

FINAL REPORT
 PACIFIC TOXICOLOGY LABORATORIES
 9348 De Soto Avenue, Chatsworth, CA 91311
 (818) 598-3110 (800) 23-TOXIC (800) 32-TOXIC

PAGE: 1

Client Name & Number	Patient Name	Age Sex
999999	SAMPLE REPORT	
TEST NAME	111-22-3333	
ADDRESS1		
ADDRESS2	Date Recv. Date Drawn Date Rept. Accession	
ADDRESS3	06/20/95 06/19/1995 06/20/1995 Z2001071	

BATCH: 0

MEDICAL DIRECTOR: O.D. STINSON, MD.

CH=CRITICAL HIGH CL=CRITICAL LOW

ORDERED PROCEDURES:

CREATININE (cr), RANDOM URINE
 SOLVENT SURVEY COMPREHENSIVE

PROCEDURE NAME	RESULT	UNITS	REFERENCE RANGE	DET LIMIT
CREATININE (cr), RANDOM URINE	1.00	g/l	Not Applicable	0.10
SOLVENT SURVEY COMPREHENSIVE				
PERCHLOROETHYLENE (WHOLE BLOOD)	< 0.003	mg/l	< 0.003	0.003
The ACGIH has published an intent to change in 1993-1994 the recommended BEI for perchloroethylene in blood when the specimen is collected prior to last shift at the end of the workweek from 1.0 to 0.5 mg perchloroethylene/l (ppm).				
1,1,1-TRICHLOROETHANE (WHOLE BLOOD)	< 0.003	mg/l	< 0.003	0.003
TRICHLOROETHYLENE (WHOLE BLOOD)	< 0.003	mg/l	< 0.003	0.003
TRICHLOROACETIC ACID (TCA) URINE				
TRICHLOROACETIC ACID (uncorrected)	1.20 H	mg/l	< 0.10	0.10
TCA (corrected for creatinine)	1.20 H	mg/g cr	< 0.05	
TRICHLOROETHANOL (TCE) TOTAL URINE				
TRICHLOROETHANOL (uncorrected)	1.20 H	mg/l	< 0.10	0.10
TCE (corrected for creatinine)	1.20 H	mg/g cr	< 0.06	
TCA + TCE (URINE)	2.40 H	mg/l	< 0.12	

Z2001071

REPORT CONTINUED ON NEXT PAGE

SAMPLE REPORT

CONTINUED REPORT
 FINAL REPORT
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PAGE: 2

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PROCEDURE NAME	RESULT	UNITS	REFERENCE RANGE	DET LIMIT
TCA+TCE (corrected for creatinine)	2.40 H	mg/g cr	< 0.08	

Trichloroethanol (TCE) and trichloroacetic acid (TCA) are metabolites of 1,1,1-trichloroethane, trichloroethylene and perchloroethylene. The ACGIH recommended biological exposure indices (BEIs) for these

metabolites in urine are:

Exposure to:	BEI	Timing of specimen collection (*)
1,1,1-Trichloroethane		
(1)	30 mg TCE/l	EOS/EOWW
(2)	10 mg TCA/l	EOWW
Trichloroethylene		
(1)	100 mg TCA/g creatinine	EOWW
(2)	300 mg TCA + TCE/g creatinine	EOS/EOWW
Perchloroethylene	(1) 3.5 mg TCA/l	EOWW

(*) EOS/EOWW: end of shift/end of workweek
 EOWW: end of workweek

BENZENE (WHOLE BLOOD)	< 0.01	mg/l	< 0.01	0.01
ETHYLBENZENE (WHOLE BLOOD)	< 0.05	mg/l	< 0.05	0.05
TOLUENE (WHOLE BLOOD)	< 0.01	mg/l	< 0.01	0.01
XYLENES (WHOLE BLOOD)	< 0.05	mg/l	< 0.05	0.05
o-CRESOL (URINE)				
o-CRESOL (uncorrected)	0.6 H	mg/l	< 0.1	0.1

o-Cresol is a minor metabolite, but a more specific indicator of toluene exposure than the hippuric acid test. It is present in unexposed individuals at levels up to 0.1 mg/l. Simultaneous measurement of toluene in blood is recommended as a confirmatory test if necessary.

o-CRESOL (corrected for creatinine)	0.6	mg/g cr	
Z2001071	REPORT CONTINUED ON NEXT PAGE	SAMPLE REPORT	

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PROCEDURE NAME	RESULT	UNITS	REFERENCE RANGE	DET LIMIT
HIPURIC ACID (URINE)				
HIPURIC ACID (uncorrected)	1.60	g/l		0.05
HIPURIC ACID (corrected for cr)	1.60	g/g cr	See Message	

Hippuric acid is non-specific metabolite of toluene because levels up to 1.5 g/g creatinine can be attributed to the metabolism of certain acidic foods. Simultaneous measurement of toluene in blood is recommended as a qualitative confirmatory test if necessary.

MANDELIC ACID (URINE)				
MANDELIC ACID (uncorrected)	0.32	g/l		0.05

Mandelic acid is a major metabolite of both ethylbenzene and styrene.

MANDELIC ACID (corrected for cr)	0.32	g/g cr	See Message	
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FOLLOWING ETHYLBENZENE EXPOSURE: the ACGIH recommended biological exposure index (BEI) states that mandelic acid in urine collected at the end of the shift at the end of the workweek should not exceed 1.5 g/g creatinine. Timing is critical.

FOLLOWING STYRENE EXPOSURE: the ACGIH recommended biological exposure index (BEI) states that mandelic acid in urine collected at the end of the shift should not exceed 0.8 g/g creatinine and collected prior to the next shift should not exceed 0.3 g/g creatinine. Timing is critical. In addition, because mandelic acid is a non-specific metabolite of styrene it is recommended that blood styrene levels be measured to confirm styrene exposure.

METHYLHIPURIC ACIDS (URINE)				
METHYLHIPURIC ACIDS (uncorrected)	1.2	g/l		0.1

Methylhippuric acids are metabolites of xylenes. They are usually not detected in the general population.

METHYLHIPURIC ACIDS (corr. for cr)	1.2	g/l	See Message	
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The ACGIH recommended biological exposure index (BEI) for methylhippuric acids in urine following exposure to xylenes is 1.5 g/gram creatinine when collected at the end of work shift.

Z2001071

REPORT CONTINUED ON NEXT PAGE

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PAGE: 4

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PROCEDURE NAME	RESULT	UNITS	BATCH: 0 REFERENCE RANGE	DET LIMIT
SPECIFIC GRAVITY	1.020			
PHENOL (URINE)				
PHENOL (uncorrected)	10.5	mg/l	See Message	0.1

Urinary phenol may be indicative of exposure to (1) benzene or (2) phenol, but levels up to 20 mg/g CREATININE can be found as a normal urinary constituent unrelated to occupational exposure.

PHENOL (corrected for sp. gravity) 12.6 mg/l See Message (1)
(1) FOLLOWING BENZENE EXPOSURE:

OSHA rules and regulations (Federal Register, 52: 34565, Sept. 11, 1987) state in regards to a urine sample analyzed for phenol following exposure to benzene: "...The urine specific gravity shall be corrected to 1.024. If the result is below 75 MG PHENOL/LITER OF URINE, no further testing is required..."

Z2001071

LAST PAGE OF REPORT

SAMPLE REPORT