

Aerospace Medical Research

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Ethanol	
Description	This is primarily a social drug with a powerful central nervous system depressant. After absorption, ethanol is uniformly distributed throughout all tissues and body fluids. The distribution pattern parallels the water content and blood supply of each organ. Postmortem production of ethanol also takes place due to putrefaction processes, but vitreous humor and urine do not suffer from such production to any significant extent in relation to blood. Vitreous humor would normally have about 12% more ethanol than blood if the system is in the post absorptive state, and urine would normally have about 25% more ethanol than blood. The average rate of elimination of ethanol from blood is 18 mg/dL (15-20 mg/dL) per hour.
Therapeutic Low	0.0000
Therapeutic High	20.0000
Units	mg/dL
Specimen	B
Half Life Low	2.00
Half Life High	14.00
VOD Low	0.43
VOD High	0.59
Toxic Level	20.000
Lethal Level	400.000
Plasma to Whole Blood ratio	1.20
Warnings	Under Federal Aviation Regulation Part 121, no covered employee shall report for duty or remain on duty performing safety-sensitive functions until the employee's alcohol concentration is less than 0.02 g/dL (20.0 mg/dL). Also, FAR Section 91.17 (a) prohibits any person from acting or attempting to act as a crewmember of a civil aircraft while having 0.040 g/dL (40.0 mg/dL) or more alcohol in the blood. Adverse clinical symptoms have been noted with blood ethanol levels as low as 20.0 mg/dL (0.020 g/dL).

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Butanol (2-)

Description	2-Butanol is an aliphatic alcohol, which is produced as a byproduct of specimen putrefaction.
Therapeutic Low	0.0000
Therapeutic High	0.0000
Units	mg/dL
Specimen	B
Half Life Low	0.00
Half Life High	0.00
VOD Low	0.00
VOD High	0.00
Toxic Level	0.000
Lethal Level	0.000
Plasma to Whole Blood ratio	0.00
Warnings	

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Propanol (N-)

Description	An alcohol. It is also produced postmortem, along with ethanol and other alcohols.
Therapeutic Low	0.0000
Therapeutic High	0.0000
Units	ug/mL
Specimen	P
Half Life Low	0.00
Half Life High	0.00
VOD Low	0.00
VOD High	0.00
Toxic Level	0.000
Lethal Level	0.000
Plasma to Whole Blood ratio	0.00
Warnings	

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Dihydrocodeine	
Description	A semisynthetic narcotic analgesic.
Therapeutic Low	0.0700
Therapeutic High	0.1500
Units	ug/mL
Specimen	P
Half Life Low	3.40
Half Life High	4.50
VOD Low	1.00
VOD High	1.30
Toxic Level	0.500
Lethal Level	0.000
Plasma to Whole Blood ratio	0.00
Warnings	Adverse reactions include dizziness, drowsiness, lightheadedness, nausea, and constipation. Warnings - may impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery).

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Hydrocodone

Description	A semisynthetic narcotic analgesic prepared from codeine. It is widely used as an antitussive in cough syrups.
Therapeutic Low	0.0100
Therapeutic High	0.0500
Units	ug/mL
Specimen	P
Half Life Low	4.00
Half Life High	0.00
VOD Low	3.30
VOD High	4.70
Toxic Level	0.100
Lethal Level	0.200
Plasma to Whole Blood ratio	0.00
Warnings	Hydrocodone is more toxic than codeine, with a greater addiction liability. Warnings - may impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery).

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Oxycodone	
Description	Is a synthetic analgesic opiate used in the treatment of pain
Therapeutic Low	0.0130
Therapeutic High	0.0990
Units	ug/mL
Specimen	P
Half Life Low	4.00
Half Life High	6.00
VOD Low	1.80
VOD High	3.70
Toxic Level	0.200
Lethal Level	0.000
Plasma to Whole Blood ratio	0.00
Warnings	Warnings - may impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery)

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Zolpidem	
Description	AMBIEN® is indicated for the short-term treatment of insomnia.
Therapeutic Low	0.0250
Therapeutic High	0.3000
Units	ug/mL
Specimen	P
Half Life Low	1.40
Half Life High	4.50
VOD Low	0.50
VOD High	0.70
Toxic Level	0.500
Lethal Level	0.000
Plasma to Whole Blood ratio	0.00
Warnings	Warnings - may impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery).