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Re: For Your Information Submission:

The enclosed information is submitted on behalf of Dow Corning Corporation, Midland, Michigan, 48686-0994, on a For-Your-Information (FYI) basis as a follow-up to submissions made concerning decamethylcyclopentasiloxane (DMCPS), which chemical substance was the subject of a health and safety data rule issued under Section 8(d) of the Toxic Substances Control Act (TSCA) and with an effective date of June 14, 1993 (sunset date June 30, 1998), as codified at 40 CFR 716 (Health and Safety Data Reporting). The information presented in this submission was generated as part of our Siloxane Research Program. This program was the subject of a memorandum of understanding, dated April 9, 1996, between Dow Corning and EPA.

Listed Chemical Substance:

541-02-6 Decamethylcyclopentasiloxane (DMCPS, D_5)

Final Study Report:

Non-Regulated Study: Human Dermal Absorption of Decamethylcyclopentasiloxane (D_5)

Dow Corning Corporation
2002-I0000-51781
June 21, 2002

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For purposes of this TSCA For-Your-Information (FYI) submission, the general INTERNAL designation on the attached health and safety report is waived by Dow Corning.

If you require further information regarding this submission, please contact Michael Thelen, Manager of U.S. EPA Regulatory Affairs, at 989-496-4168 or at the address provided herein.

Sincerely,

Kathleen P Plotzke

Kathleen P. Plotzke
Director, Health and Environmental Sciences
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TECHNICAL REPORT

Report No: 2002-I0000-51781

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Date: June 21, 2002

Title: Non-Regulated Study: Human Dermal Absorption of Decamethylcyclopentasiloxane (D5)

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GLP Compliance Statement: The work described in this report was carried out the best available scientific methodology, and procedures were followed to assure accurate, high quality results. However, this non-regulated study was ***not*** conducted to meet all of the requirements described in Good Laboratory Practices Regulations such as those documented in the Federal Register 40 CFR Part 792.

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FINAL REPORT – JUNE 2002

HUMAN DERMAL ABSORPTION OF DECAMETHYLCYCLOPENTASILOXANE (D5) (2000-I0000-49147)

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ARCHIVAL OF RESEARCH RECORDS

All records resulting from this study will be retained by the Pulmonary Unit of the Department of Medicine, University of Rochester Medical Center, Rochester, New York 14642, for a minimum of 5 years after acceptance of the Final Report or transferred to the sponsor upon written request. Good clinical laboratory procedures were used, i.e. Standard Operating Procedures for all technical procedures were followed.

R John Looney 6/21/02

R. John Looney, M.D., Principal Investigator **Date**

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ABSTRACT

Humans are regularly exposed to many commercial and consumer products that contain siloxanes. We investigated dermal exposure to decamethylcyclopentasiloxane (D_5). Three normal male volunteers had 1.4 grams of C^{13}-labeled D_5 applied in a divided dose to each axilla, while 3 women had 1.0 gram applied. By using this cold isotope as a label, D_5 absorbed from the axilla can be differentiated from D_5 from other sources, e.g. absorbed during normal use of consumer products containing D_5 as an ingredient, or contamination of the sample with D_5 generated from silicone gaskets in the analytical equipment. Blood samples were obtained prior to exposure and at ½, 1, 2, 4, and 6 hours after application. Exhaled air samples were obtained prior to exposure and at 15, 30, 45, 60, 75, 90, 105, 120, 240 and 360 minutes and 24 hours after application. D_5 levels were significantly elevated above baseline in blood, plasma, and in exhaled air at all time points after application. The highest average level in plasma was 1.2 ng D_5/gm plasma, at 60 minutes; the highest average level in exhaled air was 0.64 ng D_5/mL air, at 30 minutes. D_5 levels did not differ significantly between male and female volunteers.

INTRODUCTION

The University of Rochester, in collaboration with the Dow Corning Corporation, has undertaken a research program to study the pharmacokinetics, metabolism, and immune and clinical effects of siloxanes in humans delivered by the respiratory, dermal, and gastrointestinal routes.

Silicones make up a class of synthetic silicon-containing compounds characterized by alternating atoms of silicon and oxygen. Some silicones, including D_5, have been used in a variety of consumer products. Exposure to D_5 occurs daily in 200 million individuals in the general population and hundreds of individuals in the workplace (SRI International, 1992; Wenninger and McEwen, 1995). In this Final Report, we are providing data on blood, exhaled air, and plasma concentrations of D_5 after dermal exposures of 6 human volunteers conducted in our laboratories (12/20/00 to 3/29/01).

BACKGROUND

The safety of silicones was triggered by case reports of autoimmune disease in women with breast implants. Epidemiological studies have failed to establish an association between silicone breast implants and autoimmune disease (Hochber and Perlmutter, 1995; Perkins, et al. 1995; and Wang, 1996).

Experimental animal work at Dow Corning has found biological activity associated with the adaptive effects of D_5, e.g. increased liver size and induction of P450 enzymes (McKim, et al. 1998). The pattern of enzyme induction is similar to that seen with phenobarbital.

Dermal application of silicones in personal care products represents a major route of exposure. The semi-volatile cyclosiloxane D_5 is often a component in anti-perspirants. A typical male using a solid (or stick) roll-on anti-perspirant applies approximately 1.29 grams of the anti-perspirant formulation application; a typical female applies 0.65 grams/application (Thelen, 1998). This difference in applied dose relates mainly to the difference in the total area of the axilla, 120 cm^2 in men and 61 cm^2 in women. The percentage of D_5 in a stick anti-perspirant is approximately 34% of the stick formulation. Therefore, men average 0.44 grams of D_5 per use and women 0.22 grams per use of a stick anti-perspirant. In vitro studies using human cadaver skin found approximately 0.04% dermal absorption of D_5 (McMahon, et al. 2000). Using this value would translate into approximately 0.18 milligrams of absorbed D_5 in males and 0.09 milligrams of absorbed D_5 in females.

OBJECTIVES

The principal objective of this study was to determine levels of D_5 in blood, plasma, and expired air of adult humans which simulated anti-perspirant use.

PERSONNEL

Mark J. Utell, M.D. - Program Principal Investigator, Professor of Medicine and Environmental Medicine

R. John Looney, M.D. - Principal Investigator; Associate Professor of Medicine and Environmental Medicine

Mark W. Frampton, M.D. - Associate Professor of Medicine and Environmental Medicine

Robert Gelein, M.S. - Associate in Environmental Medicine

Deborah Campbell - Research Associate, Immunology Lab

David Chalupa - Exposure Technical Associate, Environmental Medicine Lab

Paul E. Morrow, Ph.D. - Emeritus Professor of Environmental Medicine

Ellen Miles - Quality Assurance Officer; Technical Associate

Kathy Plotzke, Ph.D. - Dow Corning Corporation, Midland, MI

TEST MATERIAL

D_5 provided by Dow Corning was 98.570 % +/- 0.000 chemically pure by GC/FID analysis (Miller, 1998). The D_5 was 49.9% enriched with C^{13}, lot number 001018 and accession number 003027 (expires 4/18/2003).

EXPERIMENTAL PLAN

This study was approved by the Institutional Human Subjects Review Board of the University of Rochester, and informed consent was obtained from all volunteers (appendix A). Normal, healthy volunteers were exposed to either 1.4 or 1.0 grams (based on gender) of C^{13}-labeled D_5 by applying the compound to the axillae. The dose was split between axilla and applied one time while the subject was breathing from a clean air source. Samples of blood and air were collected and analyzed to determine the amount of D_5 absorbed and eliminated.

SUBJECT SELECTION AND SCREENING

Healthy, normal subjects were recruited from the Medical Center via bulletin boards and word of mouth. Volunteers were selected on the basis of good general health. Fertile female volunteers were tested to insure that they were not pregnant and were required to take birth control pills while in the study. Volunteers were asked to apply neither anti-perspirant nor deodorant on the day of exposure.

EXPOSURE PROTOCOL

Subjects were screened prior to the day of exposure. Overall state of health was evaluated, and medications were noted. Female subjects were required to have a negative urine pregnancy test before exposure and asked not to shave their underarms for several days prior to the study. The test material was weighed in two separate syringes for a total weight of 1.4 grams for male subjects and 1.0 gram for female subjects. The subject was positioned on their side so that an indentation was formed in their axillae. The contents of one syringe of test material was placed over the entire indented area of the axillae and allowed to adsorb while the subject was breathing from a clean air source. This process was repeated for the other side within approximately 5 minutes. (However, the exact time was not recorded.) The used syringes were weighed after application. The weight was subtracted from the weight of the syringe containing the D_5 to obtain the actual dose applied.

BLOOD, AIR, AND URINE SAMPLING

Blood samples were obtained prior to exposure and at ½, 1, 2, 4, and 6 hours after application. Exhaled air samples were obtained prior to exposure and at 15, 30, 45, 60, 75, 90, 105, 120, 240 and 360 minutes and 24 hours after application. Blood samples were collected in heparinized 10 ml vacutainers, mixed gently, and placed on ice. The heparinized blood was separated into two tubes, one of which was centrifuged to separate the plasma from the cells. Air samples were collected via a closed system. At baseline and 24 hours, forty liters of air, measured using a dry test meter, was inspired from a reservoir filled with clean air and expired in specially adapted 40 liter Tedlar®

bags with a Hans Rudolph non-rebreathing valve. At 15, 30, 45, 60, 75, 90, 105, 120, 240 and 360 minutes, 5-liters of air were collected into 5-liter Tedlar® bags. The blood and the bag with its valve were sent to the pulmonary lab for analysis. Urine was collected by the subject in an opaque urine specimen container for 24 hours following exposure. The entire container was frozen at -20° C for possible future analysis.

Because the urine pregnancy test and baseline clinical pathology evaluations were performed by the Clinical Laboratory of the University of Rochester, all specimens required the subject's name for identification. On other documents, the samples were referred to by the specimen identification code.

BLOOD ANALYSIS FOR D_5

Plasma was obtained from two 2 ml blood aliquots. The blood was spun at 5000 rpm for 5 minutes in a refrigerated (40°C) microfuge. The plasma was removed with a Pasteur pipette. D_5 in whole blood and plasma was extracted from 1 g samples with 3 g of tetrahydrofuran (containing the internal standard M4Q) and analyzed by gas chromatography and mass spectroscopy as previously described (Varaprath, et al. 1998; Varaprath, et al. 2000) except that an ion at m/z = 360 was monitored. The C13-D5/M4Q concentration ratio of the experimental samples was determined from the regression analysis of known C13-D5/M4Q standards. The methods used to measure D_5 levels in blood and plasma are based on the statistical comparison of a measured value (area ratio) to the intercept of the calibration curve, which provides the appropriate background level. This method uses as the limit the intercept plus a multiple of its standard deviation, as determined from the regression analysis. The standard convention is to use a multiple of three for the limit of detection (LOD) and a multiple of 10 for the limit of quantification (LOQ) (United States Pharmacopoeia, 1995).

AIR ANALYSIS FOR D_5

The Tedlar® bags filled with exhaled air are pulled through an absorber system at a constant low flow rate to collect the D_5 vapor. The D_5 is trapped onto Tenex-TA ®

(20/35 mesh). The collection efficiency on the Tenax tubes is further enhanced by chilling the tubes to just above freezing temperature during collection. The overall collection efficiency of D_5 using this method is greater than 96%. These tubes are then desorbed using pure hexane. The samples were then analyzed by gas chromatography and mass spectroscopy as with blood extracts (Varaprath, et al. 2000). In contrast to the exhaled air measurements with the D_4 dermal study, the D_5 analysis used 5-liter sample bags rather than 40-liter sample bags (Looney, et al. 2000).

STATISTICS

Means, standard deviations, and graphing used Microsoft Excel 2000. Differences were evaluated for significance using the Student's t-test for individuals or groups.

RESULTS

The volunteers ranged from 26 to 42 years of age. Three were female and three were male (Table I). All 6 subjects completed the study.

The limit of detection (LOD) and limit of quantification (LOQ) for ^{13}C-labeled D_5 were the same in blood and plasma samples, and ranged from 0.020 to 0.035 ng/gm for the LOD and 0.047 to 0.108 for the LOQ (Table II). The LOD and LOQ for exhaled air samples ranged from 0.00025 ng/mL to 0.00048 ng/mL and from 0.00084 ng/mL to 0.00134 ng/mL.

A summary of blood, plasma and exhaled levels is shown in Table III. The data on blood, plasma, and exhaled levels of D_5 are shown graphically in Figure 1. Prior to exposure, no subject had a detectable level of ^{13}C-D_5 in plasma or blood. At 0.5, 1, 2, 4 and 6 hr after application, C^{13}-D_5 levels above the LOQ were detected in blood and plasma in all subjects. Peak D_5 levels for all but one subject (subject #2 whose peak was at 2 hr.) were found at one hour and ranged from 0.61 to 1.41 ng/gm for blood and

0.77 to 2.00 ng/gm for plasma. Mean plasma levels of D_5 were similar in men and women (Figure 2).

At 15, 40, 45, 60, 75, 90, 105, 120, 240, 360 and 1440 minutes D_5 in exhaled air was above the LOQ (Figure 3). The peak D_5 level in exhaled air for different individuals occurred at from 15 to 60 minutes and ranged from 0.347 to 2.315 ng/mL (Table III).

Levels of D_5 in exhaled air tended to be higher in males (Figure 4). The mean peak D_5 level in exhaled air was 0.491 ng/mL (S.D. 0.193) for women and 1.331 ng/mL (S.D. 0.877) for men. (Table III). These differences were not statistically significant.

Plasma and blood levels of D_5 were highly correlated ($r = 0.977$, $p < 0.001$) (Figure 5). Exhaled air levels generally reflected blood and plasma levels but the correlation was not as high ($r = 0.562$, $p = 0.001$ for plasma D_5 vs. exhaled air D_5) (Figure 6). Moreover, the ratio of plasma to exhaled air D_5 was not constant, but increased from 1.4 at 30 minutes to 26.0 at 360 minutes indicating that over time there was a change in the partitioning of D_5 between plasma and air in the lungs (Figure 7).

Individual data are tabulated in Appendix C.

DISCUSSION

Our data indicate that the use of ^{13}C-labeled D_5 increases the sensitivity of D_5 detection by decreasing background levels. This increased sensitivity allowed the demonstration of D_5 in blood, plasma and exhaled air after dermal application. Nevertheless, the plasma and blood levels of D_5 after dermal application were always quite low, i.e., less than 2 ng/gm of blood or plasma. With dermal application of 1.0 to 1.4 gm of D_5, average plasma D_5 levels were 1.22 ng/gm at 1 hr. and 0.61 ng/gm at 6 hr. post exposure.

These results with dermal exposure contrast with our previously conducted study of D_5 levels after a 1 hr. respiratory exposure to 10 ppm D_5. In these respiratory studies the peak plasma D_5 level was 52 ng/gm at 1 hr. and 10.6 ng/ml at 6 hr. post exposure (Utell, unpublished). Thus at early or late time points, systemic levels of D_5 appear to be at least 20 fold lower following dermal exposure compared to inhalation exposure under the given experimental conditions.

Our data on dermal absorption of D_5 was considerably more variable than the respiratory data. The method of application in the dermal study is also likely to be a source of variation as are the large differences in body weight. Repeated studies in the same individual(s) might ascertain the intra-individual reproducibility of D_5 dermal uptake.

The correlation between blood and plasma levels of D_5 at all time points was excellent. In contrast, the correlation between blood levels and exhaled air levels of D_5 was not as good. The explanation for this is suggested by the change in the ratio of D_5 in plasma to D_5 in exhaled air over time. Thus, it appears that plasma D_5 becomes less available to partition in air. One potential explanation would be the D_5, which is very lipophilic, becomes sequestered in plasma lipoproteins thus lowering the vapor pressure of D_5 as it travels through the lungs.

The baseline levels of D_5 in blood and plasma were below the LOD in all subjects. In contrast, the baseline levels of D_5 in exhaled air were above the LOD in all cases and above the LOQ in 4 of 6 subjects. Since D_5 in room air samples collected directly into the Tedlar® bags were below the LOD, the extremely low levels of D_5 in exhaled air at baseline probably represent contamination from the equipment used to collect the exhaled air.

ACKNOWLEDGEMENTS.

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Table I. Demographics and Dosage.

	Sex	Age (yrs)	Axilla Area (mm2)	Dose Applied (g)	Weight (lbs)
Subject #1	M	26	8364	1.3807	220
Subject #2	M	30	8011	1.3463	264
Subject #3	F	42	8954	0.90325	125
Subject #4	F	40	4241	0.9239	126
Subject #5	M	33	13430	1.2855	332
Subject #6	F	28	5164	0.9938	143

Table II. The Limit of Detection (LOD) and Limit of Quantification (LOQ).

	LOD (ng/gm)	LOQ (ng/gm)
Plasma or Blood		
Subject #1	0.032	0.106
Subject #2	0.027	0.091
Subject #3	0.031	0.075
Subject #4	0.02	0.047
Subject #5	0.02	0.058
Subject #6	0.035	0.108
Air	(ng/mL)*	(ng/mL)*
Subject #1	0.00030	0.00090
Subject #2	0.00039	0.00108
Subject #3	0.00025	0.00084
Subject #4	0.00048	0.00134
Subject #5	0.00031	0.00101
Subject #6	0.00026	0.00085

*Based on 5 liter bag sample

Table III. Blood, Plasma, and Exhaled Air Levels of C^{13}-D_5.

	Subject 1 M	Subject 2 M	Subject 3 F	Subject 4 F	Subject 5 M	Subject 6 F
Air (ng/mL)*						
0 hr.	0.00038	0.00065	0.00215	0.00300	0.00191	0.00228
0.25 hr	0.70230	0.14505	0.32152	0.71040	1.00068	0.34720
0.5 hr.	1.66674	0.13871	0.25837	0.69983	0.99562	0.09079
0.75 hr.	1.59290	0.67742	0.41575	0.37302	0.21213	0.25626
1 hr.	2.31459	0.22467	0.12204	0.35731	0.23241	0.15407
1.25 hr.	0.52006	0.27879	0.15023	0.32237	0.18024	0.09141
1.5 hr.	0.74142	0.35884	0.21818	0.17908	0.27063	0.04741
1.75 hr.	0.67186	0.29510	0.16772	0.12479	0.09768	0.02944
2 hr.	0.61539	0.24611	0.34775	0.10666	0.57750	0.03594
4 hr.	0.11906	0.02380	0.09610	0.04884	0.02218	0.01589
6 hr.	0.02570	0.01742	0.06427	0.01538	0.00742	0.00750
24 hr.	0.00392	0.01250	0.01824	0.00558	0.00634	0.00496
Blood (ng/g)						
0 hr.	0	0	0	0	0	0
0.5 hr.	0.75	0.20	0.36	0.92	0.77	0.47
1 hr.	1.14	0.43	0.66	1.41	0.78	0.61
2 hr.	0.87	0.70	0.60	1.39	0.58	0.37
4 hr.	0.76	0.44	0.57	1.29	0.30	0.26
6 hr.	0.42	0.32	0.52	0.69	0.19	0.17
Plasma (ng/g)						
0 hr.	0	0	0	0	0	0
0.5 hr.	1.22	0.25	0.53	1.43	1.12	0.65
1 hr.	1.70	0.70	0.95	2.00	1.17	0.77
2 hr.	1.55	0.97	0.92	1.80	0.90	0.50
4 hr.	1.15	0.61	0.90	1.49	0.62	0.34
6 hr.	0.88	0.51	0.75	0.82	0.47	0.21

*The air samples had a very small, variable C-^{13} background due to the re-used Rudolph valve despite efforts to decontaminate in between uses.

Figure 1. C^{13}- D_5 in Blood, Plasma and Air. Mean blood, plasma, and exhaled air levels of C^{13}-D_5 are shown for all 6 subjects at 30, 60, 120, 240, and 360 minutes after application. Plasma and blood samples are shown as ng of D_5/gm of plasma or blood. Air samples are shown as ng of D_5/mL expired air.

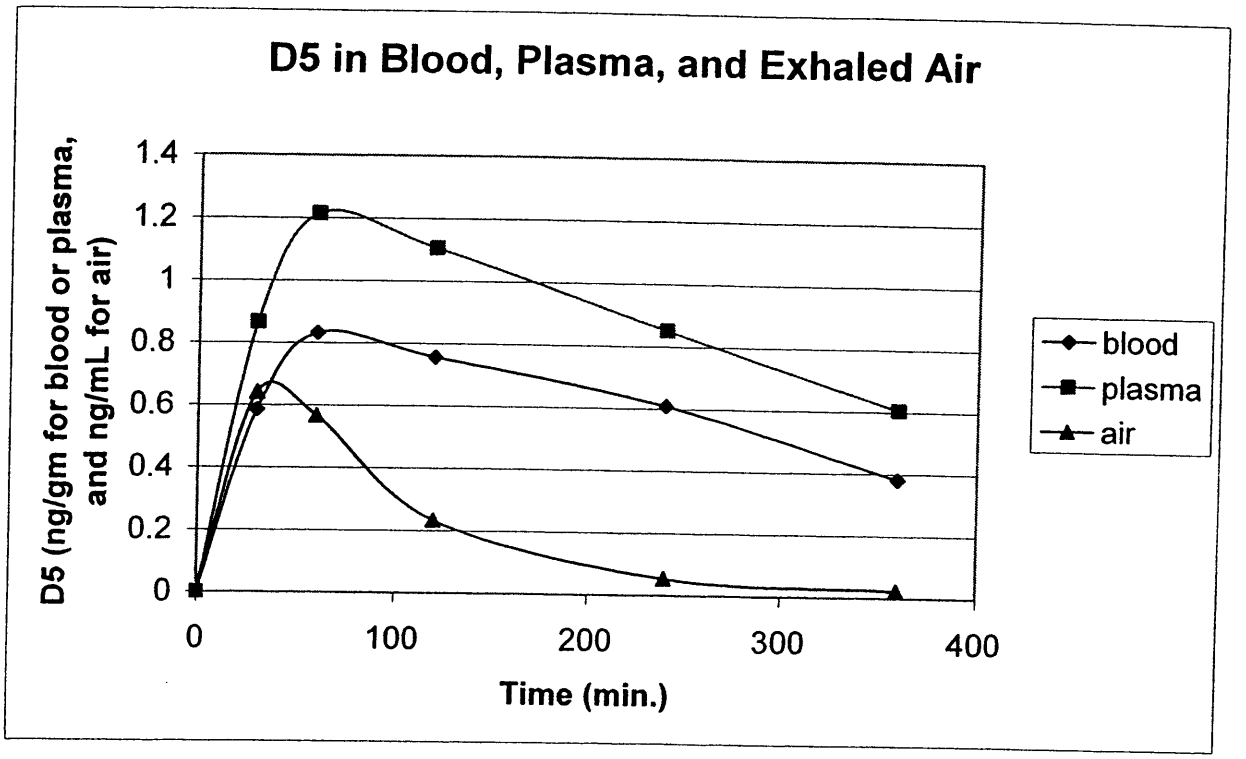


Figure 2. C^{13}-D_5 in Plasma in Males and Females. Mean plasma levels of C^{13}-D_5 are shown for all 6 subjects at 30, 60, 120, 240 and 360 minutes after application. Plasma samples are shown as ng of D_5/gm of plasma.

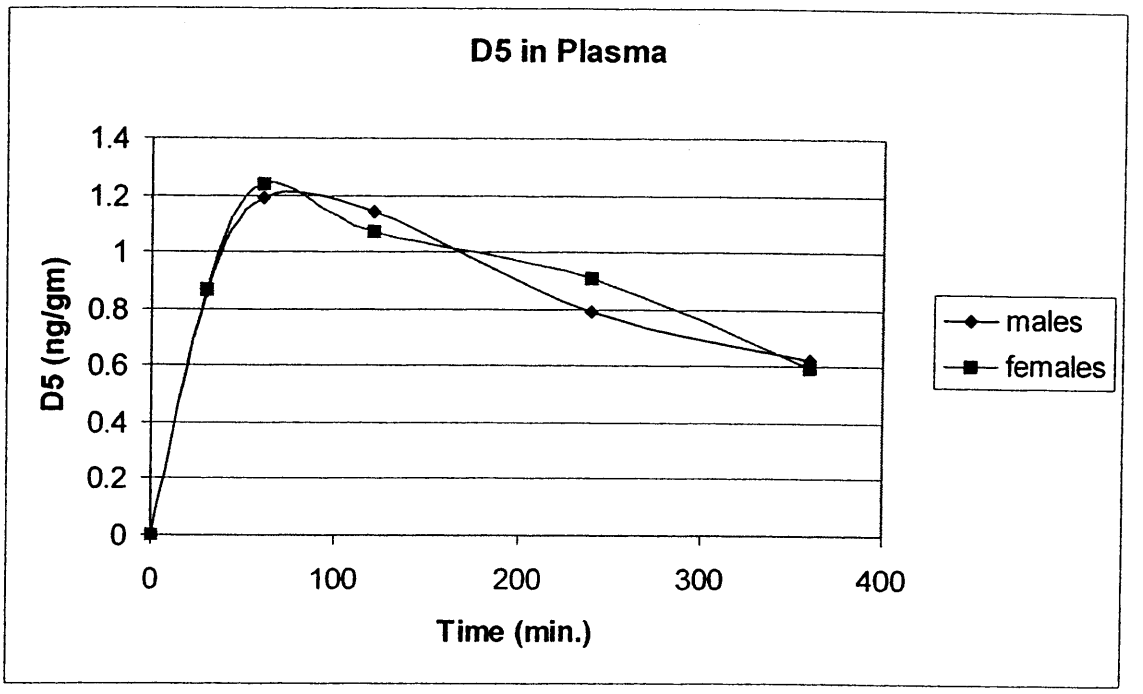


Figure 3. C^{13}-D_5 in Exhaled Air. Exhaled air levels of C^{13}-D_5 are shown for all 6 subjects at 15, 30, 45, 60, 75, 90, 105, 120, 240 and 360 minutes after application. Air samples are shown as ng of D_5/mL expired air.

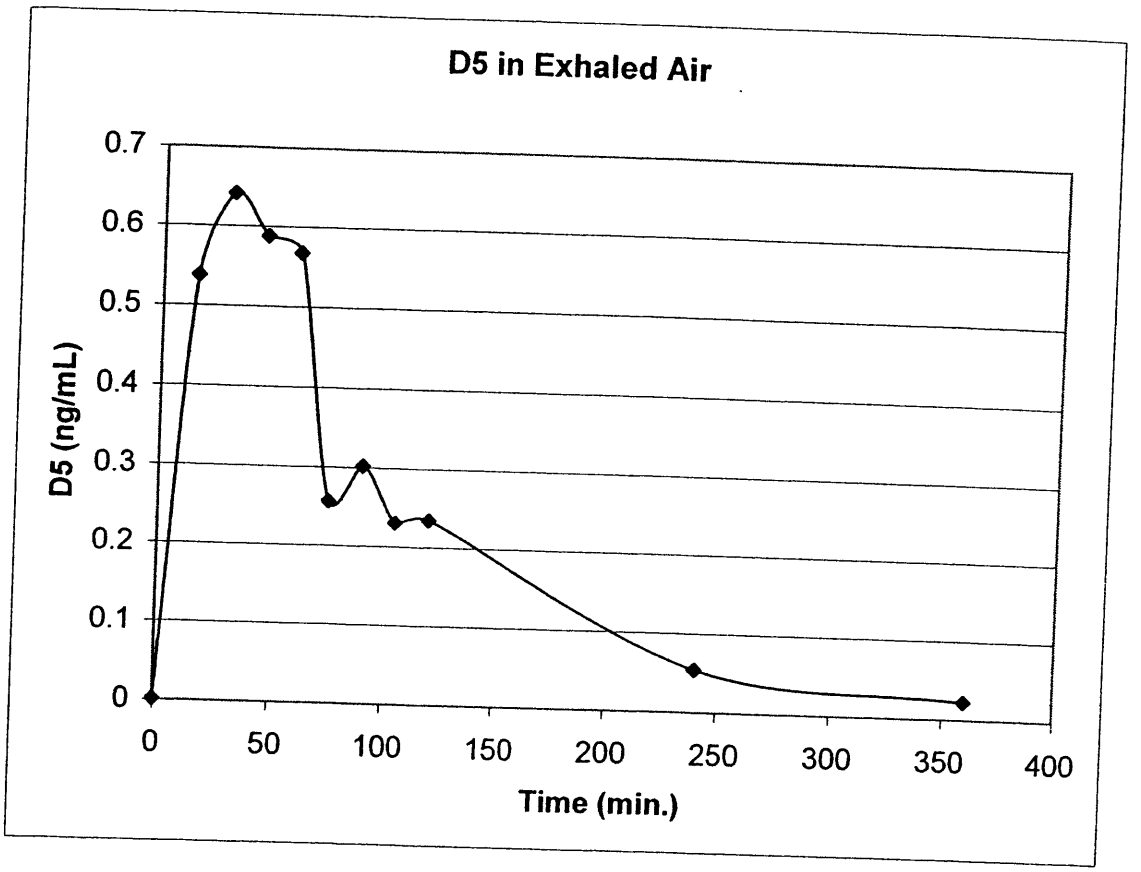


Figure 4. C^{13}-D_5 in Exhaled Air in Males and Females. Mean exhaled air levels of C^{13}-D_5 are shown at 15, 30, 45, 60, 75, 90, 105, 120, 240 and 360 minutes after application. Air samples are shown as ng of D_5/mL expired air.

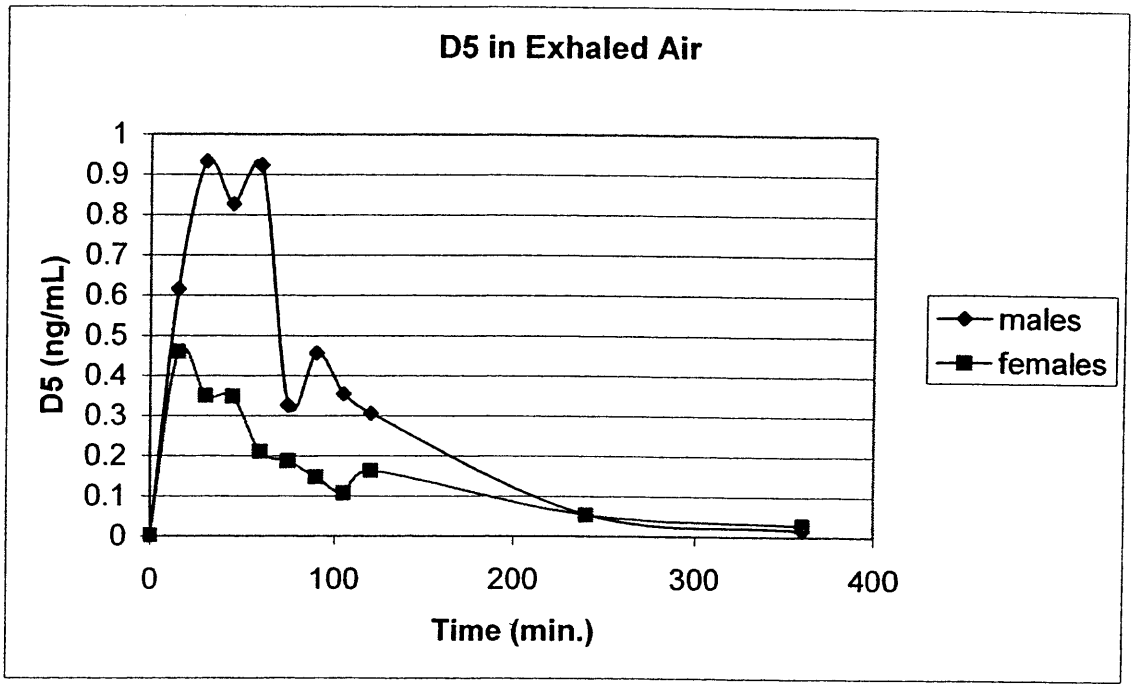


Figure 5. Correlation Between Blood and Plasma Levels of C^{13}-D_5.

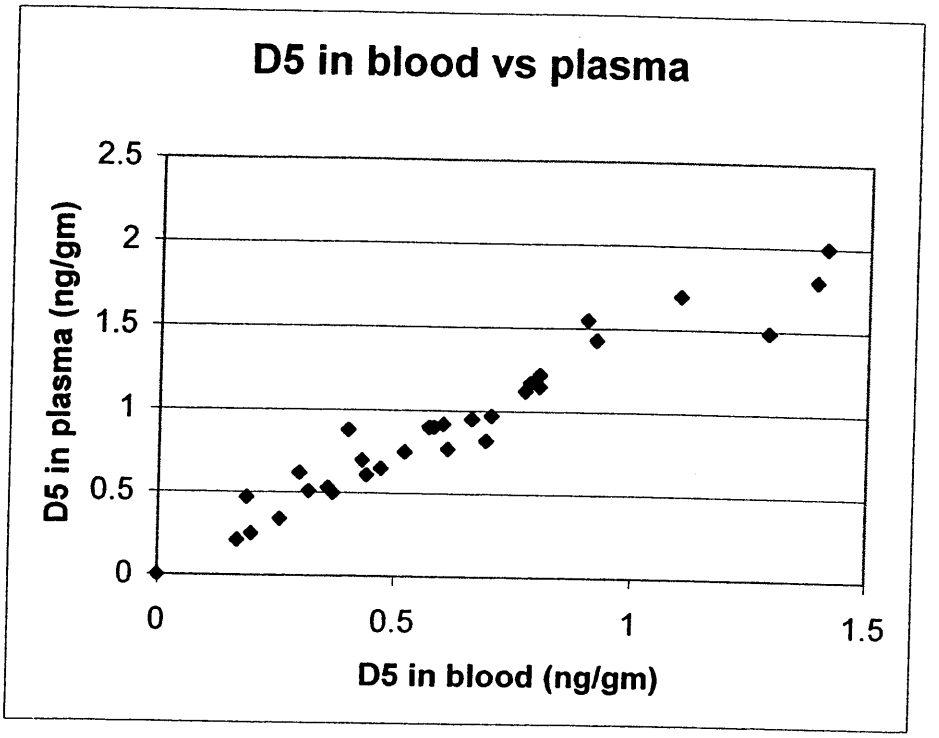


Figure 6. Correlation Between Blood and Exhaled Air Levels of C^{13}-D_5.

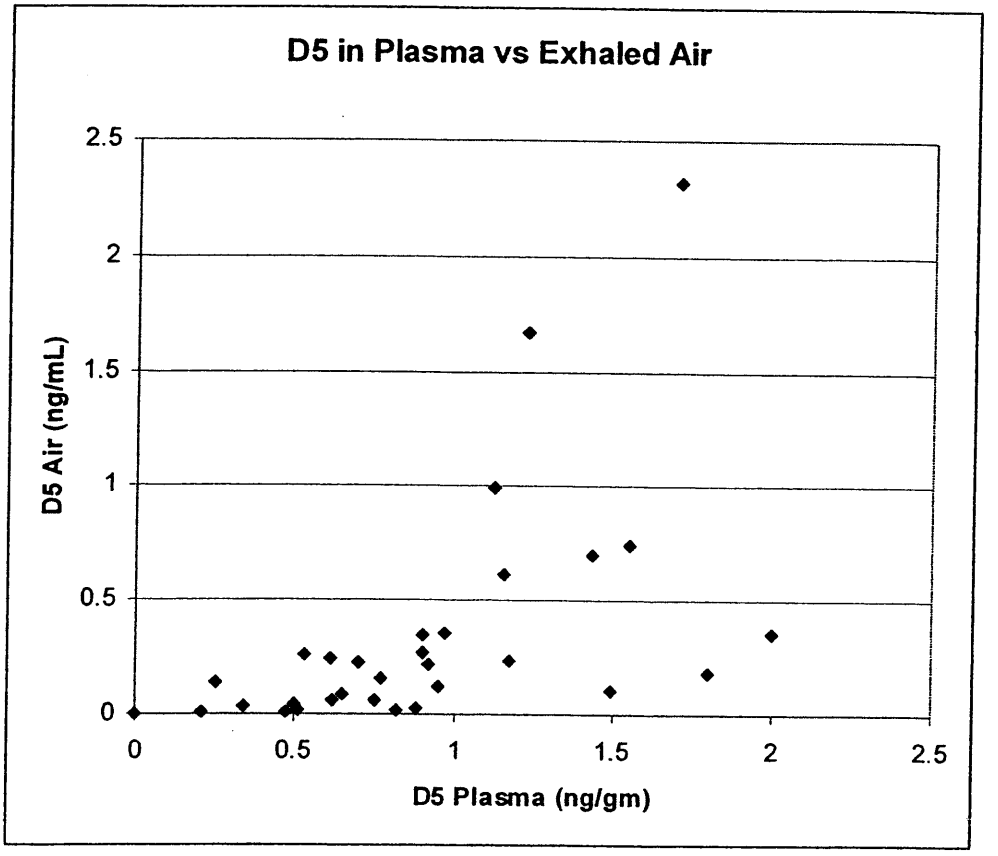
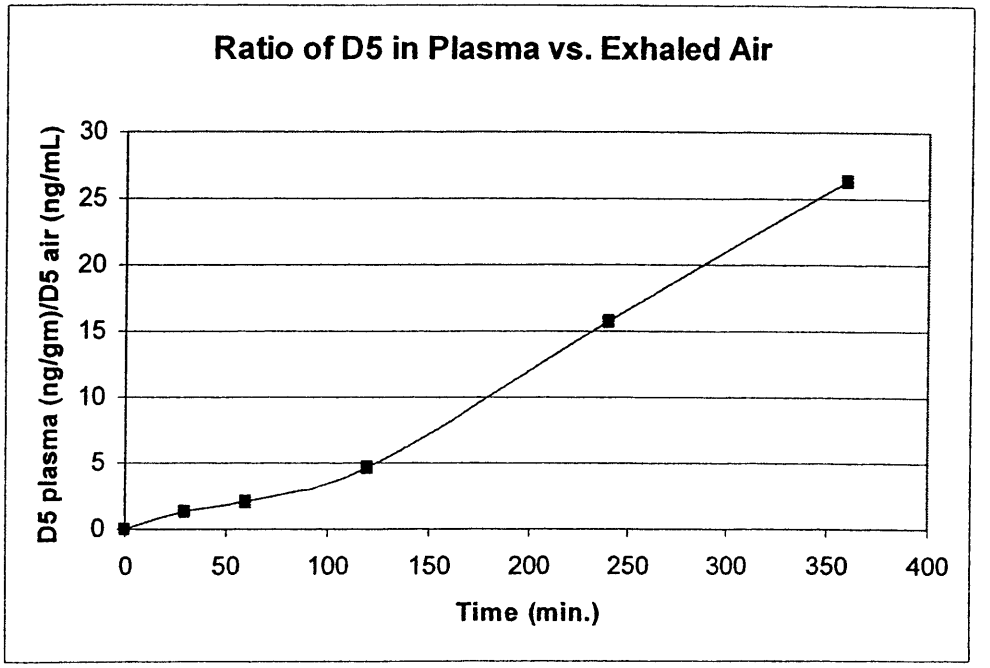


Figure 7. Ratio of C^{13}-D_5 in Exhaled Air vs. Plasma. The data in Fig. 1 were plotted as the ratio of mean C^{13}-D_5 in plasma to mean C^{13}-D_5 in exhaled air.



APPENDIX A:

CONSENT

CONSENT

Dermal Absorption of Decamethylcyclopentasiloxane (D5)

Investigator: R. John Looney, M.D., Associate Professor of Medicine
Sub-Investigator: M. Utell, M.D., Professor of Medicine

Study Sponsor: Dow-Corning Corporation

Introduction

This consent form describes a research study and what you may expect if you decide to participate. You are encouraged to read this consent form carefully and to ask the person who presents it any further questions you may have before making your decision whether or not to participate.

You are being asked to participate in this research study because you are a healthy adult who meets the requirements for the study.

This form describes the known possible risks and benefits. You are completely free to choose whether or not to participate in this study.

Background

The silicone industry in the United States produces 14,000 different silicone-containing products. Silicones are common synthetic materials usually comprised of the elements silicone, oxygen, carbon and hydrogen. The largest exposure source to silicones (including D5) is in the various cosmetics and toiletries ranging from hair products to skin lotion. Concentrations of silicones in these products range from a few parts per million to nearly 100%. Silicones have also been used in breast implants. There has been some concern that these implanted silicones may have been the cause of inflammation of the skin or body. Exposure of consumers to silicones is, of course, not by implantation but by ingestion, application to skin, or via inhalation of applied silicones that have been dispersed into the air.

Purpose of Study

The purpose of this study is to determine how much of the compound D5 is absorbed from the skin and how quickly it is eliminated from the body.

Number of Participants

Approximately six subjects (three men and three women) will take part in this study locally.

Description of Study Procedures

If you agree to participate in this study, you will receive an interview to go over your medical history, a brief physical examination, and a review of your use of silicone-containing products. A blood sample (1 tablespoon) will be drawn from a vein in your arm and a urine specimen will be collected for routine tests. If you are a woman the urine specimen will also be sent for a pregnancy test. Women who are pregnant, who are not on birth control pills, or who have not had a tubal ligation or hysterectomy will be excluded.

On the day of study you will be asked not to apply anti-perspirants or deodorants. The D5 compound will be applied to the surface skin of the axilla (underarm), 1.4 grams in men and 1.0 grams in women, using tubes filled with a predetermined amount of D5. You will lay on your side and the D5 will be applied to the central point of the axilla. Half the total dose will be applied to each axilla. While the D5 is being applied you will breathe air through a mask for about 5 minutes. You will be asked to wear a t-shirt under your regular shirt or blouse for the rest of the day.

Approximately 2 teaspoons of blood will be drawn from the arm just prior to application and at ½, 1, 2, 4, and 6 hours after application. The total amount of blood drawn in the study will be 5 tablespoons. Exhaled air samples will be collected in a 40 liter bag at the start of the study and 24 hours and in a 5 liter bag at 15, 30, 45, 60, 75, 90, 105, 120, 240 and 360 minutes after exposure to D5. The 5 liter bags will take about 1 minute to fill, and the 40 liter bags should take 5 - 8 minutes to fill. At the time of air sampling, inhaled air will be from a reservoir of purified air. You are not required to stay for the entire 6 hours. You will be allowed to leave the study room in between blood draws and air samples. At the time of application of D5, you will be asked to collect your urine for 24 hours in a container we will provide and return it the next day.

Risks of Participation/ Side Effects of Treatment

Irritation or rash at the site of application may occur.

Wearing a mask may make you feel claustrophobic.

Blood drawing may cause pain and bruising at the place where the blood is taken. Sometimes, drawing blood causes people to feel lightheaded or even faint.

Benefits of Participation

There are no direct benefits that you can expect to receive as a result of participating in this study.

New Findings

You will be informed of any new finding which may affect your decision to continue your participation in this research study.

Cost

There is no cost to you to participate in this research study.

Payment

You will receive $150 for your participation in this study.

Compensation for Injury

The University of Rochester Medical Center will provide medical care for any emergency medical problem that you may experience as a result of your participation in this research. You will not have to pay for this emergency care, but the University may seek reimbursement for this care from your health insurance or the study sponsor (Dow Corning). Decisions regarding care and compensation for other research related injury will be made on a case-by-case basis.

Confidentiality of Records

While we will make every effort to maintain your confidentiality, it cannot be absolutely guaranteed. Medical records which identify you and the consent form signed by you, may be inspected by the sponsor of this study (Dow Corning), a regulatory agency and/or the University. The results of this research study may be presented at meetings or in publications; however, your identity will not be disclosed in those presentations.

Contact Persons

For more information concerning this research study or if you believe you have suffered from a research-related injury, you should contact Dr. R. John Looney at (716) 275-5308 (Office (716) 341-6550 and Pager 220-2411).

If you have any questions about your rights as a research subject, you may contact Gloria H. Fish, D. Min., Box 304, Strong Memorial Hospital 601 Elmwood Avenue, Rochester, NY 14642, telephone: (716) 275-2187 (for long distance you may call collect).

Voluntary Participation

Participation in this study is voluntary. You are free to withdraw at any time, for whatever reason, without risking loss of present or future care you would otherwise expect to receive. In the event that you do withdraw from this study, the information you have already provided will be kept in a confidential manner.

Signatures/Dates

I have read the contents of this consent form, asked questions, and received answers concerning areas I did not understand. I give my consent to participate in this study by signing this form. I will receive a copy of this form for my records.

STUDY SUBJECT (print name): _____

STUDY SUBJECT (signature): _____ DATE _____

INVESTIGATOR: _____

SIGNATURE: _____ DATE _____

APPENDIX B:

AXILLA MEASUREMENTS

Arm Pit Measurements in mm

	Subject 1		Subject 2		Subject 3	
	Right	Left	Right	Left	Right	Left
Width	90	95	80	90	90	100
Height	55	60	60	60	60	60
W x H	4950	5700	4800	5400	5400	6000
both pits	10650		10200		11400	
ellipse	3887.72	4477	3769.9104	4241.1492	4241.1492	4712.388
both pits	8364.489		8011.0596		8953.5372	

	Subject 4		Subject 5		Subject 6	
	Right	Left	Right	Left	Right	Left
Width	30	30	90	90	90	85
Height	80	100	80	110	40	35
W x H	2400	3000	7200	9900	3600	2975
both pits	5400		17100		6575	
ellipse	1884.955	2356	5654.8656	7775.4402	2827.4328	2336.559
both pits	4241.149		13430.3058		5163.99185	

APPENDIX C:
BLOOD, PLASMA, AND AIR DATA

Abbreviations for Appendix C:

M_4Q – the internal standard which is tetrakis (trimethylsiloxy) silane

Prizm Reg – Prizm Regression Concentration Ratio (a commercial statistical program)

THF – tetrahydrofuran

LOD ARU – area ratio units for limit of detection

LOD CRU – concentration ratio units for limit of detection

Subject #1

CM122000

Air Bag Analysis

2002-I0000-51781
INTERNAL

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Time Sample ken	Sample ID Target time	Volume Exhaled Air	Hexane wt(g)	vol. Hexane	D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	Hexane extract ng D5/ml	Dilution Factor	Total D4 In Sample ng D5	D5 ng/L	Exhaled D5 ng/L
09:30 AM	Control	44.27	6.498	9.860	549	21922	0.025	25	0.072	1.800	1.000	17.7487	0.40	
	Control	44.27	6.496	9.860	547	24784	0.022	25	0.063	1.575	1.000	15.5301	0.35	
	Control BU	44.27	6.511	9.880	0	24278	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	Control BU	44.27	6.511	9.880	0	23116	0.000	25	0.000	0.000	1.000	0.0000	0.00	0.38
09:55 AM	15 min post	6.2	6.454	9.794	141030	23024	6.125	25	17.566	439.150	1.000	4300.8712	693.69	
	15 min post	6.2	6.454	9.794	150357	23954	6.277	25	18.002	450.050	1.000	4407.6217	710.91	
	15 min BU	6.2	6.474	9.824	0	22190	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	15 min BU	6.2	6.474	9.824	0	22890	0.000	25	0.000	0.000	1.000	0.0000	0.00	702.30
10:10 AM	30 min post	5.54	6.457	9.798	288416	21434	13.456	25	38.591	964.775	1.000	9453.0382	1706.32	
	30 minpost	5.54	6.457	9.798	306077	22588	13.639	25	39.116	977.900	1.000	9581.6393	1729.54	
	30 minpost	5.54	6.457	9.798	68114	24532	2.777	25	7.964	199.100	4.616	9004.9734	1625.45	
	30 minpost	5.54	6.457	9.798	66011	24065	2.743	25	7.867	196.675	4.616	8895.2945	1605.65	
	30 min BU	5.54	6.491	9.850	0	25473	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	30 min BU	5.54	6.491	9.850	0	25252	0.000	25	0.000	0.000	1.000	0.0000	0.00	1666.74
10:25 AM	45 min post	3.99	6.491	9.850	215409	23261	9.261	25	26.560	664.000	1.000	6540.2489	1639.16	
	45 min post	3.99	6.491	9.850	249580	26745	9.332	25	26.763	669.075	1.000	6590.2365	1651.69	
	45 min post	3.99	6.491	9.850	50628	21298	2.377	25	6.817	170.425	3.656	6137.1351	1538.13	
	45 min post	3.99	6.491	9.850	50626	21237	2.384	25	6.837	170.925	3.656	6155.1405	1542.64	
	45 min BU	3.99	6.514	9.885	0	25268	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	45 min BU	3.99	6.514	9.885	0	24677	0.000	25	0.000	0.000	1.000	0.0000	0.00	1592.90
10:40 AM	60 min post	5.86	6.545	9.932	452007	23258	19.434	25	55.735	1393.375	1.000	13838.6030	2361.54	
	60 minpost	5.86	6.545	9.932	443713	22844	19.424	25	55.707	1392.675	1.000	13831.6508	2360.35	
	60 minpost	5.86	6.545	9.932	118692	22339	5.313	25	15.237	380.925	3.566	13491.0282	2302.22	
	60 minpost	5.86	6.545	9.932	126648	24562	5.156	25	14.787	369.675	3.566	13092.5927	2234.23	
	60 min BU	5.86	6.529	9.907	0	24633	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	60 min BU	5.86	6.529	9.907	0	21946	0.000	25	0.000	0.000	1.000	0.0000	0.00	2314.59
10:55 AM	75 min post	5.56	6.475	9.825	92628	22723	4.076	25	11.690	292.250	1.000	2871.5004	516.46	
	75 minpost	5.56	6.475	9.825	101544	24567	4.133	25	11.853	296.325	1.000	2911.5393	523.66	
	75 min BU	5.56	6.511	9.880	0	25521	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	75 min BU	5.56	6.511	9.880	0	22599	0.000	25	0.000	0.000	1.000	0.0000	0.00	520.06
11:10 AM	90 minpost	6.05	6.483	9.838	157609	24444	6.448	25	18.492	462.300	1.000	4547.9376	751.73	
	90 minpost	6.05	6.483	9.838	133676	21316	6.271	25	17.985	449.625	1.000	4423.2456	731.11	
	90 min BU	6.05	6.513	9.883	0	24922	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	90 min BU	6.05	6.513	9.883	0	25388	0.000	25	0.000	0.000	1.000	0.0000	0.00	741.42
11:25 AM	105 min post	5.37	6.518	9.891	122640	24163	5.076	25	14.558	363.950	1.000	3599.7361	670.34	
	105 min post	5.37	6.518	9.891	117189	22981	5.099	25	14.624	365.600	1.000	3616.0558	673.38	
	105 min BU	5.37	6.481	9.835	0	22451	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	105 minBU	5.37	6.481	9.835	0	22968	0.000	25	0.000	0.000	1.000	0.0000	0.00	671.86
11:40 AM	120 min post	5.66	6.493	9.853	109099	21951	4.970	25	14.254	356.350	1.000	3511.0479	620.33	
	120 min post	5.66	6.493	9.853	108067	22095	4.891	25	14.027	350.675	1.000	3455.1332	610.45	
	120 min BU	5.66	6.529	9.907	0	24171	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	120 minBU	5.66	6.529	9.907	0	23536	0.000	25	0.000	0.000	1.000	0.0000	0.00	615.39
01:55 PM	240 minr post	5.93	3.2	4.856	50674	24536	2.065	25	5.922	148.050	1.000	718.9074	121.23	
	240 min post	5.93	3.2	4.856	45638	22919	1.991	25	5.710	142.750	1.000	693.1715	116.89	
	240 min BU	5.93	3.205	4.863	0	24038	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	240 min BU	5.93	3.205	4.863	0	20718	0.000	25	0.000	0.000	1.000	0.0000	0.00	119.06
03:35 PM	360 min post	5.81	3.203	4.860	9818	22967	0.427	25	1.225	30.625	1.000	148.8496	25.62	
	360 min post	5.81	3.203	4.860	9027	20979	0.430	25	1.233	30.825	1.000	149.8217	25.79	
	360 min BU	5.81	3.2	4.856	0	25284	0.000	25	0.000	0.000	1.000	0.0000	0.00	
	360 min BU	5.81	3.2	4.856	0	20487	0.000	25	0.000	0.000	1.000	0.0000	0.00	25.70
09:35 AM	24 hr post	47.58	6.49	9.848	6396	24395	0.262	25	0.751	18.775	1.000	184.9010	3.89	
	24 hr post	47.58	6.49	9.848	6959	26200	0.266	25	0.763	19.075	1.000	187.8555	3.95	
	24 hr post BU	47.58	6.492	9.851	0	22900	0.000	25	0.000	0.000	1.000	0.0000	0.00	3.92

Subject #1 C13-D5 Blood Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

2002-I0000-51781
INTERNAL

Standards

D5 ng /ml	M4Q ng/ml	Conc Ratio	D5 (area)	M4Q (area)	Area Ratio
0.052	25	0.00208	17	27595	0.00062
0.052	25	0.00208	9	29411	0.00031
0.126	25	0.00504	38	26946	0.00141
0.126	25	0.00504	43	28871	0.00149
0.278	25	0.01112	121	29665	0.00408
0.278	25	0.01112	120	30111	0.00399
0.605	25	0.02420	274	30369	0.00902
0.605	25	0.02420	244	29969	0.00814
0.605	25	0.02420	261	30360	0.00860
0.605	25	0.02420	243	28291	0.00859
1.02	25	0.04080	416	29768	0.01397
1.02	25	0.04080	409	29423	0.01390
1.02	25	0.04080	394	26524	0.01485
1.02	25	0.04080	332	25620	0.01296

BLANKS

	D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	26538	0.00000	0.000
	0	28162	0.00000	0.000
	0	26938	0.00000	0.000
	0	25896	0.00000	0.000
MEAN	0	27384	0	0.000
STD	0	1220	0	0.000

Subject #1 C13-D5 Blood Analysis

UNKNOWNS
CALC:

	Sample ID	Blood wt(g)	THF wt(g)	vol. THF	g blood per ml THF	D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/m	blood D5 ng/g	
control	1A	0.96	2.455	2.762	0.258	0	27850	0.000000	25	0.00000	0.000	0.00	
	1A	0.96	2.455	2.762	0.258	0	31055	0.000000	25	0.00000	0.000	0.00	
	1B	1.153	2.611	2.937	0.282	0	30996	0.000000	25	0.00000	0.000	0.00	
	1B	1.153	2.611	2.937	0.282	0	31023	0.000000	25	0.00000	0.000	0.00	mean= 0.00
													std= 0.00
30 min	2A	1.114	2.913	3.277	0.254	85	36397	0.002335	25	0.00685	0.171	0.67	
	2A	1.114	2.913	3.277	0.254	88	35102	0.002507	25	0.00735	0.184	0.72	
	2B	1.08	3.085	3.470	0.237	96	38381	0.002501	25	0.00733	0.183	0.77	
	2B	1.08	3.085	3.470	0.237	100	37849	0.002642	25	0.00774	0.194	0.82	mean= 0.75
													std= 0.05
1 hr	3A	0.947	2.589	2.912	0.245	177	45688	0.003874	25	0.01130	0.283	1.15	
	3A	0.947	2.589	2.912	0.245	179	45642	0.003922	25	0.01144	0.286	1.17	
	3B	1.053	2.89	3.251	0.245	150	40718	0.003684	25	0.01075	0.269	1.10	
	3B	1.053	2.89	3.251	0.245	154	40193	0.003832	25	0.01118	0.280	1.14	mean= 1.14
													std= 0.03
2 hr	4A	1.063	3.34	3.757	0.221	154	80433	0.001915	25	0.00564	0.141	0.64	
	4A	1.063	3.34	3.757	0.221	155	91558	0.001693	25	0.00499	0.125	0.57	
	4B	0.921	3.28	3.690	0.200	126	38791	0.003248	25	0.00949	0.237	1.19	
	4B	0.921	3.28	3.690	0.200	113	38402	0.002943	25	0.00861	0.215	1.08	mean= 0.87
													std= 0.27
4 hr	5A	0.936	2.884	3.244	0.224	55	35100	0.001567	25	0.00463	0.116	0.52	
	5A	0.936	2.884	3.244	0.224	76	34937	0.002175	25	0.00639	0.160	0.71	
	5B	1.002	3.078	3.462	0.224	97	34946	0.002776	25	0.00813	0.203	0.91	
	5B	1.002	3.078	3.462	0.224	96	35068	0.002736	25	0.00801	0.200	0.89	mean= 0.76
													std= 0.16
6 hr	6A	0.954	2.884	3.244	0.227	30	44187	0.000679	25	0.00206	0.052	0.23	
	6A	0.954	2.884	3.244	0.227	54	45118	0.001197	25	0.00356	0.089	0.39	
	6B	1.017	3.466	3.899	0.207	62	36122	0.001716	25	0.00506	0.127	0.61	
	6B	1.017	3.466	3.899	0.207	46	35284	0.001304	25	0.00387	0.097	0.47	mean= 0.42
													std= 0.14

Detection & Quantitation Estimates
From Standard Curve

y intercept= -3.4E-05 +/- 0.000146
Goodness of fit= 0.9945

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.0004	0.00126	0.032

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.0014256	0.00422	0.106

Subject #1 C13-D5 Plasma Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

D5 ng /ml	M4Q ng/ml	Conc Ratio	D5 (area)	M4Q (area)	Area Ratio
0.052	25	0.00208	17	27595	0.00062
0.052	25	0.00208	9	29411	0.00031
0.126	25	0.00504	38	26946	0.00141
0.126	25	0.00504	43	28871	0.00149
0.278	25	0.01112	121	29665	0.00408
0.278	25	0.01112	120	30111	0.00399
0.605	25	0.02420	274	30369	0.00902
0.605	25	0.02420	244	29969	0.00814
0.605	25	0.02420	261	30360	0.00860
0.605	25	0.02420	243	28291	0.00859
1.02	25	0.04080	416	29768	0.01397
1.02	25	0.04080	409	29423	0.01390
1.02	25	0.04080	394	26524	0.01485
1.02	25	0.04080	332	25620	0.01296

BLANKS

	D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	26538	0.00000	0.000
	0	28162	0.00000	0.000
	0	28938	0.00000	0.000
	0	25896	0.00000	0.000
MEAN	0	27384	0	0.000
STD	0	1220	0	0.000

Subject #1 C13-D5 Plasma Analysis

UNKNOWNS
CALC:

	Sample	Plasma wt(g)	THF wt(g)	vol. THF	g plasma per ml THF	D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	plasma D5 ng/g	
control	1A	0.826	2.435	2.739	0.232	0	38137	0.000000	25	0.00000	0.000	0.00	
	1A	0.826	2.435	2.739	0.232	0	39093	0.000000	25	0.00000	0.000	0.00	
	1B	0.857	2.472	2.781	0.236	0	45087	0.000000	25	0.00000	0.000	0.00	
	1B	0.857	2.472	2.781	0.236	0	46413	0.000000	25	0.00000	0.000	0.00	mean= 0.00
													std= 0.00
30 min	2A	0.818	2.56	2.880	0.221	163	39693	0.004107	25	0.01197	0.299	1.35	
	2A	0.818	2.56	2.880	0.221	148	39803	0.003718	25	0.01085	0.271	1.23	
	2B	0.729	2.506	2.819	0.205	136	39378	0.003454	25	0.01009	0.252	1.23	
	2B	0.729	2.506	2.819	0.205	112	37578	0.002980	25	0.00871	0.218	1.06	mean= 1.22
													std= 0.10
1 hr	3A	0.718	2.756	3.100	0.188	242	54744	0.004421	25	0.01288	0.322	1.71	
	3A	0.718	2.756	3.100	0.188	248	54660	0.004537	25	0.01322	0.331	1.76	
	3B	0.795	2.87	3.228	0.198	246	54299	0.004530	25	0.01320	0.330	1.67	
	3B	0.795	2.87	3.228	0.198	235	52792	0.004451	25	0.01297	0.324	1.64	mean= 1.70
													std= 0.04
2 hr	4A	0.777	2.859	3.216	0.195	175	42437	0.004124	25	0.01202	0.301	1.54	
	4A	0.777	2.859	3.216	0.195	158	43623	0.003622	25	0.01057	0.264	1.36	
	4B	0.803	2.924	3.289	0.196	236	54396	0.004339	25	0.01264	0.316	1.61	
	4B	0.803	2.924	3.289	0.196	245	54090	0.004529	25	0.01319	0.330	1.68	mean= 1.55
													std= 0.12
4 hr	5A	0.833	2.778	3.125	0.210	114	36878	0.003091	25	0.00904	0.226	1.07	
	5A	0.833	2.778	3.125	0.210	108	36589	0.002952	25	0.00863	0.216	1.03	
	5B	0.731	2.92	3.285	0.182	108	36237	0.002980	25	0.00871	0.218	1.20	
	5B	0.731	2.92	3.285	0.182	113	35080	0.003221	25	0.00941	0.235	1.29	mean= 1.15
													std= 0.10
6 hr	6A	0.697	2.839	3.193	0.179	60	39102	0.001534	25	0.00453	0.113	0.63	
	6A	0.697	2.839	3.193	0.179	70	39897	0.001755	25	0.00517	0.129	0.72	
	6B	0.76	2.927	3.292	0.188	98	35700	0.002745	25	0.00804	0.201	1.07	
	6B	0.76	2.927	3.292	0.188	97	34551	0.002807	25	0.00821	0.205	1.09	mean= 0.88
													std= 0.21

Detection & Quantitation Estimates
From Standard Curve

y intercept= -3.442E-05 +/- 0.000146
Goodness of fit= 0.9945

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.0004	0.00126	0.032

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.0014256	0.00422	0.106

Subject #2 Air Bag Analysis

MC011701

2002-I0000-51781
INTERNAL

UNKNOWNS
CALC:

Time sample taken	Sample ID	Volume Exhaled A	Hexane wt(g)	vol. Hexane	D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	Hexane extract ng D5/ml	Dilution Factor	Total D4 in Sample ng D5	D5 ng/L	Exhaled D5 ng/L
09:50 AM	Control	39.3	6.411	9.728	1650	36008	0.046	25	0.110	2.750	1.00	26.75	0.68	
	Control	39.3	6.411	9.728	1085	25754	0.042	25	0.101	2.525	1.00	24.56	0.63	
	Control BU	39.3	6.375	9.674	0	36674	0.000	25	0.000	0.000	1.00	0.00	0.00	
	Control BU	39.3	6.375	9.674	0	37540	0.000	25	0.000	0.000	1.00	0.00	0.00	0.65
10:16 AM	15 min post	3.96	6.465	9.810	162484	26391	6.157	25	14.761	369.025	1.00	3620.25	914.21	
error in sample	15 min post	3.96	6.465	9.810	158395	25323	6.255	25	14.996	374.900	1.00	3677.89	928.76	
	15 min BU	3.96	6.449	9.786	0	23398	0.000	25	0.000	0.000	1.00	0.00	0.00	
	15 min BU	3.96	6.449	9.786	0	24651	0.000	25	0.000	0.000	1.00	0.00	0.00	921.48
10:22 AM	15 min post	5.16	6.519	9.892	32085	25148	1.276	25	3.059	76.475	1.00	756.51	146.61	
	15 min post	5.16	6.519	9.892	31343	25095	1.249	25	2.994	74.850	1.00	740.44	143.50	
	15 min BU	5.16	6.419	9.741	0	25464	0.000	25	0.000	0.000	1.00	0.00	0.00	
	15 min BU	5.16	6.419	9.741	0	26030	0.000	25	0.000	0.000	1.00	0.00	0.00	145.06
10:31 AM	30 min post	4.83	6.5	9.863	25940	23240	1.116	25	2.675	66.875	1.00	659.62	136.57	
	30 minpost	4.83	6.5	9.863	28670	24914	1.151	25	2.759	68.975	1.00	680.33	140.86	
	30 minBU	4.83	6.475	9.825	0	24596	0.000	25	0.000	0.000	1.00	0.00	0.00	
	30 minBU	4.38	6.475	9.825	0	23280	0.000	25	0.000	0.000	1.00	0.00	0.00	138.71
10:46 AM	45 min post	4.95	6.459	9.801	139598	24828	5.623	25	13.480	337.000	1.00	3303.01	667.27	
	45 min post	4.95	6.459	9.801	149256	25762	5.794	25	13.890	347.250	1.00	3403.47	687.57	
	45 min BU	4.95	6.435	9.765	0	25311	0.000	25	0.000	0.000	1.00	0.00	0.00	
	45 min BU	4.95	6.435	9.765	0	25665	0.000	25	0.000	0.000	1.00	0.00	0.00	677.42
11:01 AM	60 min post	5.35	6.445	9.780	50839	24735	2.055	25	4.927	123.175	1.00	1204.65	225.17	
	60 min post	5.35	6.445	9.780	51415	25132	2.046	25	4.905	122.625	1.00	1199.27	224.16	
	60 min BU	5.35	6.464	9.809	0	23689	0.000	25	0.000	0.000	1.00	0.00	0.00	
	60 min BU	5.35	6.464	9.809	0	25877	0.000	25	0.000	0.000	1.00	0.00	0.00	224.67
11:16 AM	75 min post	4.76	6.448	9.785	53324	23341	2.285	25	5.478	136.950	1.00	1339.99	281.51	
	75 min post	4.76	6.448	9.785	59088	26372	2.241	25	5.372	134.300	1.00	1314.06	276.06	
	75 min BU	4.76	6.47	9.818	0	25256	0.000	25	0.000	0.000	1.00	0.00	0.00	
	75 min BU	4.76	6.47	9.818	0	25868	0.000	25	0.000	0.000	1.00	0.00	0.00	278.79
11:30 AM	90 min post	4.86	6.434	9.763	77593	25969	2.988	25	7.163	179.075	1.00	1748.36	359.74	
	90 min post	4.86	6.434	9.763	72580	24415	2.973	25	7.127	178.175	1.00	1739.57	357.94	
	90 min BU	4.86	6.418	9.739	0	24227	0.000	25	0.000	0.000	1.00	0.00	0.00	
	90 min BU	4.86	6.418	9.739	0	25669	0.000	25	0.000	0.000	1.00	0.00	0.00	358.84
11:45 AM	105 min post	5.04	6.46	9.803	63684	24629	2.586	25	6.200	155.000	1.00	1519.42	301.47	
	105 min post	5.04	6.46	9.803	62111	25080	2.477	25	5.938	148.450	1.00	1455.22	288.73	
	105 min BU	5.04	6.462	9.806	0	24651	0.000	25	0.000	0.000	1.00	0.00	0.00	
	105 minBU	5.04	6.462	9.806	0	23938	0.000	25	0.000	0.000	1.00	0.00	0.00	295.10
11:59 AM	120 min post	6.23	6.443	9.777	67850	25613	2.649	25	6.351	158.775	1.00	1552.33	249.17	
	120 min post	6.23	6.443	9.777	68931	26680	2.584	25	6.195	154.875	1.00	1514.20	243.05	
	120 min BU	6.23	6.48	9.833	0	24822	0.000	25	0.000	0.000	1.00	0.00	0.00	
	120 minBU	6.23	6.48	9.833	0	26097	0.000	25	0.000	0.000	1.00	0.00	0.00	246.11
02:00 PM	240 min post	5.43	6.447	9.783	5492	25048	0.219	25	0.525	13.125	1.00	128.40	23.65	
	240 min post	5.43	6.447	9.783	6032	27113	0.222	25	0.532	13.300	1.00	130.11	23.96	
	240 min BU	5.43	6.436	9.766	0	24748	0.000	25	0.000	0.000	1.00	0.00	0.00	
	240 min BU	5.43	6.436	9.766	0	25226	0.000	25	0.000	0.000	1.00	0.00	0.00	23.80
04:02 PM	360 min post	5.42	6.505	9.871	4099	25388	0.161	25	0.386	9.650	1.00	95.26	17.57	
	360 min post	5.42	6.505	9.871	3975	25100	0.158	25	0.379	9.475	1.00	93.53	17.26	
	360 min BU	5.42	6.48	9.833	0	25416	0.000	25	0.000	0.000	1.00	0.00	0.00	
	360 min BU	5.42	6.48	9.833	0	25360	0.000	25	0.000	0.000	1.00	0.00	0.00	17.42
09:55 AM	24 hr post	37.55	6.412	9.730	20420	25154	0.812	25	1.947	48.675	1.00	473.60	12.61	
	24 hr post	37.55	6.412	9.730	20104	25208	0.798	25	1.913	47.825	1.00	465.33	12.39	
	24 hr post BU	37.55	6.389	9.695	0	25191	0.000	25	0.000	0.000	1.00	0.00	0.00	
	24 hr post BU	37.55	6.389	9.695	0	24804	0.000	25	0.000	0.000	1.00	0.00	0.00	12.50

Subject #2 C13-D5 Blood Analysis

Analysis using M4Q as Internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.052	25	0.00208	24	38030	0.00063
0.052	25	0.00208	41	35949	0.00114
0.052	25	0.00208	33	43782	0.00075
0.126	25	0.00504	75	38614	0.00194
0.126	25	0.00504	73	36879	0.00198
0.126	25	0.00504	114	58498	0.00195
0.28	25	0.01120	160	38935	0.00411
0.28	25	0.01120	183	40747	0.00449
0.28	25	0.01120	205	45903	0.00447
0.605	25	0.02420	350	37924	0.00923
0.605	25	0.02420	339	38443	0.00882
0.605	25	0.02420	423	41921	0.01009
1.02	25	0.04080	566	37239	0.01520
1.02	25	0.04080	543	38308	0.01417
1.02	25	0.04080	948	59020	0.01606

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	26538	0.00000	0.000
	0	28162	0.00000	0.000
	0	28938	0.00000	0.000
	0	25896	0.00000	0.000
MEAN	0	27384	0	0.000
STD	0	1220	0	0.000

Subject #2 C13-D5 Blood Analysis

MC011701

UNKNOWNS
CALC:

	Sample	Blood wt(g)	THF wt(g)	vol. THF	g blood per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	blood C13-D5 ng/g	
control	1A	0.928	2.237	2.516	0.269	0	27850	0.000000	25	0.00000	0.000	0.00	
	1A	0.928	2.237	2.516	0.269	0	31055	0.000000	25	0.00000	0.000	0.00	
	1B	0.952	2.335	2.627	0.266	0	30996	0.000000	25	0.00000	0.000	0.00	
	1B	0.952	2.335	2.627	0.266	0	31023	0.000000	25	0.00000	0.000	0.00	mean= 0.00
													std= 0.00
1 min	2A	0.857	2.266	2.549	0.252	30	39982	0.000750	25	0.00176	0.044	0.17	
	2A	0.857	2.266	2.549	0.252	45	39455	0.001141	25	0.00281	0.070	0.28	
	2B	0.932	2.227	2.505	0.271	32	39823	0.000804	25	0.00191	0.048	0.18	
	2B	0.932	2.227	2.505	0.271	32	40740	0.000785	25	0.00185	0.046	0.17	mean= 0.20
													std= 0.05
1 hr	3A	1.088	2.49	2.801	0.280	75	37280	0.002012	25	0.00514	0.129	0.46	
	3A	1.088	2.49	2.801	0.280	80	37500	0.002133	25	0.00547	0.137	0.49	
	3B	1.105	2.574	2.895	0.276	55	37301	0.001474	25	0.00370	0.093	0.33	
	3B	1.105	2.574	2.895	0.276	71	36267	0.001958	25	0.00500	0.125	0.45	mean= 0.43
													std= 0.06
2 hr	4A	0.988	2.361	2.656	0.271	114	39373	0.002895	25	0.00751	0.188	0.69	
	4A	0.988	2.361	2.656	0.271	115	39930	0.002880	25	0.00747	0.187	0.69	
	4B	1.03	2.555	2.874	0.264	120	38422	0.003123	25	0.00812	0.203	0.77	
	4B	1.03	2.555	2.874	0.264	102	38902	0.002622	25	0.00678	0.170	0.64	mean= 0.70
													std= 0.05
4 hr	5A	0.913	2.489	2.800	0.246	56	39284	0.001426	25	0.00357	0.089	0.36	
	5A	0.913	2.489	2.800	0.246	83	55865	0.001486	25	0.00373	0.093	0.38	
	5B	1.025	2.554	2.873	0.263	81	40788	0.001986	25	0.00507	0.127	0.48	
	5B	1.025	2.554	2.873	0.263	90	40351	0.002230	25	0.00573	0.143	0.54	mean= 0.44
													std= 0.07
6 hr	6A	1.092	2.777	3.124	0.259	54	34738	0.001554	25	0.00392	0.098	0.38	
	6A	1.092	2.777	3.124	0.259	55	52479	0.001048	25	0.00256	0.064	0.25	
	6B	1.238	2.961	3.331	0.271	60	39899	0.001504	25	0.00378	0.095	0.35	
	6B	1.238	2.961	3.331	0.271	71	52236	0.001359	25	0.00339	0.085	0.31	mean= 0.32
													std= 0.05

Detection & Quantitation Estimates
From Standard Curve
y intercept= 9.3021E-05 +/- 0.0001352
Goodness of fit= 0.9942

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000499	0.00109	0.027

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.001445	0.00362	0.091

Subject #2 C13-D5 Plasma Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.052	25	0.00208	24	38030	0.00063
0.052	25	0.00208	41	35949	0.00114
0.052	25	0.00208	33	43782	0.00075
0.126	25	0.00504	75	38614	0.00194
0.126	25	0.00504	73	36879	0.00198
0.126	25	0.00504	114	58496	0.00195
0.28	25	0.01120	160	38935	0.00411
0.28	25	0.01120	183	40747	0.00449
0.28	25	0.01120	205	45903	0.00447
0.605	25	0.02420	350	37924	0.00923
0.605	25	0.02420	339	38443	0.00882
0.605	25	0.02420	423	41921	0.01009
1.02	25	0.04080	566	37239	0.01520
1.02	25	0.04080	543	38308	0.01417
1.02	25	0.04080	948	59020	0.01606

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	26538	0.00000	0.000
	0	28162	0.00000	0.000
	0	28938	0.00000	0.000
	0	25896	0.00000	0.000
MEAN	0	27384	0	0.000
STD	0	1220	0	0.000

Subject #2 C13-D5 Plasma Analysis

MC011701

UNKNOWNS
CALC:

	Sample	Plasma wt(g)	THF wt(g)	vol. THF	g plasma per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	plasma C13-D5 ng/g	
control	1A	0.826	2.248	2.529	0.246	0	27850	0.000000	25	0.00000	0.000	0.00	
	1A	0.826	2.248	2.529	0.246	0	31055	0.000000	25	0.00000	0.000	0.00	
	1B	0.663	2.069	2.327	0.222	0	30996	0.000000	25	0.00000	0.000	0.00	
	1B	0.663	2.069	2.327	0.222	0	31023	0.000000	25	0.00000	0.000	0.00	mean= 0.00 std= 0.00
1 min	2A	0.583	1.635	1.839	0.241	40	40514	0.000987	25	0.00240	0.060	0.25	
	2A	0.583	1.635	1.839	0.241	29	41066	0.000706	25	0.00164	0.041	0.17	
	2B	0.67	1.824	2.052	0.246	40	50881	0.000786	25	0.00186	0.047	0.19	
	2B	0.67	1.824	2.052	0.246	83	51857	0.001601	25	0.00404	0.101	0.41	mean= 0.25 std= 0.09
1 hr	3A	0.736	2.132	2.398	0.235	116	41646	0.002785	25	0.00721	0.180	0.77	
	3A	0.736	2.132	2.398	0.235	128	53925	0.002374	25	0.00611	0.153	0.65	
	3B	0.668	2.073	2.332	0.223	132	57891	0.002280	25	0.00586	0.147	0.66	
	3B	0.668	2.073	2.332	0.223	140	55397	0.002527	25	0.00652	0.163	0.73	mean= 0.70 std= 0.05
2 hr	4A	0.626	2.147	2.415	0.206	150	56294	0.002665	25	0.00689	0.172	0.84	
	4A	0.626	2.147	2.415	0.206	177	56766	0.003118	25	0.00811	0.203	0.98	
	4B	0.784	2.009	2.260	0.258	202	54246	0.003724	25	0.00973	0.243	0.94	
	4B	0.784	2.009	2.260	0.258	249	57131	0.004358	25	0.01143	0.286	1.11	mean= 0.97 std= 0.10
4 hr	5A	0.761	2.44	2.745	0.217	103	58595	0.001758	25	0.00446	0.112	0.51	
	5A	0.761	2.44	2.745	0.217	122	57711	0.002114	25	0.00542	0.136	0.62	
	5B	0.842	2.285	2.570	0.247	145	54596	0.002656	25	0.00687	0.172	0.70	
	5B	0.842	2.285	2.570	0.247	128	54530	0.002347	25	0.00604	0.151	0.61	mean= 0.61 std= 0.06
6 hr	6A	0.878	2.062	2.319	0.275	111	50421	0.002201	25	0.00565	0.141	0.51	
	6A	0.878	2.062	2.319	0.275	117	51829	0.002257	25	0.00580	0.145	0.53	
	6B	0.89	2.121	2.386	0.272	116	53152	0.002182	25	0.00560	0.140	0.52	
	6B	0.89	2.121	2.386	0.272	79	39094	0.002021	25	0.00517	0.129	0.48	mean= 0.51 std= 0.02

Detection & Quantitation Estimates
From Standard Curve
y Intercept= 9.3021E-05 +/- 0.0001352
Goodness of fit= 0.9942

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000499	0.00109	0.027

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.001445	0.00362	0.091

Subject #3 Air Bag Analysis

MA022201

2002-I0000-51781
INTERNAL

UNKNOWNS
CALC:

Time sample taken	Sample ID	Volume Exhaled Air	Hexane wt(g)	vol. Hexane	D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	Hexane extract ng D5/ml	Dilution Factor	Total D4 In Sample ng D5	D5 ng/L	Exhaled D5 ng/L
08:20 AM	Control	40.21	6.481	9.835	4440	31014	0.143	25	0.350	8.750	1.00	86.05	2.14	
	Control	40.21	6.481	9.835	4737	32878	0.144	25	0.352	8.800	1.00	86.54	2.15	
	Control BU	40.21	6.434	9.763	0	31614	0.000	25	0.000	0.000	1.00	0.00	0.00	
	Control BU	40.21	6.434	9.763	0	32726	0.000	25	0.000	0.000	1.00	0.00	0.00	2.15
08:51 AM	15 min post	4.51	6.484	9.839	74193	30915	2.400	25	5.867	146.675	1.00	1443.16	319.99	
	15 min post	4.51	6.484	9.839	76832	31703	2.423	25	5.923	148.075	1.00	1456.93	323.04	
	15 min BU	4.51	6.528	9.906	0	32844	0.000	25	0.000	0.000	1.00	0.00	0.00	
	15 min BU	4.51	6.528	9.906	0	33408	0.000	25	0.000	0.000	1.00	0.00	0.00	321.52
09:07 AM	30 min post	3.71	6.509	9.877	55812	34605	1.613	25	3.943	98.575	1.00	973.63	262.43	
	30 minpost	3.71	6.509	9.877	51869	33183	1.563	25	3.821	95.525	1.00	943.51	254.32	
	30 minBU	3.71	6.503	9.868	0	34288	0.000	25	0.000	0.000	1.00	0.00	0.00	
	30 minBU	3.71	6.503	9.868	0	33518	0.000	25	0.000	0.000	1.00	0.00	0.00	258.37
09:21 AM	45 min post	4.51	6.515	9.886	107845	34983	3.083	25	7.536	188.400	1.00	1862.56	412.98	
	45 min post	4.51	6.515	9.886	109430	35025	3.124	25	7.637	190.925	1.00	1887.52	418.52	
	45 min BU	4.51	6.536	9.918	0	33406	0.000	25	0.000	0.000	1.00	0.00	0.00	
	45 min BU	4.51	6.536	9.918	0	33489	0.000	25	0.000	0.000	1.00	0.00	0.00	415.75
09:35 AM	60 min post	3.92	6.522	9.897	24804	31573	0.786	25	1.921	48.025	1.00	475.29	121.25	
	60 min post	3.92	6.522	9.897	27359	34371	0.796	25	1.946	48.650	1.00	481.48	122.83	
	60 min BU	3.92	6.521	9.895	0	32412	0.000	25	0.000	0.000	1.00	0.00	0.00	
	60 min BU	3.92	6.521	9.895	0	32326	0.000	25	0.000	0.000	1.00	0.00	0.00	122.04
09:52 AM	75 min post	3.07	6.484	9.839	26652	34560	0.771	25	1.885	47.125	1.00	463.67	151.03	
	75 min post	3.07	6.484	9.839	26465	34692	0.763	25	1.865	46.625	1.00	458.75	149.43	
	75 min BU	3.07	6.488	9.845	0	33181	0.000	25	0.000	0.000	1.00	0.00	0.00	
	75 min BU	3.07	6.488	9.845	0	35135	0.000	25	0.000	0.000	1.00	0.00	0.00	150.23
10:05 AM	90 min post	3.95	6.526	9.903	48584	33879	1.434	25	3.505	87.625	1.00	867.74	219.68	
	90 min post	3.95	6.526	9.903	42030	29718	1.414	25	3.457	86.425	1.00	855.86	216.67	
	90 min BU	3.95	6.49	9.848	0	35758	0.000	25	0.000	0.000	1.00	0.00	0.00	
	90 min BU	3.95	6.49	9.848	0	36061	0.000	25	0.000	0.000	1.00	0.00	0.00	218.18
10:20 AM	105 min post	4.11	6.535	9.917	36932	32065	1.152	25	2.816	70.400	1.00	698.12	169.86	
	105 min post	4.11	6.535	9.917	37010	32964	1.123	25	2.745	68.625	1.00	680.52	165.58	
	105 min BU	4.11	6.48	9.833	0	35101	0.000	25	0.000	0.000	1.00	0.00	0.00	
	105 minBU	4.11	6.48	9.833	0	34146	0.000	25	0.000	0.000	1.00	0.00	0.00	167.72
10:35 AM	120 min post	5.54	6.504	9.869	107923	33862	3.187	25	7.791	194.775	1.00	1922.33	346.99	
	120 min post	5.54	6.504	9.869	107169	33476	3.201	25	7.825	195.625	1.00	1930.72	348.51	
	120 min BU	5.54	6.531	9.910	0	35318	0.000	25	0.000	0.000	1.00	0.00	0.00	
	120 minBU	5.54	6.531	9.910	0	35895	0.000	25	0.000	0.000	1.00	0.00	0.00	347.75
12:35 PM	240 min post	5.32	6.493	9.853	27280	31868	0.856	25	2.093	52.325	1.00	515.55	96.91	
	240 min post	5.32	6.493	9.853	28328	33647	0.842	25	2.058	51.450	1.00	506.93	95.29	
	240 min BU	5.32	6.537	9.920	0	34202	0.000	25	0.000	0.000	1.00	0.00	0.00	
	240 min BU	5.32	6.537	9.920	0	33859	0.000	25	0.000	0.000	1.00	0.00	0.00	96.10
02:40 PM	360 min post	5.33	6.51	9.879	18934	33528	0.565	25	1.381	34.525	1.00	341.06	63.99	
	360 min post	5.33	6.51	9.879	19770	34665	0.570	25	1.393	34.825	1.00	344.02	64.54	
	360 min BU	5.33	6.514	9.885	0	34320	0.000	25	0.000	0.000	1.00	0.00	0.00	
	360 min BU	5.33	6.514	9.885	0	33880	0.000	25	0.000	0.000	1.00	0.00	0.00	64.27
08:35 AM	24 hr post	42.98	6.451	9.789	43504	33452	1.300	25	3.178	79.450	1.00	777.74	18.10	
	24 hr post	42.98	6.451	9.789	44317	33537	1.321	25	3.229	80.725	1.00	790.22	18.39	
	24 hr post BU	42.98	6.469	9.816	0	33937	0.000	25	0.000	0.000	1.00	0.00	0.00	
	24 hr post BU	42.98	6.469	9.816	0	34900	0.000	25	0.000	0.000	1.00	0.00	0.00	18.24

Subject #3 C13-D5 Blood Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.052	25	0.00208	31	39302	0.00079
0.052	25	0.00208	27	39086	0.00069
0.052	25	0.00208	47	61342	0.00077
0.126	25	0.00504	71	39419	0.00180
0.126	25	0.00504	79	40126	0.00197
0.126	25	0.00504	121	60485	0.00200
0.28	25	0.01120	227	49916	0.00455
0.28	25	0.01120	212	49875	0.00425
0.28	25	0.01120	321	74275	0.00432
0.605	25	0.02420	412	43230	0.00953
0.605	25	0.02420	440	41993	0.01048
0.605	25	0.02420	642	61171	0.01050
1.02	25	0.04080	709	42213	0.01680
1.02	25	0.04080	726	41440	0.01752
1.02	25	0.04080	1095	63402	0.01727

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	42023	0.00000	0.000
	0	28162	0.00000	0.000
	0	28938	0.00000	0.000
	0	25896	0.00000	0.000
MEAN	0	31255	0	0.000
STD	0	6317	0	0.000

Subject #3 C13-D5 Blood Analysis

MA022201

UNKNOWNS
CALC:

	Sample	Blood wt(g)	THF wt(g)	vol. THF	g blood per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	blood C13-D5 ng/g	
control	1A	1.019	2.495	2.807	0.266	0	27850	0.00000	25	0.00000	0.000	0.00	
	1A	1.019	2.495	2.807	0.266	0	31055	0.00000	25	0.00000	0.000	0.00	
	1B	1.089	2.5	2.812	0.279	0	30996	0.00000	25	0.00000	0.000	0.00	
	1B	1.089	2.5	2.812	0.279	0	31023	0.00000	25	0.00000	0.000	0.00	mean= 0.00
													std= 0.00
min	2A	1.124	2.599	2.924	0.278	76	40890	0.00186	25	0.00444	0.111	0.40	
	2A	1.124	2.599	2.924	0.278	66	40162	0.00164	25	0.00391	0.098	0.35	
	2B	1.054	2.501	2.813	0.273	70	43886	0.00160	25	0.00382	0.096	0.35	
	2B	1.054	2.501	2.813	0.273	69	43294	0.00159	25	0.00379	0.095	0.35	mean= 0.36
													std= 0.02
1 hr	3A	1.052	2.516	2.830	0.271	127	44006	0.00289	25	0.00690	0.173	0.64	
	3A	1.052	2.516	2.830	0.271	136	45160	0.00301	25	0.00718	0.180	0.66	
	3B	0.99	2.622	2.949	0.251	120	44029	0.00273	25	0.00651	0.163	0.65	
	3B	0.99	2.622	2.949	0.251	130	44544	0.00292	25	0.00697	0.174	0.69	mean= 0.66
													std= 0.02
2 hr	4A	0.975	2.612	2.938	0.249	107	45285	0.00236	25	0.00563	0.141	0.56	
	4A	0.975	2.612	2.938	0.249	109	42867	0.00254	25	0.00606	0.152	0.61	
	4B	1.09	2.676	3.010	0.266	109	42053	0.00259	25	0.00618	0.155	0.58	
	4B	1.09	2.676	3.010	0.266	118	42064	0.00281	25	0.00671	0.168	0.63	mean= 0.60
													std= 0.03
4 hr	5A	0.966	2.694	3.030	0.242	86	46574	0.00185	25	0.00441	0.110	0.46	
	5A	0.966	2.694	3.030	0.242	107	45027	0.00238	25	0.00568	0.142	0.59	
	5B	1.075	2.814	3.165	0.254	119	46301	0.00257	25	0.00613	0.153	0.60	
	5B	1.075	2.814	3.165	0.254	124	46371	0.00267	25	0.00637	0.159	0.63	mean= 0.57
													std= 0.07
6 hr	6A	1.133	2.998	3.372	0.251	100	42901	0.00233	25	0.00556	0.139	0.55	
	6A	1.133	2.998	3.372	0.251	101	43326	0.00233	25	0.00556	0.139	0.55	
	6B	0.98	2.58	2.902	0.252	93	46236	0.00201	25	0.00480	0.120	0.48	
	6B	0.98	2.58	2.902	0.252	96	45859	0.00209	25	0.00499	0.125	0.49	mean= 0.52
													std= 0.03

Detection & Quantitation Estimates
From Standard Curve

y intercept= 2.05E-04 +/- 0.0001055
Goodness of fit= 0.9981

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000521	0.00124	0.031

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.00126	0.00301	0.075

Subject #3 C13-D5 Plasma Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.052	25	0.00208	31	39302	0.00079
0.052	25	0.00208	27	39086	0.00069
0.052	25	0.00208	47	61342	0.00077
0.126	25	0.00504	71	39419	0.00180
0.126	25	0.00504	79	40126	0.00197
0.126	25	0:00504	121	60485	0.00200
0.28	25	0.01120	227	49916	0.00455
0.28	25	0.01120	212	49875	0.00425
0.28	25	0.01120	321	74275	0.00432
0.605	25	0.02420	412	43230	0.00953
0.605	25	0.02420	440	41993	0.01048
0.605	25	0.02420	642	61171	0.01050
1.02	25	0.04080	709	42213	0.01680
1.02	25	0.04080	726	41440	0.01752
1.02	25	0.04080	1095	63402	0.01727

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	42023	0.00000	0.000
	0	28162	0.00000	0.000
	0	28938	0.00000	0.000
	0	25896	0.00000	0.000
MEAN	0	31255	0	0.000
STD	0	6317	0	0.000

Subject #3 C13-D5 Plasma Analysis

MA022201

UNKNOWNS
CALC:

	Sample	Plasma wt(g)	THF wt(g)	vol. THF	g plasma per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	plasma C13-D5 ng/g	
control	1A	0.973	2.682	3.017	0.244	0	38219	0.00000	25	0.00000	0.000	0.00	
	1A	0.973	2.682	3.017	0.244	0	39652	0.00000	25	0.00000	0.000	0.00	
	1B	1.114	2.508	2.821	0.283	0	42800	0.00000	25	0.00000	0.000	0.00	
	1B	1.114	2.508	2.821	0.283	0	42660	0.00000	25	0.00000	0.000	0.00	mean= 0.00
													std= 0.00
30 min	2A	0.794	2.109	2.372	0.251	90	42230	0.00213	25	0.00509	0.127	0.51	
	2A	0.794	2.109	2.372	0.251	96	42960	0.00223	25	0.00533	0.133	0.53	
	2B	0.711	2.013	2.264	0.239	116	48107	0.00241	25	0.00575	0.144	0.60	
	2B	0.711	2.013	2.264	0.239	95	48253	0.00197	25	0.00470	0.117	0.49	mean= 0.53
													std= 0.04
1 hr	3A	0.948	2.507	2.820	0.252	189	51383	0.00368	25	0.00878	0.219	0.87	
	3A	0.948	2.507	2.820	0.252	182	40783	0.00446	25	0.01065	0.266	1.06	
	3B	0.962	2.581	2.903	0.249	157	42186	0.00372	25	0.00888	0.222	0.89	
	3B	0.962	2.581	2.903	0.249	175	42692	0.00410	25	0.00978	0.245	0.98	mean= 0.95
													std= 0.07
2 hr	4A	0.925	2.453	2.759	0.251	168	43683	0.00385	25	0.00918	0.229	0.91	
	4A	0.925	2.453	2.759	0.251	170	41986	0.00405	25	0.00966	0.242	0.96	
	4B	0.879	2.426	2.729	0.244	207	59908	0.00346	25	0.00824	0.206	0.85	
	4B	0.879	2.426	2.729	0.244	233	60097	0.00388	25	0.00925	0.231	0.95	mean= 0.92
													std= 0.05
4 hr	5A	1.057	2.798	3.147	0.251	195	54614	0.00357	25	0.00852	0.213	0.85	
	5A	1.057	2.798	3.147	0.251	211	53632	0.00393	25	0.00939	0.235	0.93	
	5B	0.971	2.641	2.971	0.246	232	60544	0.00383	25	0.00914	0.229	0.93	
	5B	0.971	2.641	2.971	0.246	228	60964	0.00374	25	0.00892	0.223	0.91	mean= 0.90
													std= 0.03
6 hr	6A	0.958	2.505	2.818	0.254	192	60405	0.00318	25	0.00758	0.190	0.75	
	6A	0.958	2.505	2.818	0.254	181	60542	0.00299	25	0.00713	0.178	0.70	
	6B	0.979	2.658	2.990	0.247	182	58406	0.00312	25	0.00744	0.186	0.75	
	6B	0.979	2.658	2.990	0.247	142	42355	0.00335	25	0.00800	0.200	0.81	mean= 0.75
													std= 0.04

Detection & Quantitation Estimates
From Standard Curve
y intercept= 2.05E-04 +/- 0.0001055
Goodness of fit= 0.9981

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000521	0.00124	0.031

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.0012597	0.00301	0.075

Subject #4

AS030601

Air Bag Analysis

2002-I0000-51781
INTERNAL

UNKNOWNS
CALC:

Time sample taken	Sample ID	Volume Exhaled Air	Hexane wt(g)	vol. Hexane	D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	Hexane extract ng D5/ml	Dilution Factor	Total D4 in Sample ng D5	D5 ng/L	Exhaled D5 ng/L
08:47 AM	Control	40.5	6.492	9.851	8294	39290	0.211	25	0.493	12.325	1.00	121.42	3.00	
	Control	40.5	6.492	9.851	11839	55828	0.212	25	0.495	12.375	1.00	121.91	3.01	
	Control BU	40.5	6.46	9.803	0	55785	0.000	25	0.000	0.000	1.00	0.00	0.00	
	Control BU	40.5	6.46	9.803	0	54441	0.000	25	0.000	0.000	1.00	0.00	0.00	3.00
09:02 AM	15 min post	5.82	6.5	9.863	410405	56791	7.227	25	16.885	422.125	1.00	4163.60	715.40	
	15 min post	5.82	6.5	9.863	398086	55860	7.126	25	16.649	416.225	1.00	4105.41	705.40	
	15 min BU	5.82	6.507	9.874	0	56846	0.000	25	0.000	0.000	1.00	0.00	0.00	
	15 min BU	5.82	6.507	9.874	0	57052	0.000	25	0.000	0.000	1.00	0.00	0.00	710.40
09:15 AM	30 min post	6.01	6.499	9.862	421363	56900	7.405	25	17.301	432.525	1.00	4265.52	709.74	
	30 minpost	6.01	6.499	9.862	397372	55206	7.198	25	16.818	420.450	1.00	4146.44	689.92	
	30 minBU	6.01	6.498	9.860	0	40416	0.000	25	0.000	0.000	1.00	0.00	0.00	
	30 minBU	6.01	6.498	9.860	0	38287	0.000	25	0.000	0.000	1.00	0.00	0.00	699.83
09:30 AM	45 min post	6.22	6.473	9.822	157428	39548	3.981	25	9.301	232.525	1.00	2283.97	367.20	
	45 min post	6.22	6.473	9.822	166037	40429	4.107	25	9.596	239.900	1.00	2356.41	378.84	
	45 min BU	6.22	6.529	9.907	0	40621	0.000	25	0.000	0.000	1.00	0.00	0.00	
	45 min BU	6.22	6.529	9.907	0	37440	0.000	25	0.000	0.000	1.00	0.00	0.00	373.02
09:47 AM	60 min post	6.2	6.517	9.889	150094	39336	3.816	25	8.916	222.900	1.00	2204.31	355.53	
	60 min post	6.2	6.517	9.889	151306	39264	3.854	25	9.005	225.125	1.00	2226.31	359.08	
	60 min BU	6.2	6.492	9.851	0	37253	0.000	25	0.000	0.000	1.00	0.00	0.00	
	60 min BU	6.2	6.492	9.851	0	39730	0.000	25	0.000	0.000	1.00	0.00	0.00	357.31
10:01 AM	75 min post	6.01	6.488	9.845	136568	40201	3.397	25	7.937	198.425	1.00	1953.54	325.05	
	75 min post	6.01	6.488	9.845	130662	39113	3.341	25	7.806	195.150	1.00	1921.29	319.68	
	75 min BU	6.01	6.508	9.876	0	38416	0.000	25	0.000	0.000	1.00	0.00	0.00	
	75 min BU	6.01	6.508	9.876	0	39650	0.000	25	0.000	0.000	1.00	0.00	0.00	322.37
10:16 AM	90 min post	5.63	6.506	9.873	66075	37267	1.773	25	4.142	103.550	1.00	1022.30	181.58	
	90 min post	5.63	6.506	9.873	68350	39635	1.724	25	4.028	100.700	1.00	994.16	176.58	
	90 min BU	5.63	6.499	9.862	0	40874	0.000	25	0.000	0.000	1.00	0.00	0.00	
	90 min BU	5.63	6.499	9.862	0	38383	0.000	25	0.000	0.000	1.00	0.00	0.00	179.08
10:33 AM	105 min post	5.79	6.516	9.888	54709	43825	1.248	25	2.916	72.900	1.00	720.81	124.49	
	105 min post	5.79	6.516	9.888	51024	40691	1.254	25	2.930	73.250	1.00	724.27	125.09	
	105 min BU	5.79	6.521	9.895	0	40191	0.000	25	0.000	0.000	1.00	0.00	0.00	
	105 minBU	5.79	6.521	9.895	0	42043	0.000	25	0.000	0.000	1.00	0.00	0.00	124.79
10:45 AM	120 min post	5.63	6.53	9.909	39716	38089	1.043	25	2.437	60.925	1.00	603.70	107.23	
	120 min post	5.63	6.53	9.909	61225	59304	1.032	25	2.411	60.275	1.00	597.26	106.09	
	120 min BU	5.63	6.466	9.812	0	62659	0.000	25	0.000	0.000	1.00	0.00	0.00	
	120 minBU	5.63	6.466	9.812	0	42522	0.000	25	0.000	0.000	1.00	0.00	0.00	106.66
12:50 PM	240 min post	5.78	6.504	9.869	29200	59761	0.489	25	1.143	28.575	1.00	282.02	48.79	
	240 min post	5.78	6.504	9.869	19739	40280	0.490	25	1.145	28.625	1.00	282.51	48.88	
	240 min BU	5.78	6.486	9.842	0	41364	0.000	25	0.000	0.000	1.00	0.00	0.00	
	240 min BU	5.78	6.486	9.842	0	40727	0.000	25	0.000	0.000	1.00	0.00	0.00	48.84
02:38 PM	360 min post	5.5	6.502	9.866	5777	39236	0.147	25	0.343	8.575	1.00	84.60	15.38	
	360 min post	5.5	6.502	9.866	6168	41929	0.147	25	0.343	8.575	1.00	84.60	15.38	
	360 min BU	5.5	6.51	9.879	0	42279	0.000	25	0.000	0.000	1.00	0.00	0.00	
	360 min BU	5.5	6.51	9.879	0	40514	0.000	25	0.000	0.000	1.00	0.00	0.00	15.38
08:45 AM	24 hr post	41.68	6.533	9.914	15792	40038	0.394	25	0.921	23.025	1.00	228.26	5.48	
	24 hr post	41.68	6.533	9.914	15932	38912	0.409	25	0.956	23.900	1.00	236.93	5.68	
	24 hr post BU	41.68	6.461	9.804	0	39865	0.000	25	0.000	0.000	1.00	0.00	0.00	
	24 hr post BU	41.68	6.461	9.804	0	39912	0.000	25	0.000	0.000	1.00	0.00	0.00	5.58

Subject #4 C13-D5 Blood Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.052	25	0.00208	53	58355	0.00091
0.052	25	0.00208	40	60037	0.00067
0.052	25	0.00208	46	63696	0.00072
0.126	25	0.00504	108	60037	0.00180
0.126	25	0.00504	110	60176	0.00183
0.126	25	0.00504	133	67449	0.00197
0.248	25	0.00992	223	53323	0.00418
0.248	25	0.00992	214	58575	0.00365
0.248	25	0.00992	280	65712	0.00426
0.54	25	0.02160	527	57761	0.00912
0.54	25	0.02160	538	57998	0.00928
0.54	25	0.02160	554	62119	0.00892
0.716	25	0.02864	712	58352	0.01220
0.716	25	0.02864	708	58449	0.01211
0.716	25	0.02864	764	62839	0.01216
0.96	25	0.03840	950	58394	0.01627
0.96	25	0.03840	970	59134	0.01640
0.96	25	0.03840	1039	65313	0.01591

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	60265	0.00000	0.000
	0	63046	0.00000	0.000
MEAN	0	61656	0	0.000
STD	0	1391	0	0.000

Subject #4 C13-D5 Blood Analysis

AS030501

UNKNOWNS
CALC:

	Sample II	Blood wt(g)	THF wt(g)	vol. THF	g blood per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	blood C13-D5 ng/g	
control	1A	1.036	2.501	2.813	0.269	0	27850	0.00000	25	0.00000	0.000	0.00	
	1A	1.036	2.501	2.813	0.269	0	31055	0.00000	25	0.00000	0.000	0.00	
	1B	0.95	2.506	2.819	0.252	0	30996	0.00000	25	0.00000	0.000	0.00	
	1B	0.95	2.506	2.819	0.252	0	31023	0.00000	25	0.00000	0.000	0.00	mean= 0.00
													std= 0.00
30 min	2A	0.736	2.651	2.982	0.198	135	44034	0.00307	25	0.00729	0.182	0.92	
	2A	0.736	2.561	2.881	0.203	160	57415	0.00279	25	0.00662	0.166	0.81	
	2B	1.04	2.587	2.910	0.263	263	56016	0.00470	25	0.01115	0.279	1.06	
	2B	1.04	2.587	2.910	0.263	170	42591	0.00399	25	0.00947	0.237	0.90	mean= 0.92
													std= 0.09
1 hr	3A	0.977	2.558	2.877	0.253	314	51061	0.00615	25	0.01459	0.365	1.44	
	3A	0.977	2.558	2.877	0.253	258	40754	0.00633	25	0.01502	0.376	1.48	
	3B	1.009	2.553	2.872	0.260	254	41773	0.00608	25	0.01443	0.361	1.39	
	3B	1.009	2.553	2.872	0.260	250	43078	0.00580	25	0.01376	0.344	1.32	mean= 1.41
													std= 0.06
2 hr	4A	0.977	2.584	2.907	0.252	244	40910	0.00596	25	0.01414	0.354	1.41	
	4A	0.977	2.584	2.907	0.252	218	40478	0.00539	25	0.01279	0.320	1.27	
	4B	1.027	2.657	2.989	0.256	262	42104	0.00622	25	0.01476	0.369	1.44	
	4B	1.027	2.657	2.989	0.256	331	52948	0.00625	25	0.01483	0.371	1.45	mean= 1.39
													std= 0.07
4 hr	5A	1.09	2.68	3.015	0.266	329	57296	0.00574	25	0.01362	0.341	1.28	
	5A	1.09	2.68	3.015	0.266	244	43363	0.00563	25	0.01336	0.334	1.26	
	5B	1.065	2.551	2.870	0.271	312	55289	0.00564	25	0.01338	0.335	1.24	
	5B	1.065	2.551	2.870	0.271	334	53207	0.00628	25	0.01490	0.373	1.38	mean= 1.29
													std= 0.05
6 hr	6A	1.021	2.62	2.947	0.257	175	54828	0.00319	25	0.00757	0.189	0.74	
	6A	1.021	2.62	2.947	0.257	144	50246	0.00287	25	0.00681	0.170	0.66	
	6B	0.976	2.55	2.868	0.254	160	55823	0.00287	25	0.00681	0.170	0.67	
	6B	0.976	2.55	2.868	0.254	167	56625	0.00295	25	0.00700	0.175	0.69	mean= 0.69
													std= 0.03

Detection & Quantitation Estimates
From Standard Curve

y intercept= 1.48E-04 +/- 6.3391E-05
Goodness of fit= 0.9991

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000338	0.0008	0.020

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.000782	0.00186	0.047

Subject #4 C13-D5 Plasma Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.052	25	0.00208	53	58355	0.00091
0.052	25	0.00208	40	60037	0.00067
0.052	25	0.00208	46	63696	0.00072
0.126	25	0.00504	108	60037	0.00180
0.126	25	0.00504	110	60176	0.00183
0.126	25	0.00504	133	67449	0.00197
0.248	25	0.00992	223	53323	0.00418
0.248	25	0.00992	214	58575	0.00365
0.248	25	0.00992	280	65712	0.00426
0.54	25	0.02160	527	57761	0.00912
0.54	25	0.02160	538	57998	0.00928
0.54	25	0.02160	554	62119	0.00892
0.716	25	0.02864	712	58352	0.01220
0.716	25	0.02864	708	58449	0.01211
0.716	25	0.02864	764	62839	0.01216
0.96	25	0.03840	950	58394	0.01627
0.96	25	0.03840	970	59134	0.01640
0.96	25	0.03840	1039	65313	0.01591

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	60265	0.00000	0.000
	0	63046	0.00000	0.000
MEAN	0	61656	0	0.000
STD	0	1391	0	0.000

Subject #4 C13-D5 Plasma Analysis

AS030501

UNKNOWNS
CALC:

	Sample	Plasma wt(g)	THF wt(g)	vol. THF	g plasma per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	plasma C13-D5 ng/g	
control	1A	0.946	2.536	2.853	0.249	0	53134	0.00000	25	0.00000	0.000	0.00	
	1A	0.946	2.536	2.853	0.249	0	41535	0.00000	25	0.00000	0.000	0.00	
	1B	1.116	2.465	2.773	0.287	0	39441	0.00000	25	0.00000	0.000	0.00	
	1B	1.116	2.465	2.773	0.287	0	39596	0.00000	25	0.00000	0.000	0.00	mean= 0.00 std= 0.00
30 min	2A	1.02	2.58	2.902	0.260	339	51762	0.00655	25	0.01554	0.389	1.49	
	2A	1.02	2.58	2.902	0.260	318	51602	0.00616	25	0.01462	0.366	1.41	
	2B	0.999	2.541	2.858	0.259	234	40212	0.00582	25	0.01381	0.345	1.33	
	2B	0.999	2.541	2.858	0.259	346	52761	0.00656	25	0.01557	0.389	1.50	mean= 1.43 std= 0.07
1 hr	3A	1.084	2.502	2.814	0.278	550	51882	0.01060	25	0.02515	0.629	2.26	
	3A	1.084	2.502	2.814	0.278	451	51742	0.00872	25	0.02069	0.517	1.86	
	3B	1.04	2.593	2.917	0.263	435	52080	0.00835	25	0.01981	0.495	1.88	
	3B	1.04	2.593	2.917	0.263	504	57137	0.00882	25	0.02093	0.523	1.99	mean= 2.00 std= 0.16
2 hr	4A	0.991	2.525	2.840	0.259	446	57921	0.00770	25	0.01827	0.457	1.77	
	4A	0.991	2.525	2.840	0.259	470	57451	0.00818	25	0.01941	0.485	1.88	
	4B	1.051	2.675	3.009	0.259	477	58813	0.00811	25	0.01924	0.481	1.86	
	4B	1.051	2.675	3.009	0.259	401	54651	0.00734	25	0.01742	0.436	1.68	mean= 1.80 std= 0.08
4 hr	5A	0.942	2.628	2.956	0.242	365	53367	0.00684	25	0.01623	0.406	1.68	
	5A	0.942	2.628	2.956	0.242	329	57866	0.00569	25	0.01350	0.338	1.40	
	5B	0.94	2.632	2.961	0.241	362	58948	0.00614	25	0.01457	0.364	1.51	
	5B	0.94	2.632	2.961	0.241	305	54250	0.00562	25	0.01334	0.334	1.38	mean= 1.49 std= 0.12
6 hr	6A	1.023	2.574	2.895	0.261	176	53625	0.00328	25	0.00778	0.195	0.74	
	6A	1.023	2.574	2.895	0.261	217	58767	0.00369	25	0.00876	0.219	0.84	
	6B	0.947	2.586	2.909	0.246	220	58586	0.00376	25	0.00892	0.223	0.91	
	6B	0.947	2.586	2.909	0.246	194	58313	0.00333	25	0.00790	0.198	0.80	mean= 0.82 std= 0.06

Detection & Quantitation Estimates
From Standard Curve
y intercept= 1.48E-04 +/- 6.3391E-05
Goodness of fit= 0.9991

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000338	0.0008	0.020

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.000782	0.00186	0.047

Subject #5

TB032201

Air Bag Analysis

2002-I0000-51781
INTERNAL

UNKNOWNS
CALC:

Time sample taken	Sample ID	Volume Exhaled Air	Hexane wt(g)	vol. Hexane	D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	Hexane extract ng D5/ml	Dilution Factor	Total D4 in Sample ng D5	D5 ng/L	Exhaled D5 ng/L
10:45 AM	Control	42.47	6.443	9.777	5233	34304	0.153	25	0.320	8.000	1.00	78.22	1.84	
	Control	42.47	6.443	9.777	7645	48109	0.159	25	0.332	8.300	1.00	81.15	1.91	
	Control	42.47	6.443	9.777	7503	45478	0.165	25	0.345	8.625	1.00	84.33	1.99	
	Control BU	42.47	6.431	9.759	0	43857	0.000	25	0.000	0.000	1.00	0.00	0.00	
	Control BU	42.47	6.431	9.759	0	44652	0.000	25	0.000	0.000	1.00	0.00	0.00	1.91
11:01 AM	15 min post	5.6	6.411	9.728	365956	35536	10.298	25	21.524	538.100	1.00	5234.84	934.79	
	15 min post	5.6	6.411	9.728	345424	30200	11.438	25	23.906	597.650	1.00	5814.16	1038.24	
	15 min post	5.6	6.411	9.728	376928	33251	11.336	25	23.693	592.325	1.00	5762.36	1028.99	
	15 min BU	5.6	6.354	9.642	0	31813	0.000	25	0.000	0.000	1.00	0.00	0.00	
	15 min BU	5.6	6.354	9.642	0	32386	0.000	25	0.000	0.000	1.00	0.00	0.00	1000.68
11:17 AM	30 min post	6.09	6.416	9.736	373964	34024	10.991	25	22.972	574.300	1.00	5591.36	918.12	
	30 minpost	6.09	6.416	9.736	511831	42555	12.028	25	25.140	628.500	1.00	6119.05	1004.77	
	30 minpost	6.09	6.416	9.736	536267	42103	12.737	25	26.621	665.525	1.00	6479.53	1063.96	
	30 minBU	6.09	6.388	9.693	0	47135	0.000	25	0.000	0.000	1.00	0.00	0.00	
	30 minBU	6.09	6.388	9.693	0	46540	0.000	25	0.000	0.000	1.00	0.00	0.00	995.62
11:34 AM	45 min post	5.57	6.414	9.733	115948	50846	2.280	25	4.765	119.125	1.00	1159.44	208.16	
	45 min post	5.57	6.414	9.733	104183	44764	2.327	25	4.864	121.600	1.00	1183.52	212.48	
	45 min post	5.57	6.414	9.733	110334	46685	2.363	25	4.939	123.475	1.00	1201.77	215.76	
	45 min BU	5.57	6.404	9.718	0	46882	0.000	25	0.000	0.000	1.00	0.00	0.00	
	45 min BU	5.57	6.404	9.718	0	47620	0.000	25	0.000	0.000	1.00	0.00	0.00	212.13
11:45 AM	60 min post	5.65	6.386	9.690	132292	52304	2.529	25	5.286	132.150	1.00	1280.59	226.65	
	60 min post	5.65	6.386	9.690	122087	45251	2.698	25	5.639	140.975	1.00	1366.11	241.79	
	60 min post	5.65	6.386	9.690	123503	48372	2.553	25	5.336	133.400	1.00	1292.70	228.80	
	60 min BU	5.65	6.384	9.687	0	45251	0.000	25	0.000	0.000	1.00	0.00	0.00	
	60 min BU	5.65	6.384	9.687	0	48372	0.000	25	0.000	0.000	1.00	0.00	0.00	232.41
12:04 AM	75 min post	5.95	6.406	9.721	110191	52605	2.095	25	4.379	109.475	1.00	1064.18	178.85	
	75 min post	5.95	6.406	9.721	67840	31705	2.140	25	4.473	111.825	1.00	1087.03	182.69	
	75 min post	5.95	6.406	9.721	97995	46682	2.099	25	4.387	109.675	1.00	1066.13	179.18	
	75 min BU	5.95	6.44	9.772	0	45340	0.000	25	0.000	0.000	1.00	0.00	0.00	
	75 min BU	5.95	6.44	9.772	0	46680	0.000	25	0.000	0.000	1.00	0.00	0.00	180.24
12:19 AM	90 min post	6.07	6.416	9.736	163327	52159	3.131	25	6.544	163.600	1.00	1592.80	262.41	
	90 min post	6.07	6.416	9.736	160382	48825	3.285	25	6.866	171.650	1.00	1671.18	275.32	
	90 min post	6.07	6.416	9.736	153263	46853	3.271	25	6.837	170.925	1.00	1664.12	274.15	
	90 min BU	6.07	6.411	9.728	0	44500	0.000	25	0.000	0.000	1.00	0.00	0.00	
	90 min BU	6.07	6.411	9.728	0	45600	0.000	25	0.000	0.000	1.00	0.00	0.00	270.63
12:30 AM	105 min post	5.51	6.454	9.794	39369	38137	1.032	25	2.157	53.925	1.00	528.12	95.85	
	105 min post	5.51	6.454	9.794	56045	52264	1.072	25	2.241	56.025	1.00	548.69	99.58	
	105 min post	5.51	6.454	9.794	53666	51047	1.051	25	2.197	54.925	1.00	537.91	97.63	
	105 min BU	5.51	6.386	9.690	0	51743	0.000	25	0.000	0.000	1.00	0.00	0.00	
	105 minBU	5.51	6.386	9.690	0	52000	0.000	25	0.000	0.000	1.00	0.00	0.00	97.68
12:47 AM	120 min post	5.86	6.383	9.686	23536	35799	0.657	25	1.373	34.325	1.00	332.47	56.74	
	120 min post	5.86	6.383	9.686	24311	36056	0.674	25	1.409	35.225	1.00	341.19	58.22	
	120 min post	5.86	6.383	9.686	23971	35531	0.675	25	1.411	35.275	1.00	341.67	58.31	
	120 min BU	5.86	6.412	9.730	0	32427	0.000	25	0.000	0.000	1.00	0.00	0.00	
	120 minBU	5.86	6.412	9.730	0	33100	0.000	25	0.000	0.000	1.00	0.00	0.00	57.75
02:45 PM	240 min post	6.25	6.381	9.683	9742	35995	0.271	25	0.566	14.150	1.00	137.01	21.92	
	240 min post	6.25	6.381	9.683	9767	35303	0.277	25	0.579	14.475	1.00	140.16	22.43	
	240 min post	6.25	6.381	9.683	9706	35409	0.274	25	0.573	14.325	1.00	138.71	22.19	
	240 min BU	6.25	6.418	9.739	0	35438	0.000	25	0.000	0.000	1.00	0.00	0.00	
	240 min BU	6.25	6.418	9.739	0	36000	0.000	25	0.000	0.000	1.00	0.00	0.00	22.18
04:47 PM	360 min post	6.27	6.408	9.724	4963	53066	0.094	25	0.196	4.900	1.00	47.65	7.60	
	360 min post	6.27	6.408	9.724	3104	35048	0.089	25	0.186	4.650	1.00	45.22	7.21	
	360 min post	6.27	6.408	9.724	3218	34798	0.092	25	0.192	4.800	1.00	46.67	7.44	
	360 min BU	6.27	6.386	9.690	0	35103	0.000	25	0.000	0.000	1.00	0.00	0.00	
	360 min BU	6.27	6.386	9.690	0	34100	0.000	25	0.000	0.000	1.00	0.00	0.00	7.42
10:45 AM	24 hr post	42.13	6.453	9.792	27055	51573	0.525	25	1.097	27.425	1.00	268.55	6.37	
	24 hr post	42.13	6.453	9.792	18165	34759	0.523	25	1.093	27.325	1.00	267.57	6.35	
	24 hr post	42.13	6.453	9.792	18606	35823	0.519	25	1.085	27.125	1.00	265.61	6.30	
	24 hr post BU	42.13	6.482	9.836	0	35576	0.000	25	0.000	0.000	1.00	0.00	0.00	
	24 hr post BU	42.13	6.482	9.836	0	36104	0.000	25	0.000	0.000	1.00	0.00	0.00	6.34

Subject #5 C13-D5 Blood Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.103	25	0.00412	96	65903	0.00146
0.103	25	0.00412	103	65822	0.00156
0.103	25	0.00412	101	71816	0.00141
0.222	25	0.00888	182	63948	0.00285
0.222	25	0.00888	204	64502	0.00316
0.222	25	0.00888	155	50944	0.00304
0.544	25	0.02176	485	65601	0.00739
0.544	25	0.02176	492	64766	0.00760
0.544	25	0.02176	382	52128	0.00733
0.773	25	0.03092	685	65124	0.01052
0.773	25	0.03092	675	64396	0.01048
0.773	25	0.03092	742	72590	0.01022
1.158	25	0.04632	1067	66986	0.01593
1.158	25	0.04632	1057	66422	0.01591
1.158	25	0.04632	804	52520	0.01531

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	65106	0.00000	0.000
	0	46696	0.00000	0.000
	0	68770	0.00000	0.000
	0	51587	0.00000	0.000
MEAN	0	58040	0	0.000
STD	0	9157	0	0.000

Subject #5 C13-D5 Blood Analysis

AS030501

UNKNOWNS
CALC:

	Sample ID	Blood wt(g)	THF wt(g)	vol. THF	g blood per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	blood C13-D5 ng/g	
control	1A	0.922	2.71	3.048	0.232	0	44045	0.00000	25	0.00000	0.000	0.00	
	1A	0.922	2.71	3.048	0.232	0	43952	0.00000	25	0.00000	0.000	0.00	
	1B	1.056	2.809	3.160	0.250	0	43057	0.00000	25	0.00000	0.000	0.00	
	1B	1.056	2.809	3.160	0.250	0	43560	0.00000	25	0.00000	0.000	0.00	mean= 0.00 std= 0.00
30 min	2A	0.939	2.664	2.997	0.239	110	45281	0.00243	25	0.00717	0.179	0.75	
	2A	0.939	2.664	2.997	0.239	121	46537	0.00260	25	0.00767	0.192	0.80	
	2B	1.047	2.72	3.060	0.255	149	61059	0.00244	25	0.00720	0.180	0.71	
	2B	1.047	2.72	3.060	0.255	134	46302	0.00289	25	0.00852	0.213	0.84	mean= 0.77 std= 0.05
1 hr	3A	1.063	2.769	3.115	0.254	125	45572	0.00274	25	0.00808	0.202	0.79	
	3A	1.063	2.769	3.115	0.254	138	45486	0.00303	25	0.00894	0.224	0.88	
	3B	1	2.839	3.193	0.238	121	48756	0.00248	25	0.00732	0.183	0.77	
	3B	1	2.839	3.193	0.238	111	49471	0.00224	25	0.00661	0.165	0.69	mean= 0.78 std= 0.07
2 hr	4A	1.046	2.751	3.094	0.253	89	44524	0.00200	25	0.00590	0.148	0.58	
	4A	1.046	2.751	3.094	0.253	87	43825	0.00199	25	0.00587	0.147	0.58	
	4B	1.137	2.745	3.088	0.269	129	63931	0.00202	25	0.00596	0.149	0.55	
	4B	1.137	2.745	3.088	0.269	105	48454	0.00217	25	0.00640	0.160	0.59	mean= 0.58 std= 0.02
4 hr	5A	0.961	2.74	3.082	0.238	43	44268	0.00097	25	0.00286	0.072	0.30	
	5A	0.961	2.74	3.082	0.238	45	44400	0.00101	25	0.00298	0.075	0.31	
	5B	1.017	2.887	3.247	0.238	46	50548	0.00091	25	0.00268	0.067	0.28	
	5B	1.017	2.887	3.247	0.238	50	51991	0.00096	25	0.00283	0.071	0.30	mean= 0.30 std= 0.01
6 hr	6A	1.054	2.709	3.047	0.257	30	56673	0.00053	25	0.00156	0.039	0.15	
	6A	1.054	2.709	3.047	0.257	20	56846	0.00035	25	0.00103	0.026	0.10	
	6B	1.06	2.9	3.262	0.245	52	62974	0.00083	25	0.00245	0.061	0.25	
	6B	1.06	2.9	3.262	0.245	56	62391	0.00090	25	0.00265	0.066	0.27	mean= 0.19 std= 0.07

Detection & Quantitation Estimates
From Standard Curve
y intercept= 4.47E-05 +/- 7.39E-05
Goodness of fit= 0.999

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000266	0.00078	0.020

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.0007837	0.00231	0.058

Subject #5 C13-D5 Plasma Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.103	25	0.00412	96	65903	0.00146
0.103	25	0.00412	103	65822	0.00156
0.103	25	0.00412	101	71816	0.00141
0.222	25	0.00888	182	63948	0.00285
0.222	25	0.00888	204	64502	0.00316
0.222	25	0.00888	155	50944	0.00304
0.544	25	0.02176	485	65601	0.00739
0.544	25	0.02176	492	64766	0.00760
0.544	25	0.02176	382	52128	0.00733
0.773	25	0.03092	685	65124	0.01052
0.773	25	0.03092	675	64396	0.01048
0.773	25	0.03092	742	72590	0.01022
1.158	25	0.04632	1067	66986	0.01593
1.158	25	0.04632	1057	66422	0.01591
1.158	25	0.04632	804	52520	0.01531

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	65106	0.00000	0.000
	0	46696	0.00000	0.000
	0	68770	0.00000	0.000
	0	51587	0.00000	0.000
MEAN	0	58040	0	0.000
STD	0	9157	0	0.000

Subject #5 C13-D5 Plasma Analysis

TB032201

UNKNOWNS
CALC:

	Sample	Blood wt(g)	THF wt(g)	vol. THF	g blood per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	blood C13-D5 ng/g	
control	1A	0.987	2.757	3.101	0.241	0	57656	0.00000	25	0.00000	0.000	0.00	
	1A	0.987	2.757	3.101	0.241	0	45890	0.00000	25	0.00000	0.000	0.00	
	1B	0.973	2.703	3.040	0.242	0	63215	0.00000	25	0.00000	0.000	0.00	
	1B	0.973	2.703	3.040	0.242	0	62693	0.00000	25	0.00000	0.000	0.00	mean= 0.00
													std= 0.00
30 min	2A	0.899	2.77	3.116	0.224	221	59102	0.00374	25	0.01103	0.276	1.23	
	2A	0.899	2.77	3.116	0.224	195	58659	0.00332	25	0.00979	0.245	1.09	
	2B	0.942	2.736	3.078	0.234	202	60712	0.00333	25	0.00982	0.246	1.05	
	2B	0.942	2.736	3.078	0.234	217	62206	0.00349	25	0.01029	0.257	1.10	mean= 1.12
													std= 0.07
1 hr	3A	0.981	2.763	3.108	0.240	232	63610	0.00365	25	0.01077	0.269	1.12	
	3A	0.981	2.763	3.108	0.240	256	65414	0.00391	25	0.01153	0.288	1.20	
	3B	0.982	2.819	3.171	0.236	248	65292	0.00380	25	0.01121	0.280	1.19	
	3B	0.982	2.819	3.171	0.236	243	65498	0.00371	25	0.01094	0.274	1.16	mean= 1.17
													std= 0.03
2 hr	4A	0.865	2.486	2.796	0.236	171	62734	0.00273	25	0.00805	0.201	0.85	
	4A	0.865	2.486	2.796	0.236	191	62822	0.00304	25	0.00897	0.224	0.95	
	4B	0.796	2.573	2.894	0.216	167	65738	0.00254	25	0.00749	0.187	0.87	
	4B	0.796	2.573	2.894	0.216	180	65425	0.00275	25	0.00811	0.203	0.94	mean= 0.90
													std= 0.04
4 hr	5A	0.809	2.841	3.196	0.202	97	65502	0.00148	25	0.00437	0.109	0.54	
	5A	0.809	2.841	3.196	0.202	109	64902	0.00168	25	0.00496	0.124	0.61	
	5B	0.967	2.741	3.083	0.239	118	61308	0.00192	25	0.00566	0.142	0.59	
	5B	0.967	2.741	3.083	0.239	141	60893	0.00232	25	0.00684	0.171	0.72	mean= 0.62
													std= 0.06
6 hr	6A	0.84	2.777	3.124	0.212	77	65430	0.00118	25	0.00348	0.087	0.41	
	6A	0.84	2.777	3.124	0.212	84	63438	0.00132	25	0.00389	0.097	0.46	
	6B	1.017	2.721	3.061	0.249	108	62244	0.00174	25	0.00513	0.128	0.51	
	6B	1.017	2.721	3.061	0.249	105	62644	0.00168	25	0.00496	0.124	0.50	mean= 0.47
													std= 0.04

Detection & Quantitation Estimates
From Standard Curve
y intercept 4.47E-05 +/- 7.39E-05
Goodness of fit= 0.999

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000266	0.00078	0.020

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.0007837	0.00231	0.058

Subject #6

TE032901

Air Bag Analysis

2002-I0000-51781
INTERNAL

UNKNOWNS
CALC:

ne sample aken	Sample ID	Volume Exhaled Air	Hexane wt(g)	vol. Hexane	D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	Hexane extract ng D5/ml	Total D4 in Sample ng D5	D5 ng/L	Exhaled D5 ng/L
07:55 AM	Control	42.16	6.337	9.616	9498	53039	0.179	25	0.403	10.075	96.88	2.30	
	Control	42.16	6.337	9.616	9676	54827	0.176	25	0.396	9.900	95.20	2.26	
	Control BU	42.16	6.334	9.612	0	50035	0.000	25	0.000	0.000	0.00	0.00	2.28
Start 7:55 08:10 AM	15 min post	5.51	6.491	9.850	122148	35283	3.462	25	7.798	194.950	1920.21	348.50	
	15 min post	5.51	6.491	9.850	181513	52827	3.436	25	7.740	193.500	1905.93	345.90	
	15 min BU	5.51	6.526	9.903	0	51218	0.000	25	0.000	0.000	0.00	0.00	347.20
08:25 AM	30 min post	5.38	6.493	9.853	47790	53526	0.893	25	2.011	50.275	495.35	92.07	
	30 minpost	5.38	6.493	9.853	33168	38212	0.868	25	1.955	48.875	481.56	89.51	
	30 minBU	5.38	6.476	9.827	0	35143	0.000	25	0.000	0.000	0.00	0.00	90.79
08:40 AM	45 min post	5.29	6.519	9.892	131485	54245	2.424	25	5.460	136.500	1350.29	255.25	
	45 min post	5.29	6.519	9.892	126328	51719	2.443	25	5.503	137.575	1360.93	257.26	
	45 min BU	5.29	6.521	9.895	0	53450	0.000	25	0.000	0.000	0.00	0.00	256.26
08:55 AM	60 min post	5.77	6.523	9.898	59005	37115	1.590	25	3.581	89.525	886.15	153.58	
	60 min post	5.77	6.523	9.898	87887	54937	1.600	25	3.604	90.100	891.84	154.56	
	60 min BU	5.77	6.484	9.839	0	37631	0.000	25	0.000	0.000	0.00	0.00	154.07
09:14 AM	75 min post	5.5	6.535	9.917	34256	38369	0.893	25	2.011	50.275	498.55	90.65	
	75 min post	5.5	6.535	9.917	35472	39064	0.908	25	2.045	51.125	506.98	92.18	
	75 min BU	5.5	6.514	9.885	0	38521	0.000	25	0.000	0.000	0.00	0.00	91.41
09:28 AM	90 min post	5.71	6.479	9.832	27832	56339	0.494	25	1.113	27.825	273.56	47.91	
	90 min post	5.71	6.479	9.832	19339	39987	0.484	25	1.090	27.250	267.91	46.92	
	90 min BU	5.71	6.492	9.851	0	38431	0.000	25	0.000	0.000	0.00	0.00	47.41
09:44 AM	105 min post	5.73	6.505	9.871	12245	40028	0.306	25	0.689	17.225	170.03	29.67	
	105 min post	5.73	6.505	9.871	11834	39307	0.301	25	0.678	16.950	167.31	29.20	
	105 minBU	5.73	6.492	9.851	0	37587	0.000	25	0.000	0.000	0.00	0.00	29.44
09:55 AM	120 min post	5.88	6.535	9.917	14737	38502	0.383	25	0.863	21.575	213.95	36.39	
	120 min post	5.88	6.535	9.917	13411	35878	0.374	25	0.842	21.050	208.74	35.50	
	120 minBU	5.88	6.499	9.862	0	37625	0.000	25	0.000	0.000	0.00	0.00	35.94
11:55 PM	240 min post	5.37	6.491	9.850	5882	38775	0.152	25	0.342	8.550	84.22	15.68	
	240 min post	5.37	6.491	9.850	5629	36169	0.156	25	0.351	8.775	86.43	16.10	
	240 min BU	5.37	6.435	9.765	0	37803	0.000	25	0.000	0.000	0.00	0.00	15.89
02:00 PM	360 min post	5.78	6.51	9.879	3182	40448	0.079	25	0.178	4.450	43.96	7.61	
	360 min post	5.78	6.51	9.879	2982	38781	0.077	25	0.173	4.325	42.72	7.39	
	360 min BU	5.78	6.518	9.891	0	38830	0.000	25	0.000	0.000	0.00	0.00	7.50
08:10 AM	24 hr post	42.59	6.311	9.577	15771	40286	0.391	25	0.881	22.025	210.93	4.95	
	24 hr post	42.59	6.311	9.577	23255	59306	0.392	25	0.883	22.075	211.40	4.96	
	24 hr post BU	42.59	6.283	9.534	0	55663	0.000	25	0.000	0.000	0.00	0.00	4.96

Subject #6 C13-D5 Blood Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.103	25	0.00412	53	49925	0.00106
0.103	25	0.00412	81	69882	0.00116
0.103	25	0.00412	72	54542	0.00132
0.222	25	0.00888	227	69259	0.00328
0.222	25	0.00888	210	67700	0.00310
0.222	25	0.00888	178	55323	0.00322
0.544	25	0.02176	481	69063	0.00696
0.544	25	0.02176	523	69371	0.00754
0.544	25	0.02176	374	55907	0.00669
0.773	25	0.03092	711	69297	0.01026
0.773	25	0.03092	734	69550	0.01055
0.773	25	0.03092	532	54479	0.00977
1.158	25	0.04632	1070	70876	0.01510
1.158	25	0.04632	799	52113	0.01533
1.158	25	0.04632	1310	81955	0.01598

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	65106	0.00000	0.000
	0	46696	0.00000	0.000
	0	68770	0.00000	0.000
	0	51587	0.00000	0.000
MEAN	0	58040	0	0.000
STD	0	9157	0	0.000

Subject #6 C13-D5 Blood Analysis

TE032901

UNKNOWNS
CALC:

	Sample ID	Blood wt(g)	THF wt(g)	vol. THF	g blood per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	blood C13-D5 ng/g	
control	1A	0.93	2.408	2.709	0.256	0	47706	0.00000	25	0.00000	0.000	0.00	
	1A	0.93	2.408	2.709	0.256	0	64777	0.00000	25	0.00000	0.000	0.00	
	1B	0.965	2.497	2.809	0.256	0	63400	0.00000	25	0.00000	0.000	0.00	
	1B	0.965	2.497	2.809	0.256	0	63972	0.00000	25	0.00000	0.000	0.00	mean= 0.00
													std= 0.00
0 min	2A	0.88	2.478	2.787	0.240	110	65923	0.00167	25	0.00503	0.126	0.52	
	2A	0.88	2.478	2.787	0.240	56	48752	0.00115	25	0.00346	0.087	0.36	
	2B	1.036	2.705	3.043	0.254	99	62084	0.00159	25	0.00479	0.120	0.47	
	2B	1.036	2.705	3.043	0.254	79	46262	0.00171	25	0.00515	0.129	0.51	mean= 0.47
													std= 0.06
1 hr	3A	1.027	2.813	3.164	0.245	105	60051	0.00175	25	0.00527	0.132	0.54	
	3A	1.027	2.813	3.164	0.245	87	62430	0.00139	25	0.00419	0.105	0.43	
	3B	1.108	2.669	3.002	0.270	176	63067	0.00279	25	0.00840	0.210	0.78	
	3B	1.108	2.669	3.002	0.270	150	61619	0.00243	25	0.00732	0.183	0.68	mean= 0.61
													std= 0.13
2 hr	4A	1.017	2.837	3.191	0.242	86	70880	0.00121	25	0.00364	0.091	0.38	
	4A	1.017	2.837	3.191	0.242	90	68380	0.00132	25	0.00398	0.100	0.41	
	4B	1.089	2.799	3.148	0.257	73	66321	0.00110	25	0.00331	0.083	0.32	
	4B	1.089	2.799	3.148	0.257	65	50241	0.00129	25	0.00389	0.097	0.38	mean= 0.37
													std= 0.03
4 hr	5A	0.9	2.835	3.189	0.220	46	69567	0.00066	25	0.00199	0.050	0.23	
	5A	0.9	2.835	3.189	0.220	42	51749	0.00081	25	0.00244	0.061	0.28	
	5B	1.078	2.86	3.217	0.251	46	53999	0.00085	25	0.00256	0.064	0.25	
	5B	1.078	2.86	3.217	0.251	47	53654	0.00088	25	0.00265	0.066	0.26	mean= 0.26
													std= 0.02
6 hr	6A	1.11	2.859	3.216	0.257	60	74637	0.00080	25	0.00241	0.060	0.23	
	6A	1.11	2.859	3.216	0.257	26	56405	0.00046	25	0.00139	0.035	0.14	
	6B	0.926	2.787	3.135	0.228	21	49209	0.00043	25	0.00130	0.033	0.14	
	6B	0.926	2.787	3.135	0.228	23	49115	0.00047	25	0.00142	0.036	0.16	mean= 0.17
													std= 0.04

Detection & Quantitation Estimates
From Standard Curve
y intercept= 4.00E-05 +/- 0.0001393
Goodness of fit= 0.999

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000458	0.00138	0.035

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.001433	0.00432	0.108

Subject #6 C13-D5 Plasma Analysis

Analysis using M4Q as internal std
M4Q was dissolved in the THF extractant at a conc. of ~25ng/ml
m/z = 360 for C13-D5 and m/z = 281 for M4Q

Standards

C13-D5 ng /ml	M4Q ng/ml	Conc Ratio	C13-D5 (area)	M4Q (area)	Area Ratio
0.103	25	0.00412	53	49925	0.00106
0.103	25	0.00412	81	69882	0.00116
0.103	25	0.00412	72	54542	0.00132
0.222	25	0.00888	227	69259	0.00328
0.222	25	0.00888	210	67700	0.00310
0.222	25	0.00888	178	55323	0.00322
0.544	25	0.02176	481	69063	0.00696
0.544	25	0.02176	523	69371	0.00754
0.544	25	0.02176	374	55907	0.00669
0.773	25	0.03092	711	69297	0.01026
0.773	25	0.03092	734	69550	0.01055
0.773	25	0.03092	532	54479	0.00977
1.158	25	0.04632	1070	70876	0.01510
1.158	25	0.04632	799	52113	0.01533
1.158	25	0.04632	1310	81955	0.01598

BLANKS

	C13-D5 AREA	M4Q AREA	AREA RATIO	CONC RATIO
	0	65106	0.00000	0.000
	0	46696	0.00000	0.000
	0	68770	0.00000	0.000
	0	51587	0.00000	0.000
MEAN	0	58040	0	0.000
STD	0	9157	0	0.000

Subject #6 C13-D5 Plasma Analysis

TE032901

UNKNOWNS
CALC:

	Sample	Plasma wt(g)	THF wt(g)	vol. THF	g plasma per ml THF	C13-D5 area	M4Q area	area Ratio	Conc M4Q	Prizm Reg conc. Ratio	THF ext conc ng D4/ml	Plasma C13-D5 ng/g	
control	1A	1.211	2.948	3.316	0.268	0	43210	0.00000	25	0.00000	0.000	0.00	
	1A	1.211	2.948	3.316	0.268	0	43863	0.00000	25	0.00000	0.000	0.00	
	1B	1.215	2.82	3.172	0.277	0	44392	0.00000	25	0.00000	0.000	0.00	
	1B	1.215	2.82	3.172	0.277	0	43849	0.00000	25	0.00000	0.000	0.00	mean= 0.00 std= 0.00
30 min	2A	1.099	2.704	3.042	0.265	98	45477	0.00215	25	0.00648	0.162	0.61	
	2A	1.099	2.704	3.042	0.265	97	46739	0.00208	25	0.00627	0.157	0.59	
	2B	1.115	2.676	3.010	0.270	102	45802	0.00223	25	0.00672	0.168	0.62	
	2B	1.115	2.676	3.010	0.270	130	46106	0.00282	25	0.00849	0.212	0.79	mean= 0.65 std= 0.08
1 hr	3A	1.254	2.838	3.192	0.282	154	45822	0.00336	25	0.01012	0.253	0.90	
	3A	1.254	2.838	3.192	0.282	131	45638	0.00287	25	0.00864	0.216	0.77	
	3B	1.223	2.934	3.300	0.270	118	44228	0.00267	25	0.00804	0.201	0.74	
	3B	1.223	2.934	3.300	0.270	110	44865	0.00245	25	0.00738	0.185	0.68	mean= 0.77 std= 0.08
2 hr	4A	1.101	2.857	3.214	0.255	85	48053	0.00177	25	0.00533	0.133	0.52	
	4A	1.101	2.857	3.214	0.255	69	47733	0.00145	25	0.00437	0.109	0.43	
	4B	1.296	2.859	3.216	0.287	84	48005	0.00175	25	0.00527	0.132	0.46	
	4B	1.296	2.859	3.216	0.287	108	46841	0.00231	25	0.00696	0.174	0.61	mean= 0.50 std= 0.07
4 hr	5A	1.182	2.853	3.209	0.269	65	47553	0.00137	25	0.00413	0.103	0.38	
	5A	1.182	2.853	3.209	0.269	57	46633	0.00122	25	0.00367	0.092	0.34	
	5B	1.245	2.973	3.344	0.271	67	48160	0.00139	25	0.00419	0.105	0.39	
	5B	1.245	2.973	3.344	0.271	43	48909	0.00088	25	0.00265	0.066	0.24	mean= 0.34 std= 0.06
6 hr	6A	1.059	2.921	3.286	0.244	36	49074	0.00073	25	0.00220	0.055	0.23	
	6A	1.059	2.921	3.286	0.244	35	51025	0.00069	25	0.00208	0.052	0.21	
	6B	1.192	2.855	3.211	0.271	32	48322	0.00066	25	0.00199	0.050	0.18	
	6B	1.192	2.855	3.211	0.271	37	46005	0.00080	25	0.00241	0.060	0.22	mean= 0.21 std= 0.02

Detection & Quantitation Estimates
From Standard Curve
y intercej 4.00E-05 +/- 0.0001393
Goodness of fit= 0.999

	LOD ARU	LOD CRU	LOD ng/ml
I+3 x std	0.000458	0.00138	0.035

	LOQ ARU	LOQ CRU	LOQ ng/ml
I+10 x std	0.001433	0.00432	0.108