

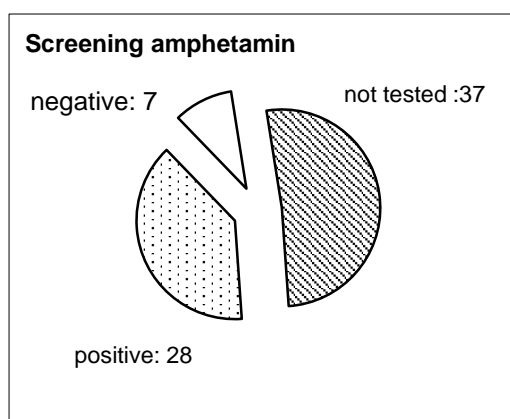
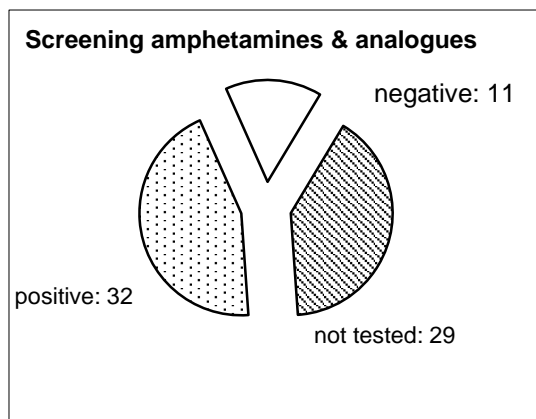
## DOA Round 2014.4A

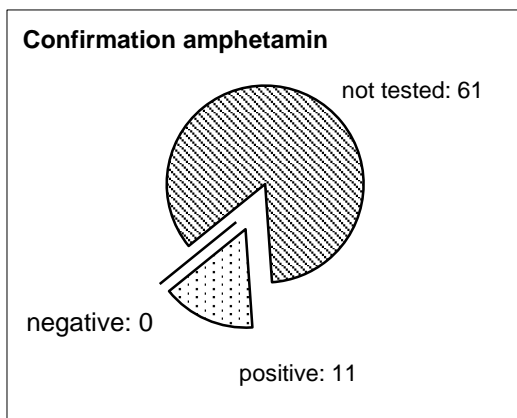
Casus: A sample of a person driving after a party.

Composition: urine spiked with dexamphetamin 1198 µg/l and oxazepam 604 µg/l.

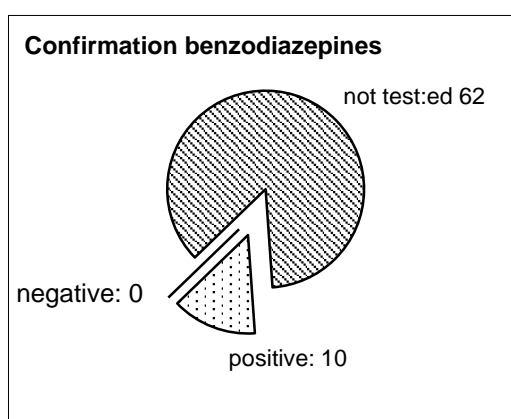
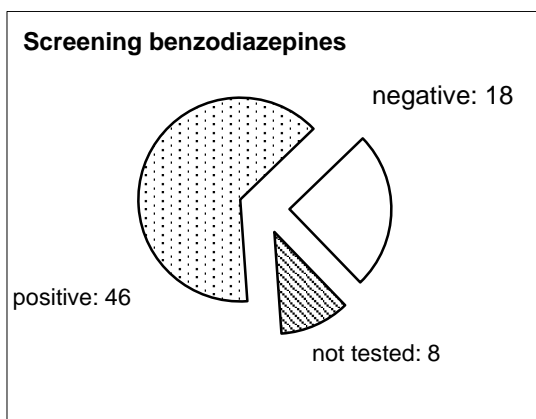
Results:

Amphetamines: screening positive (>1000 µg/l)					
Summary statistics:					
number of laboratories: 72					
screening:	pos.	neg.	not tested	FP*	FN*
amphetamines & analogues	32=44%	11=15%	29=40%	0	11=26%
amphetamine	28=39%	7=10%	37=51%	0	7=20%
methylamphetamine	0=0%	26=36%	46=64%	0	0
MDMA	0=0%	19=26%	53=74%	0	0
MDA	0=0%	1=1%	71=99%	0	0
MDEA	0=0%	0=0%	72=100%	0	0
confirmation:	pos.	neg.	not tested		
amphetamine	11=15%	0=0%	61=85%	0	0
methylamphetamine	0=0%	7=10%	65=90%	0	0
MDA	0=0%	5=7%	67=93%	0	0
MDMA	0=0%	6=8%	66=92%	0	0
MDEA	0=0%	5=7%	67=93%	0	0





Benzodiazepines: screening positive (>200 µg/l)					
Summary statistics:					
number of laboratories: 72					
screening:	pos.	neg.	not tested	FP*	FN*
	46=64%	18=25%	8=11%	0	18=28%
confirmation:	pos.	neg.	not tested		
	10=14%	0=0%	62=86%	0	0



## Discussion by drs. P.G.M. Zweipfenning:

This was blanc urine spiked with dexamphetamine 1198 µg/L and oxazepam 604 µg/L.

There are many tests for amphetamine and amphetamine-like substances, MDMA, MDEA, MDA and methamphetamine, available. In this case only amphetamine and amphetamine-like substances resulted in positive results. The other tests are obviously selective enough to "ignore" the dexamphetamine concentration 20% above cut-off. So far the good news.

16 Labs were not able to detect dexamphetamine in a concentration of 120% of the cut-off value. Between them 2 Labs even twice (they tested for amphetamine AND amphetamine-like substances) further wrong results were cause by: 7x test type 6c (Triage), 3 x type 2b (EMIT 2 plus), 2x type 4

(KIMS), 1x type 6z (innovacon), 1x type 3 (Cedia), 1x type 1c (Beckman-Coulter) and once an unknown type.

Type 6c (Triage) caused 7 from these wrong results. Triage scored 14x correct (the sum of amphetamine and amph.-like substances.) But from a total of 22 results that means 36% wrong!

Confirmation of amphetamine was done 11x. Quantification during confirmation is difficult: results varied from about 50% up to about 200%.

Testing for benzodiazepines was done by 64 Labs out of 72. Here the concentration was about 3x the cut-off value. But never the less 18 Labs reported negative; so 28% was false negative. 16 Of these wrong results were obtained by type 6c (Triage. N.B. not a single Triage tests scored positive here), and further 1x type 3 (Cedia) and 1x type 1c (Beckman Coulter).

Benzodiazepines were confirmed by 10 Labs. 9 Correctly as oxazepam. Lab nr. 3218 reportedly confirmed, but did not specify oxazepam. Quantification during confirmation was only done by 4 labs.