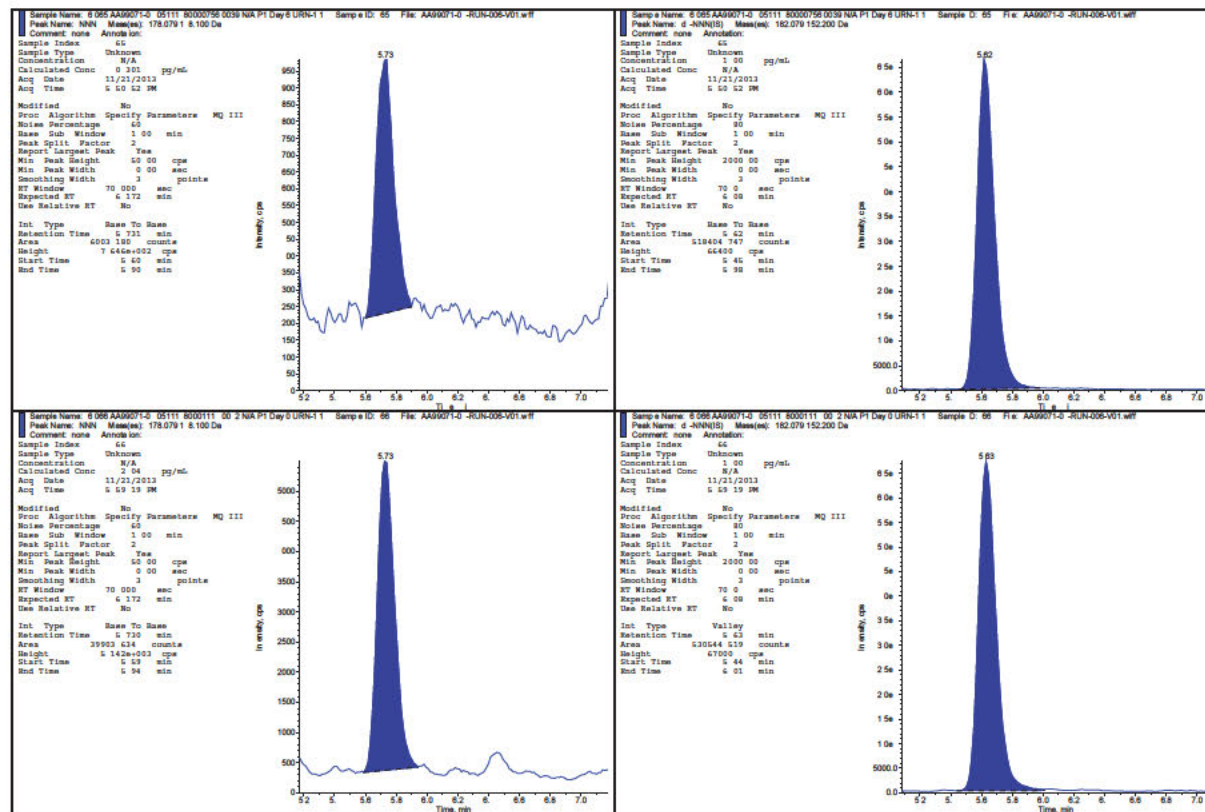


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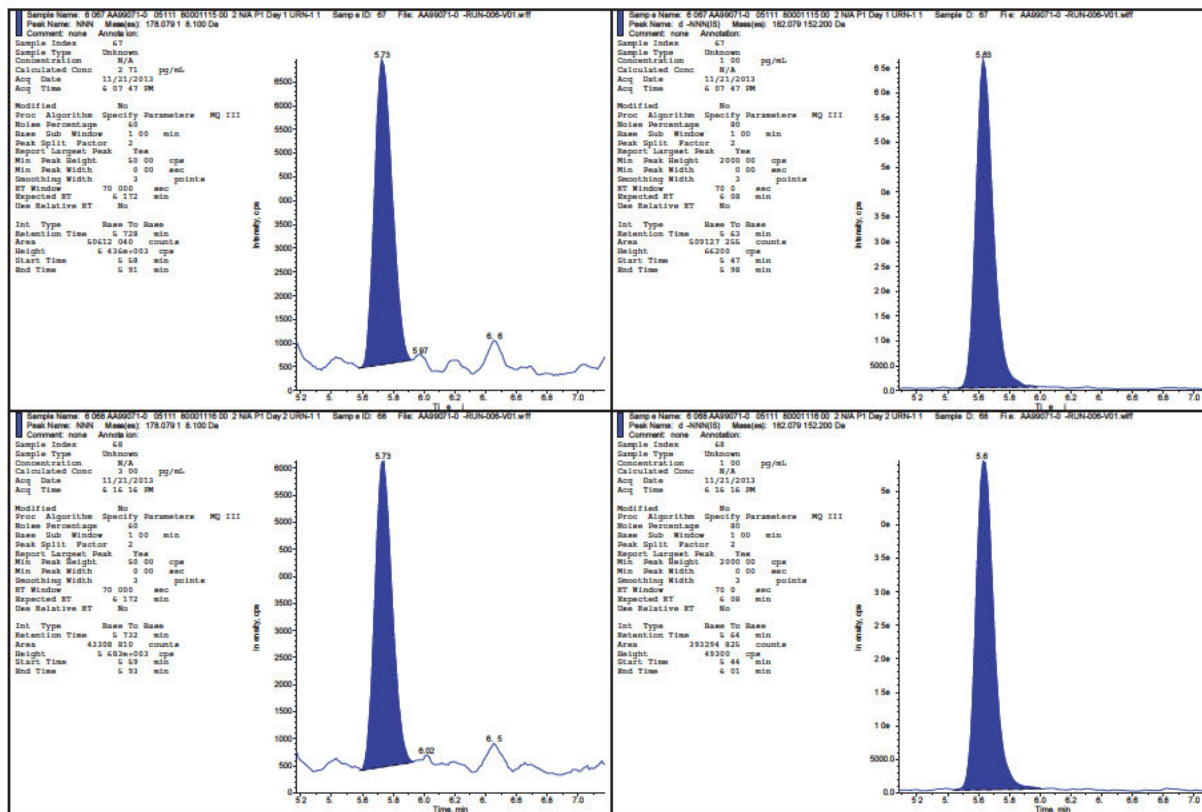


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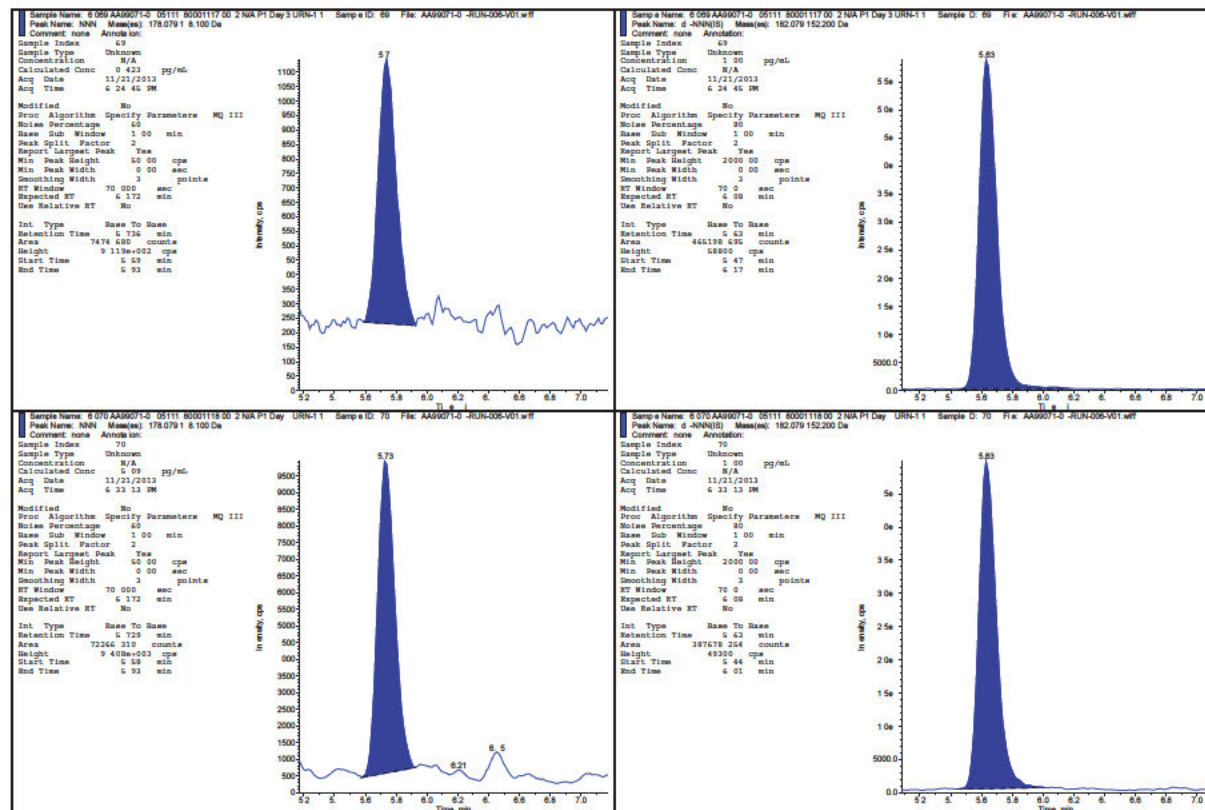


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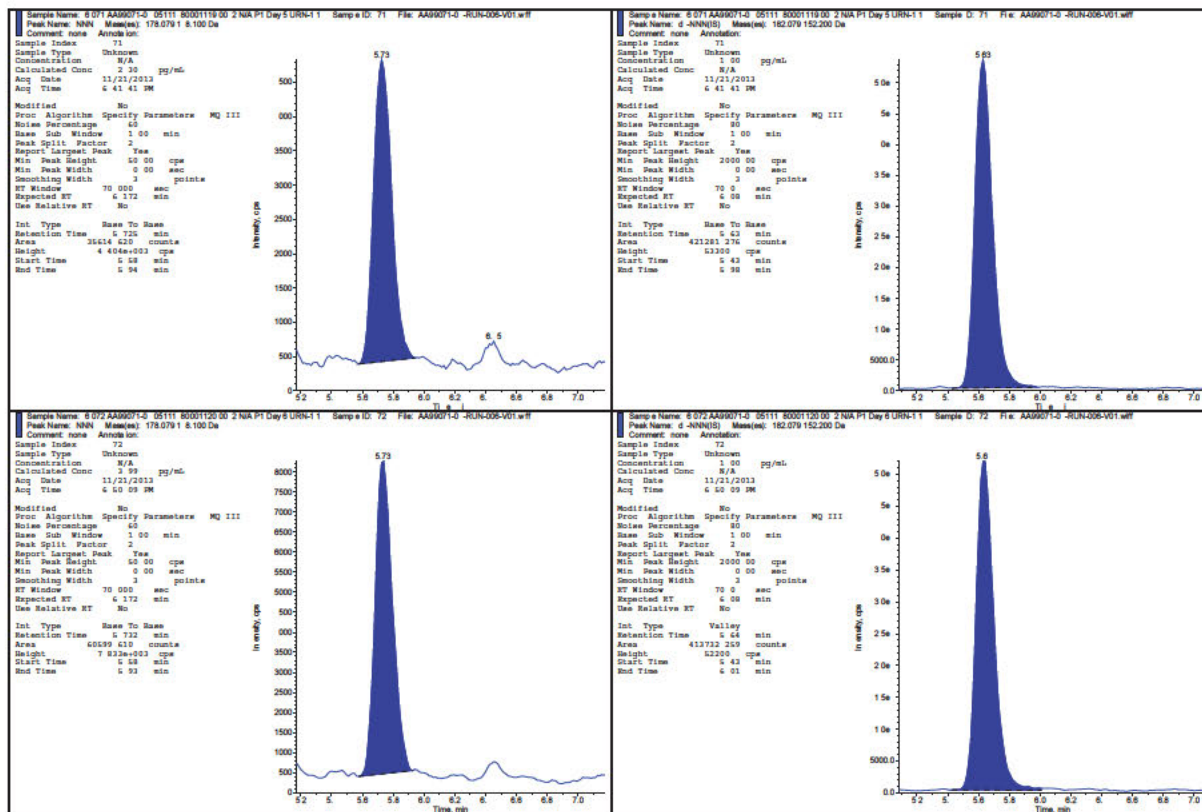


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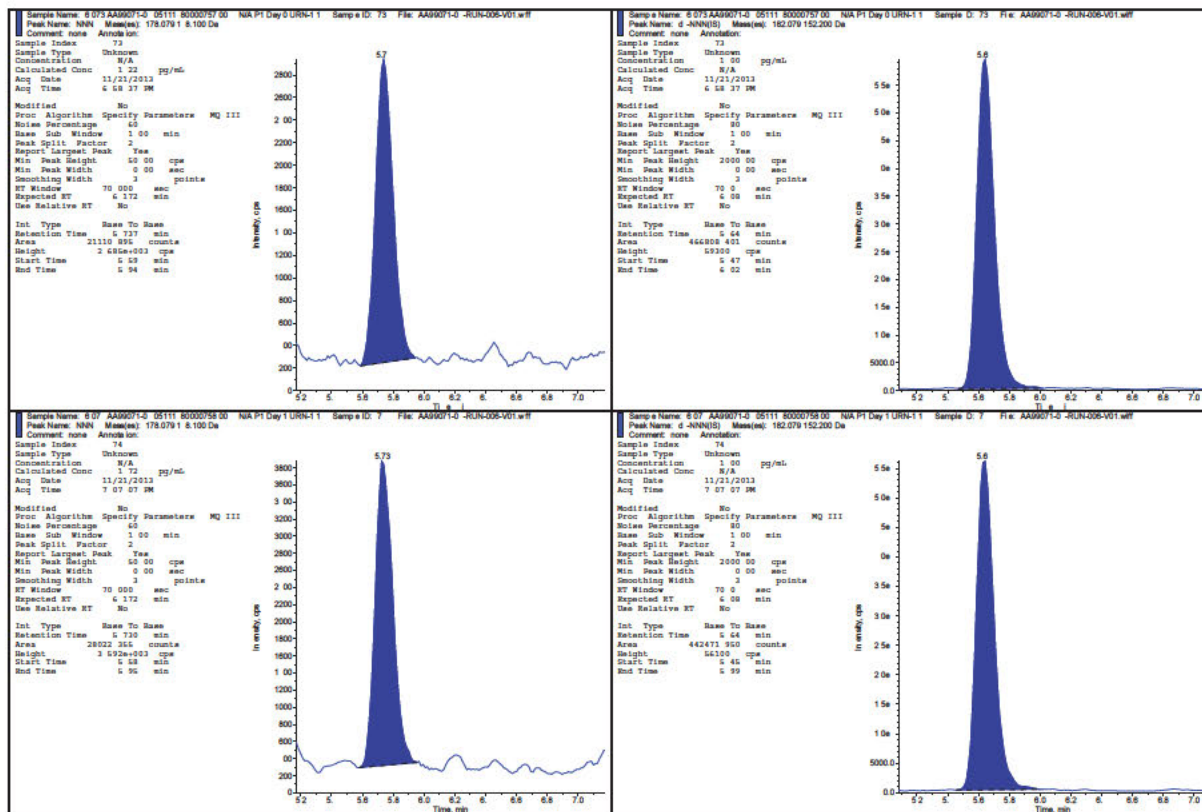


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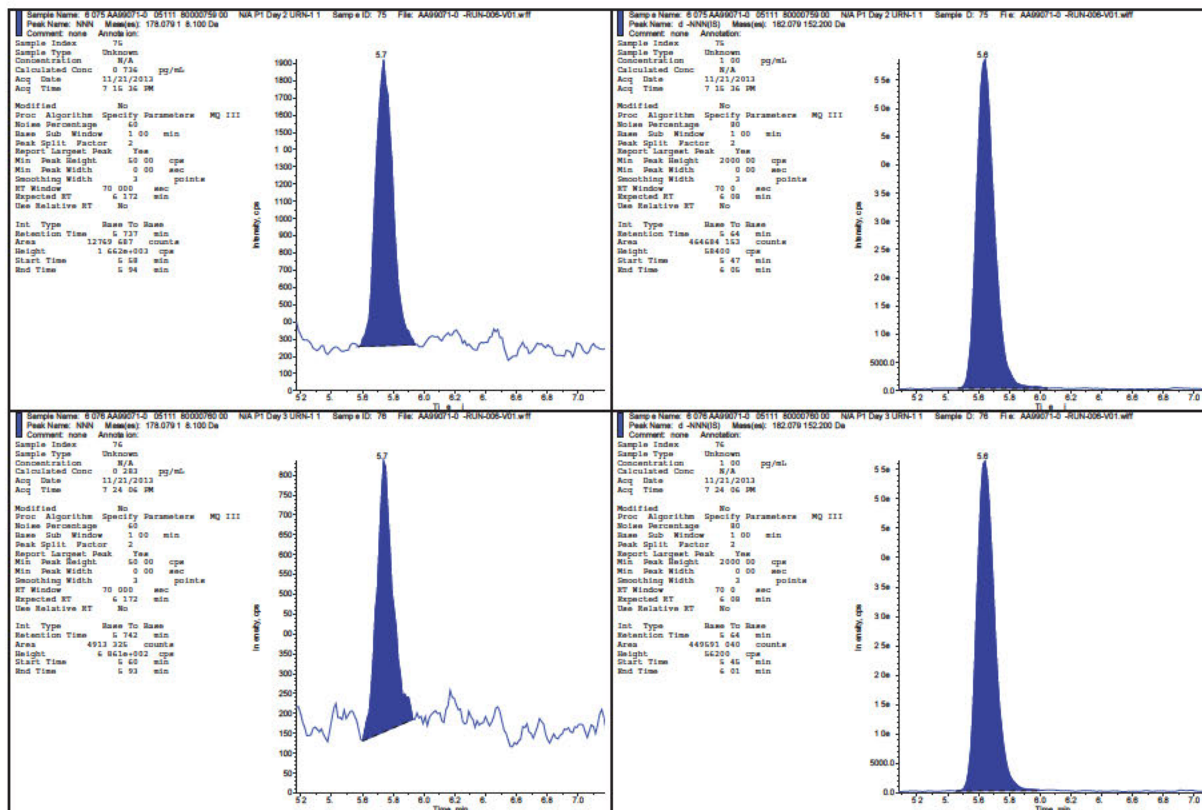


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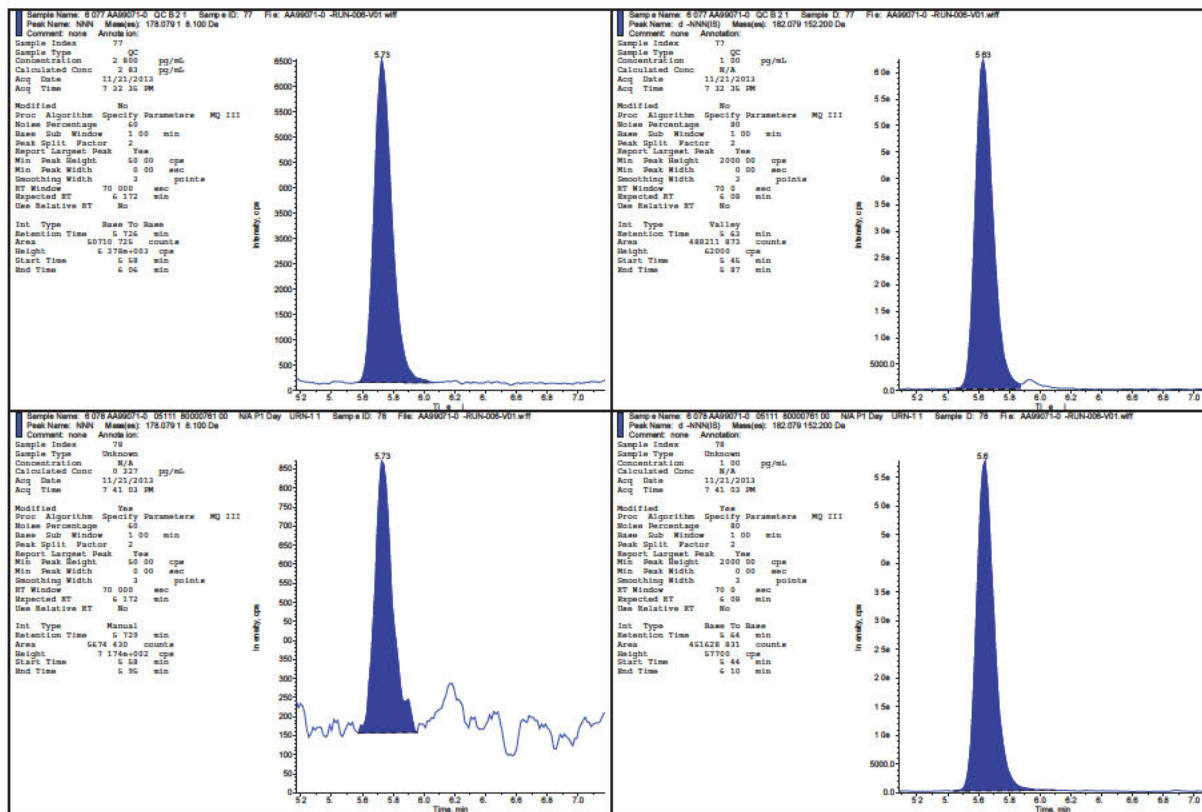


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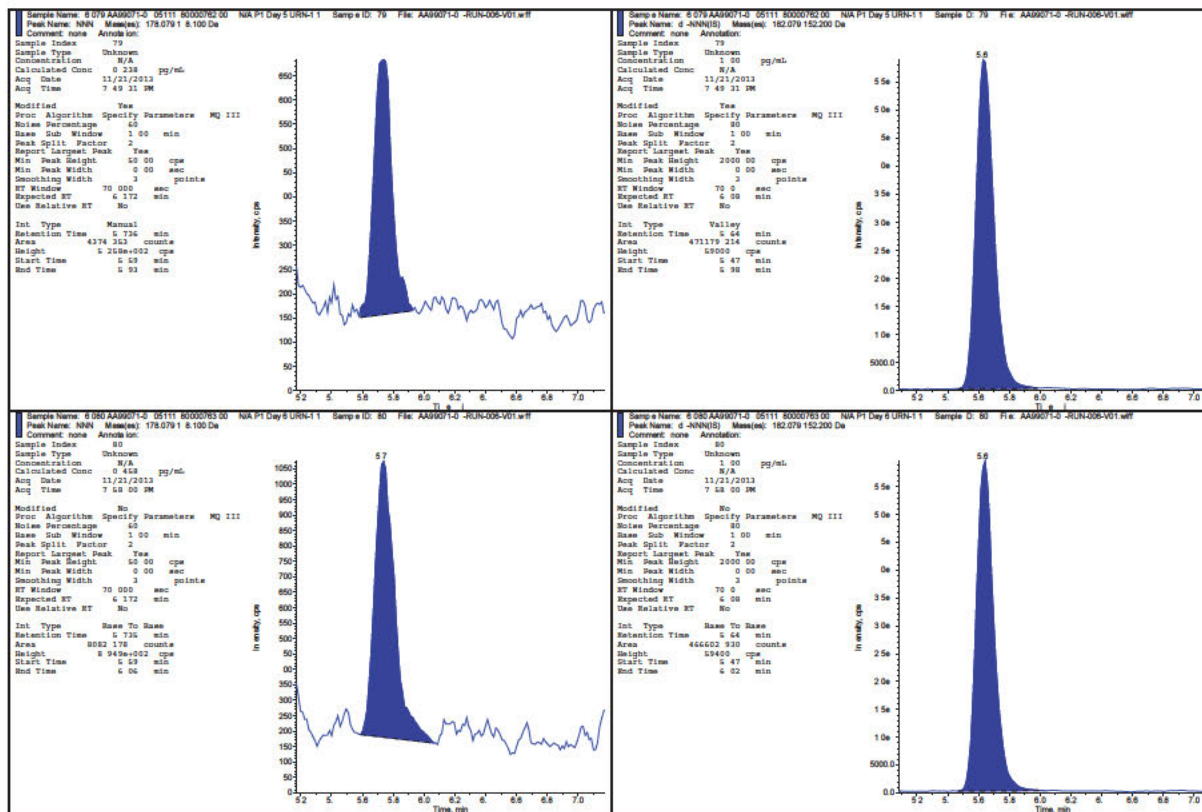


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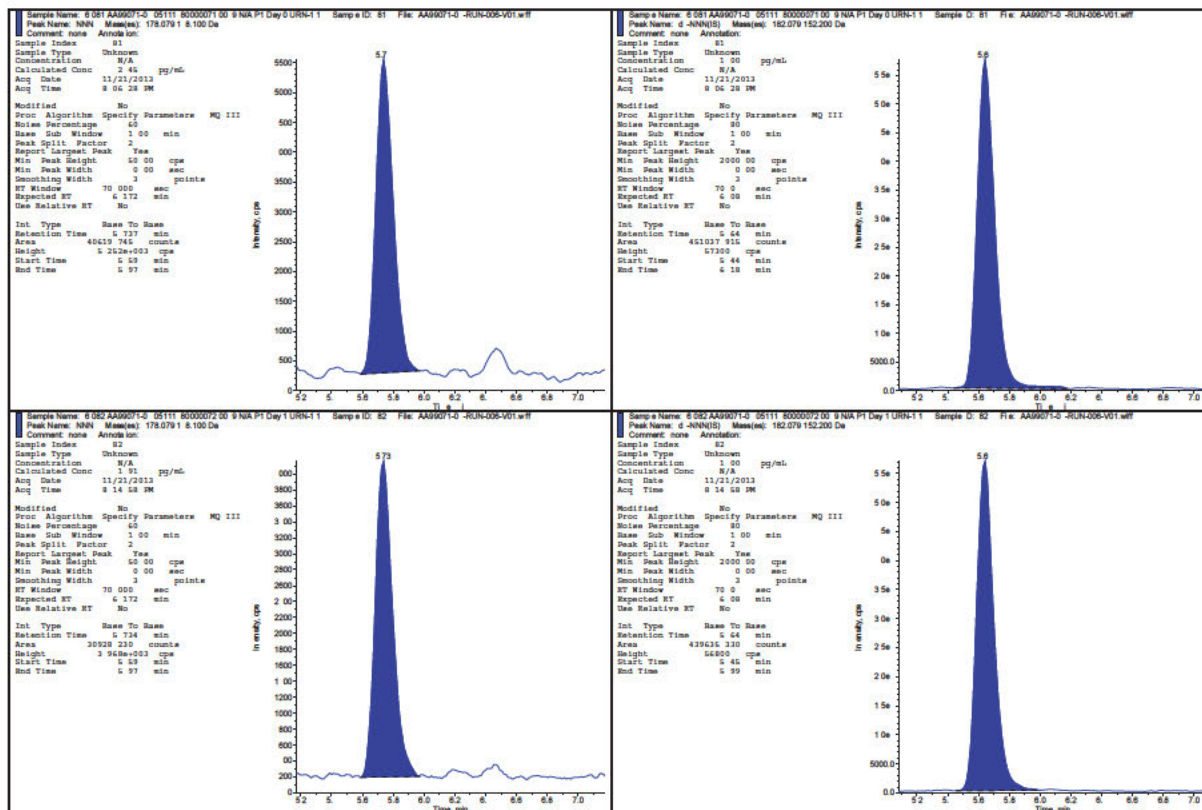


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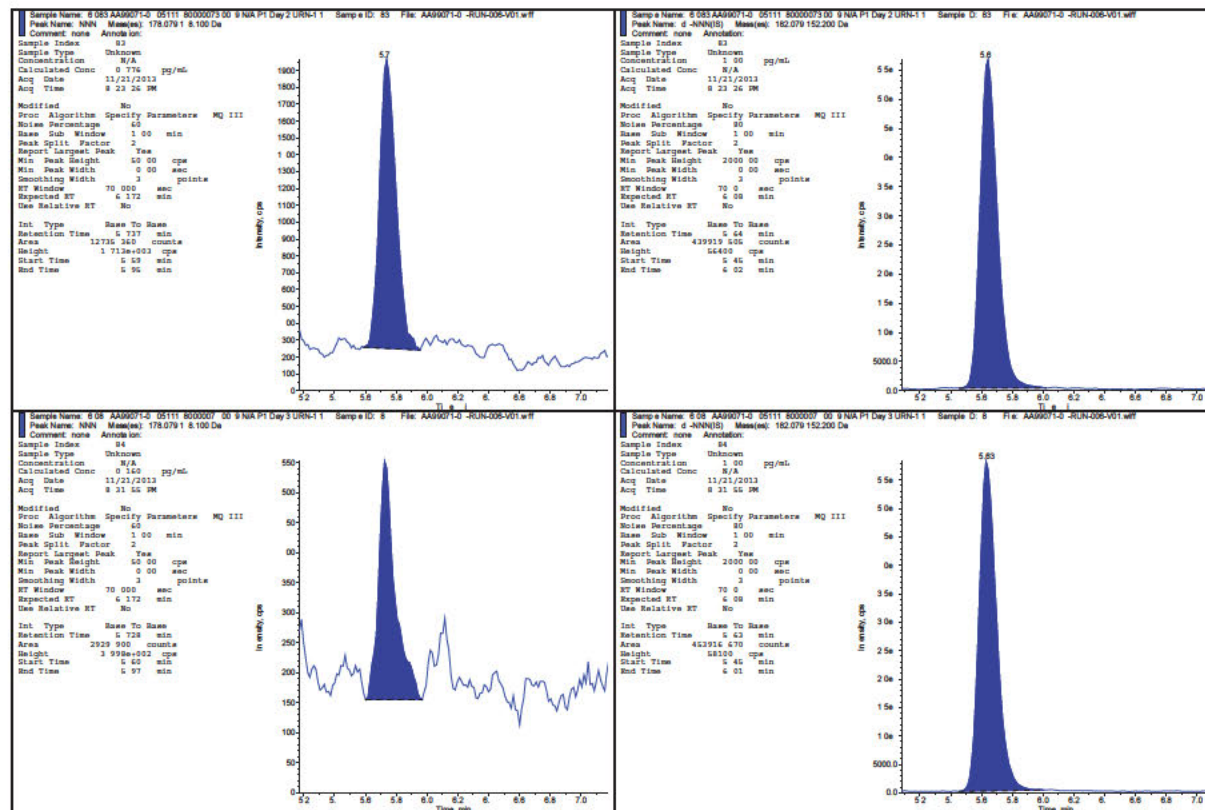


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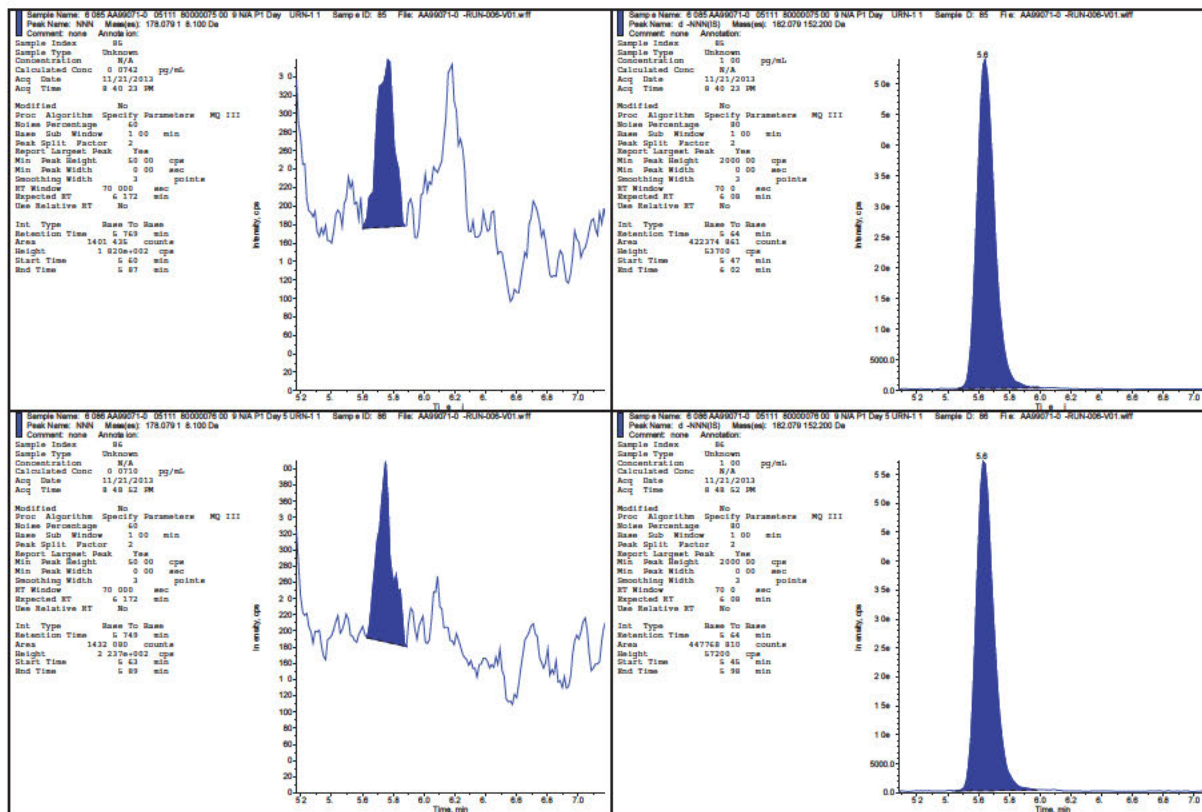


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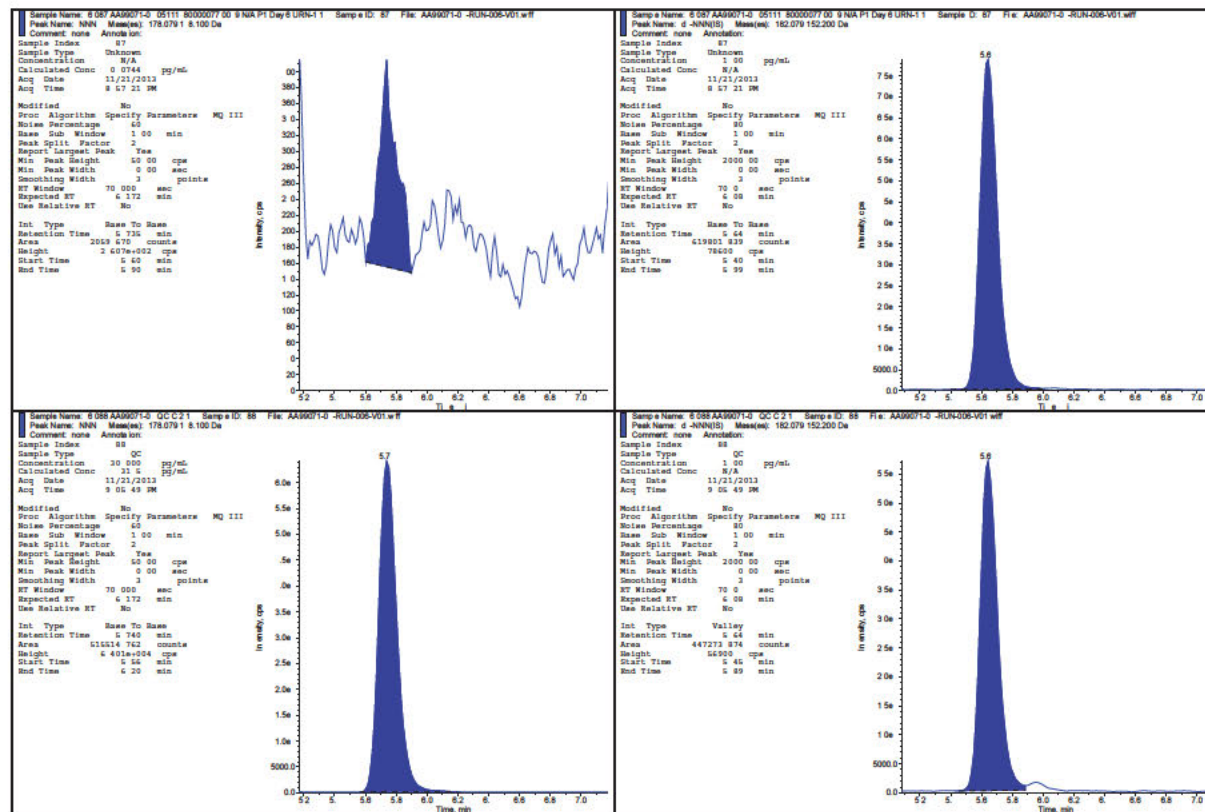


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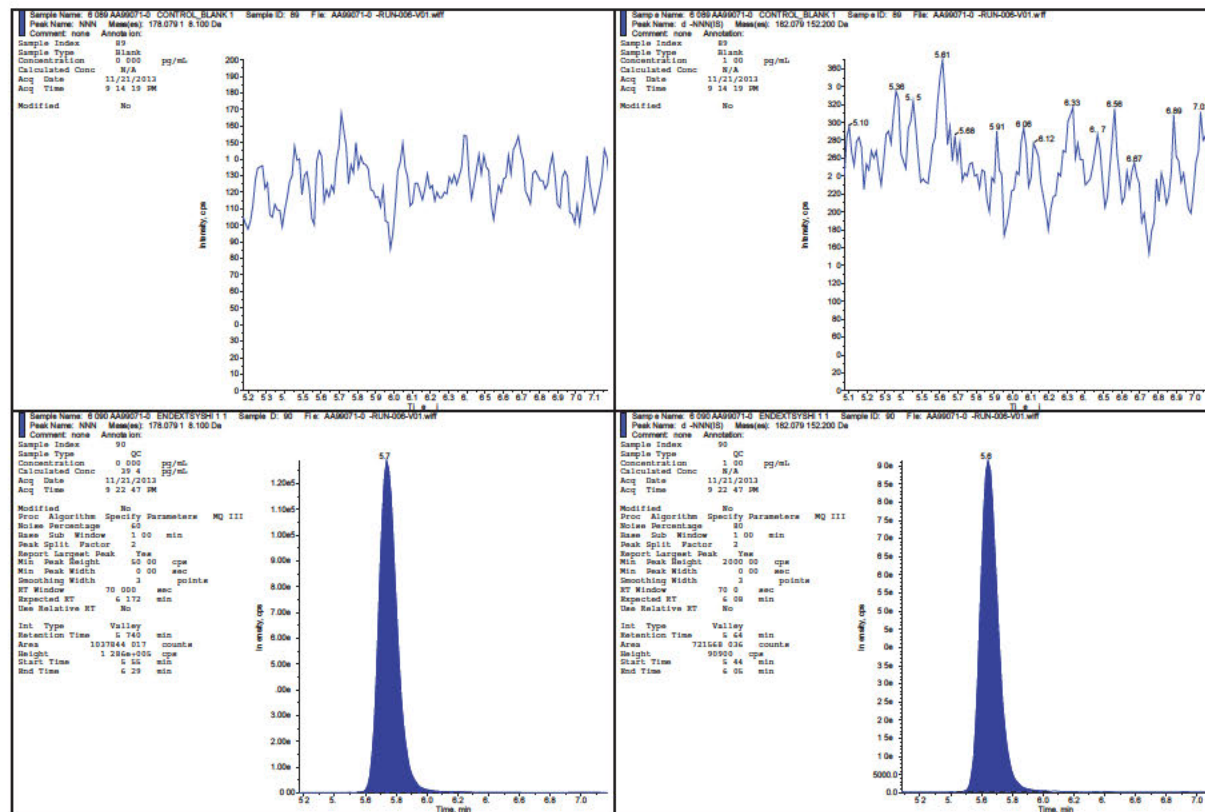


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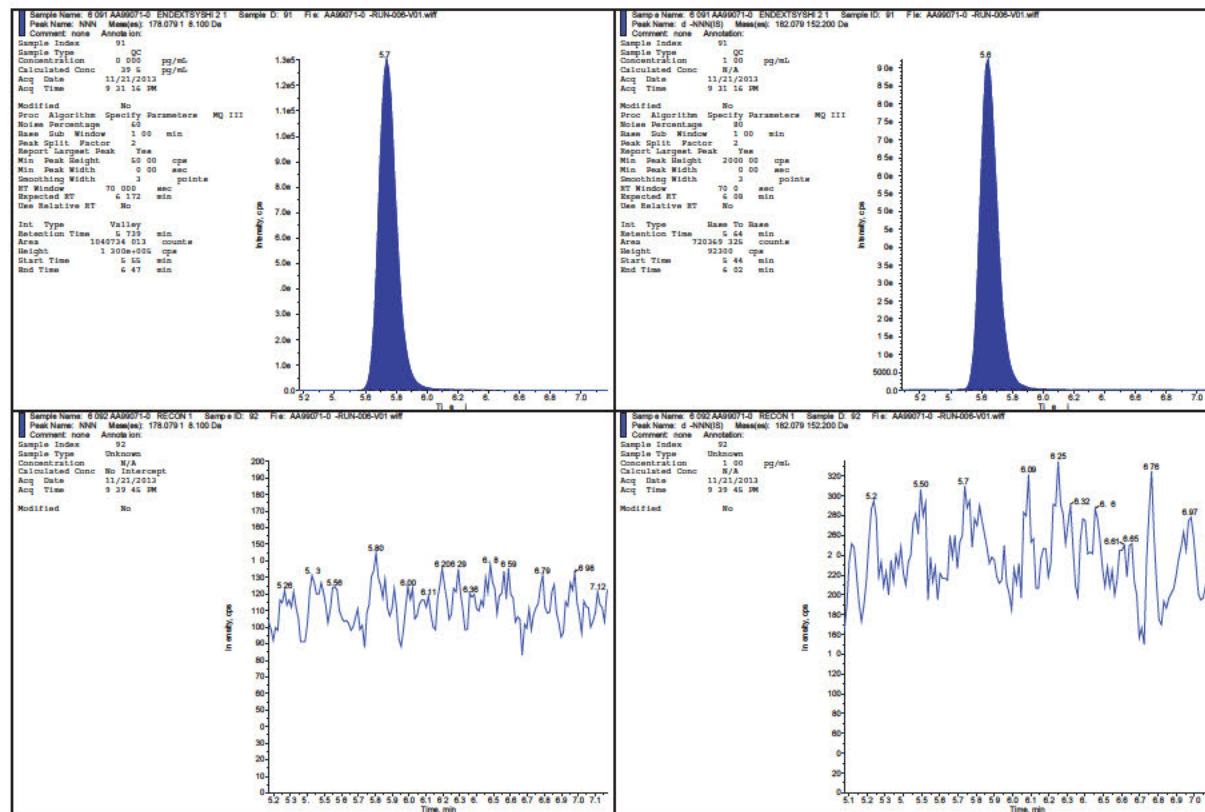


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