

Minimum Levels of Controlled Substances or Their Metabolites in Blood to Establish Presence of Controlled Substance

Pursuant to section 1547(c)(4) of the Vehicle Code (75 Pa.C.S. § 1547(c)(4)), as amended by Act 2003-24, the Department of Health (Department) is hereby publishing a notice of the minimum levels of Schedule I, II, and III controlled substances or their biotransformation products (metabolites) that must be present in a person's blood in order for the test results to be admissible in a prosecution for a violation of section 1543(b)(1.1), 3802(d)(1), (2) or (3), or 3808(a)(2) of the Vehicle Code (75 Pa.C.S. § 1543(b)(1.1), 3802(d)(1), (2) or (3), or 3808(a)(2)).

Although there are hundreds of controlled substances in Schedules I, II, and III, detection limits are listed only for commonly abused controlled substances for which testing procedures are readily available. The minimum concentrations specified are those that can be reliably measured by laboratories approved by the Department to test blood for controlled substance content.

Clinical laboratories that operate in Pennsylvania and that perform analyses of blood to determine controlled substance content must be approved by the Department in accordance with Department regulation 28 Pa. Code §5.50 (relating to approval to provide special analytical services). The approval process is conducted in much the same manner as the Department's approval of laboratories to test blood for alcohol content, as described in *Commonwealth v. Brown*, 631 A.2d 1014 (Pa. Super. 1993). This approval process requires laboratories to demonstrate an acceptable level of proficiency in determining the presence of controlled substances or their metabolites in blood.

This testing is a two-step process. The first step involves the screening of blood using a relatively rapid and inexpensive technique to presumptively determine which specimens may contain the substance or a metabolite of the substance for which the blood is screened. The second step utilizes a more sensitive and specific procedure to substantiate the presence and concentration of the substance or its metabolite that was presumptively detected in the initial screening procedure.

Confirmatory analyses employed to substantiate the presence of a drug or drug metabolite generally focuses on identifying and quantitatively determining the concentration of the parent drug or a primary metabolite if extensive biotransformation occurs. The detection limits listed were developed by reviewing the minimum reportable concentrations for confirmatory analyses that laboratories in the Department's approval program specified they could measure. The concentrations listed are the levels that all laboratories approved by the Department to test blood for controlled substance content can reliably determine.

The list contains only those substances that are included in the Department's proficiency testing program designed to provide assurance that laboratories approved to test blood for controlled substance content can reliably identify and measure the concentrations of drugs and their metabolites in blood. The Department will publish superseding notices as it determines the

detection limits for other Schedule I, II and III controlled substances, or as the need otherwise arises.

Class	Substance	Schedule	Minimum Detection Limits(nanograms/milliliter)
Amphetamines			
	Amphetamine	II	10
	Methamphetamine	II	10
Analgesics			
	Methadone	II	50
Cannabinoids			
	Delta-9-carboxy THC*	I	5
Cocaine			
	Cocaine	II	20
	Benzoylcegonine	II	50
Hallucinogens			
	Phencyclidine	II	5
Opiates			
	Codeine	II	10
	Hydrocodone	II	10
	Hydromorphone	II	10
	6-Monoacetylmorphine	II	10

Morphine	II	10
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Oxycodone	II	10
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Sedatives/Hypnotics

Amobarbital	II	200
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Pentobarbital	II	200
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Secobarbital	II	200
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* THC = tetrahydrocannabinol

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