

Laboratory Order

Client: Dominion Diagnostics
Patient Information:
CARD Joe
Birth Date: 11/07/1957
Gender: M
ID: 000000002144
Collected: 07/11/12
Received: 07/12/12 -12:27

Account Information:
Account: 4010
Location: North Kingstown
Clinician:
Collector:
Requisition: 0050634
Fax: (401) 667-0818

Accession: 9110050634

Tests performed:
1.Opiates Profile by EIA (P114)
2.Ethylglucuronide Profile by LC/MS/MS (P178)

Laboratory Analysis:	[i] Analyte (Methodology)	Flag	Result	Creatinine Adjusted Value	LOQ/ Normal Range	Units	Clinical Note	
Drug Tests	Amphetamines							
		Amphetamines (EIA)	Not detected			1000 ng/mL		
	✓	Benzodiazepines						
			BENZODIAZEPINES (EIA)	DETECTED	2292	1810	300 ng/mL	
	✓	Cannabinoids						
			THC (CANNABINOIDS) (EIA)	DETECTED	71	56	25 ng/mL	
		Cocaine						
			Cocaine (EIA)	Not detected			150 ng/mL	
	✓	Ethanol						
			ETHYLGLUCURONIDE (LCMSMS)	DETECTED	4969		500 ng/mL	
	✓	Opioids						
			BUPRENORPHINE (EIA)	DETECTED	73.0	57.7	15 ng/mL	
			Heroin Metabolite (EIA)	Not detected			10 ng/mL	
			Methadone Metabolite (EIA)	Not detected			100 ng/mL	
		Methadone (EIA)	Not detected			250 ng/mL		
		Opiates (EIA)	Not detected			300 ng/mL		
		Oxycodone/Oxymorphone (EIA)	Not detected			100 ng/mL		
		Propoxyphene (EIA)	Not detected			150 ng/mL		
Biological Markers		Creatinine		126.6		20.0 -400.0 mg/dL		
		pH		6.9		4.5 -9.0		
		Specific Gravity		1.013		1.003-1.035		
Validity		Oxidants	Not detected			200 ug/mL		

Comments: - Results unconfirmed unless otherwise indicated.
- Creatinine adjusted values are for clinical pharmacokinetic comparison only

- ALL TESTING CERTIFIED BY DJH

Notations: ✓ Indicates Analyte Detected
[i] Icon

Abbreviations
- EA: Enzyme Assay
- EIA: Enzyme Immunoassay
- HPLC: High Performance Liquid Chromatography
- GC: Gas Chromatography
- GCMS: Gas Chromatography/Mass Spectrometry
- LCMSMS: Liquid Chromatography Tandem Mass Spectrometry
- LOQ: Limits of Quantification
- MSMS: Tandem Mass Spectrometry

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Self-reported drug misuse: Marijuana, Alcohol
Treatment-related medications reported: Buprenorphine

Comprehensive Analysis of Reported Drugs (CARD)™

A summary correlating self-reported drug misuse and treatment-related medications with state-of-the-art diagnostic testing

Reported Drug	Detected Analyte (Methodology)	Result ng/mL	CAV *	EXPECTED ●	NOT EXPECTED ▲	ALERT !	Comments
NON-REPORTED DRUGS							
	Benzodiazepines (EIA)	2292	1810		▲		BENZODIAZEPINES DETECTED BY EIA. See Pharmacist's Notes [a] [b] [c]
SELF-REPORTED DRUG MISUSE							
Marijuana	THC (Cannabinoids) (EIA)	71	56	●			THC is the main psychoactive substance found in marijuana. (1,2)
Alcohol	Ethylglucuronide (LCMSMS)	4969		●			Ethylglucuronide is a metabolite of alcohol. See Pharmacist's Notes [d]
TREATMENT-RELATED MEDICATIONS							
Buprenorphine	Buprenorphine (EIA)	73.0	57.7	●			

EIA (Enzyme Immunoassay) provides only a preliminary analytical test result. A more specific alternative method (e.g. GC/MS, LC/MS/MS) must be used to obtain a confirmed analytical result. Clinical consideration and professional judgment should be applied to any drug test result particularly when preliminary results are used.

* Creatinine adjusted values (CAV) are used to monitor changes in drug concentrations in the urine over time and are for clinical pharmacokinetic comparison only.

CLINICAL NOTES

PHARMACIST'S NOTES:

- [a] Benzodiazepines are a class of depressant drugs that include alprazolam (Xanax), clonazepam (Klonopin), diazepam (Valium), lorazepam (Ativan), oxazepam (Serax), and temazepam (Restoril). These drugs are prescribed to manage a multitude of conditions including anxiety, insomnia, seizures, muscle spasms, alcohol withdrawal and pre-operative sedation. (2,3)
- [b] Benzodiazepines can be detected in the urine, on average, 2 to 7 days after the last dose. Exceptions are the metabolites of diazepam and chlordiazepoxide, which can be detected up to 30 days. (2,4)
- [c] EIA provides only a preliminary test result. Confirmation testing (e.g. GC/MS, LC/MS/MS) must be used to rule out interference from certain prescribed and over-the-counter drugs. Please refer to Dominion's EIA Cross-Reactivity tables for a listing of cross-reacting substances. (1)
- [d] Ethylglucuronide (EtG) is produced in the liver after ethanol (alcohol) consumption and can be detected in the urine for up to 80 hours. Although EtG formation can occur with incidental exposures as well as consumption, by utilizing a 500 ng/mL limit of quantification (LOQ) most incidental exposures can be ruled out. (5)

1. Microgenics Corp. Fremont, CA 94538.
2. Baselt, RC. Disposition of Toxic Drugs and Chemicals in Man. 7th ed., Biomedical Publications, Foster City 2004.
3. Lacy DF, Armstrong LL, Goldman MP, Lance LL. Drug Information Handbook with International Trade Names Index. 15th ed. Lexi-Comp Inc. 2007.
4. Guide to Abused Drugs, Abbott Diagnostics 97-9458/15 October 1993.
5. Wurst FM, Skipper GE, Weinmann W. Ethyl glucuronide: the direct ethanol metabolite on the threshold from science to routine use. Addiction. 2003 Dec;98 Suppl 2:51-61.

Comprehensive Analysis of Reported Drugs (CARD)™ utilizes the supplied list of treatment-related medications and self-reported drugs, documented pharmaceutical and pharmacokinetic data, and state-of-the-art diagnostic testing to augment individual treatment protocols. The information provided should be combined with clinical consideration and professional judgment. The list of reported drugs has not been verified by Dominion Diagnostics.