DAU Interpretation Job Aid

This document is applicable at site(s):
UAH

Purpose

Quick reference for interpretation of toxicology screen results on the Cobas c501 analyzer.

Interpretation

These results are **QUALITATIVE** only. (**Exception:** Cotinine is semi-quantitative.)
Positive result if concentration in patient specimen is ≥ specified level.
Negative result if concentration in patient specimen is < specified level.

Screening Test	Calibrator and cut-off Concentration
Barbiturates	Secobarbital, 300 µg/L
Benzodiazepines	Nordiazepam, 300 µg/L
Cotinine	Cotinine, semi-quantitative
Ethanol	Ethanol, 5 mmol/L
Tricyclic Antidepressants	Nortriptyline, 300 µg/L

Screening Test	Compounds Which Cross React to Produce a Positive Result	Concentration ≥ (µg/L)
Roche Barbiturates	Allobarbital	~ 423 *
	Amobarbital	~ 1053 *
	Aprobarbital	~ 323 *
	Barbital	~ 2625 *
	Barbituic Acid	> 100 000
	Butabarbital	~ 821 *
	Butalbital	~ 422 *
	Cyclopentobarbital	~ 296 *
	1,3 Dimethylbarbituric Acid	> 150 000
	Glutethimide	> 750 000
	Hexobarbital	> 100 000
	p-Hydroxyphenobarbital	~ 1559 *
	Mephobarbital	> 150 000
	Pentobarbital	~ 842 *
	Phenobarbital	~ 1388 *
	Phenytoin	> 750 000
	Secobarbital	300
	*Estimates only as direct extrapolation from 300 ng/mL cut-off may not be proportional.	
Roche Benzodiazepines	α-hydroxy-Alprazolam	347
	α-hydroxy-Triazolam	440
	α-hydroxymidazolam	428
	4 Hydroxyalprazolam	342
	7-aminoclonazepam	334
	7-aminoflunitrazepam	368
	7-aminonitrazepam	218
	7-acetamidonitrazepam	55 328

Screening Test	Compounds Which Cross React to Produce a Positive Result	Concentration ≥ (µg/L)
Roche Benzodiazepines (continued)	Alprazolam	372
	Bentazepam	504
	Bromazepam	299
	Chlordiazepoxide	499
	Clobazam	386
	Clonazepam	483
	Clonazolam	290
	Clorazepate	374
	Desalkylflurazepam	336
	Deschloroetizalom	242
	Desmethylchlordiazepoxide	452
	Desmethylflunitrazepam	338
	Desmethylmedazepam	539
	Diazepam	400
	Diclazepam	346
	Didesethylflurazepam	458
	Etizolam	343
	Flubromazepam	274
	3-OH-Flubromazepam	358
	Flubromazolam	351
	Flunitrazepam	439
	Flurazepam	511
	Hydroxyethylflurazepam	394
	Lorazepam	506
	Lorazepam glucuronide	825
	Lormetazepam	410
	Meclonazepam	424
	Midazolam	564
	Nifoxipam	552
	Nitrazepam	354
	Norchlordiazepoxide	483
	Nordiazepam	316
	Oxazepam	325
	Oxazepam glucuronide	684
	Pyrazolam	279
	Temazepam	416
	Temazepam glucuronide	923
	Triazolam	425
	Zolpidem	200 000
	False Positives: Oxaprozin	
	Compounds that do not give a false positive response: • Norsertraline (at 5.0 µg/mL) • Sertraline (at 5.0 µg/mL)	

Screening Test	Compounds Which Cross React to Produce a Positive Result	Concentration ≥ (µg/L)
DRI Cotinine	Cotinine	250
	3-Hydroxy-Cotinine	12 500
	Note: Nicotine does not cause a positive result.	
DRI Tricyclics	Amitriptyline	400
	Amoxapine	100 000
	Clomipramine	350
	Desipramine	250
	Doxepin	550
	Imipramine	350
	2-Hydroxyimipramine	1700
	Loxapine succinate	250 000
	N-desmethyltrimipramine	780
	Norclomipramine HCl	780
	Nordoxepin HCl	1560
	Nortriptyline	300
	Opipramol Dihydrochloride (not in Canada)	780
	Protriptyline	450
	Trimipramine	1000
	False Positives: • Carbamazepine • Chlorpromazine • Cyclobenzaprine • Dimenhydrinate • Diphenhydramine • Orphenadrine • Quetiapine	
	Compounds that do not cause a false positive response: • Methotrimeprazine • Olanzapine	
	Severely hemolytic, lipemic, or icteric samples may cause questionable results and must not be run.	

Screening Test	Compound	Concentration (mmol/L)	% Cross Reactivity
Roche Ethanol	n-Butanol	440	1.7
	n-Propanol	440	10.7
	Assay detects ethyl alcohol and no other alcohols (isopropanol, methanol) or ethylene glycol.		