

DOA Round 2015.2A

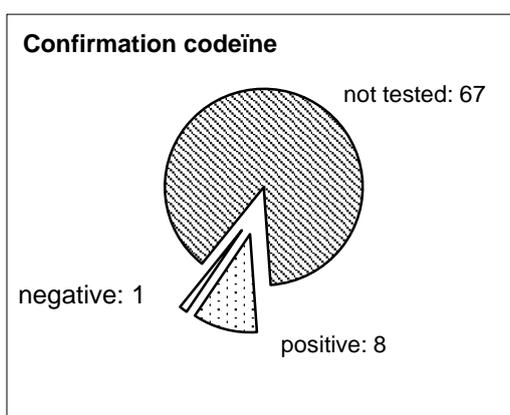
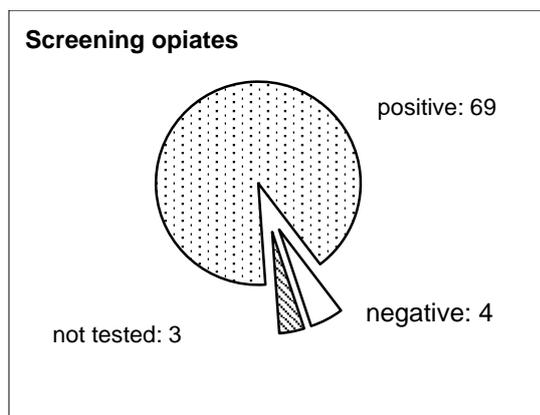
Casus:

Urine from a patient in drug treatment.

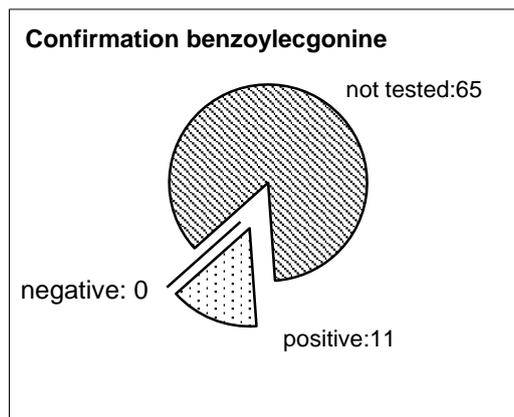
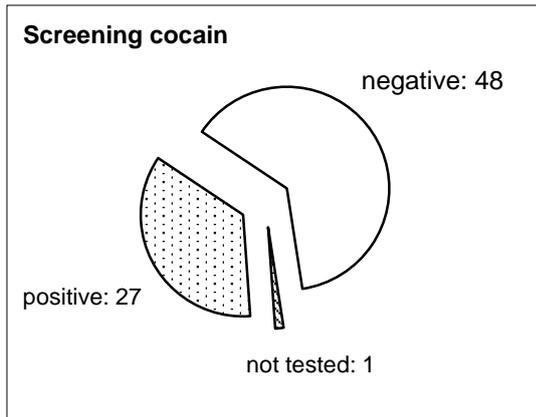
Composition: urine spiked with codein 1563 µg/l and cocain 996 µg/l.

Results:

Opiates: screening positive (>300 µg/l)					
Summary statistics:					
number of laboratories: 76					
screening:	pos.	neg.	not tested	FP*	FN*
	69=91%	4=5%	3=4%	0	4=6%
confirmation:	pos.	neg.	not tested		
6-MAM	0=0%	3=4%	73=96%	0	0
morphine	2=3%	4=5%	70=92%	2=33%	0
codein	8=11%	1=1%	67=88%	0	1=11%



Cocain: screening positive (>300 µg/l)					
Summary statistics:					
number of laboratories: 76					
screening:	pos.	neg.	not tested	FP*	FN*
	27=36%	48=63%	1=1%	0	0
confirmation:	pos.	neg.	not tested		
benzoylecgonine	11=14%	0=0%	65=86%	0	0
cocain	5=7%	0=0%	70=93%	0	0



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

This was not so very strong tea spiked with codeine and cocaine. So no urine!

33 Labs reported, based on a creatinin determination, (which of course resulted in 0 mmol/L) that something was wrong. When creatinine is lower than 2 mmol/L positive results of drugs tests are to be considered positive, negatives are however inconclusive. Tests can give a negative result, although the urine donor consumed a drug in sufficient amount, because the drug is diluted to below the cut-off concentration. This of course only when the urine is dilute enough either by drinking a large amount of water or by adding water to the sample later. This in an amount sufficient to lower the creatinine concentration to a value < 2 mmol/L. My compliments for the 33 labs that signaled this here correctly. In this case it was not dilute nor diluted urine, but tea. The task of a DOA lab is to report irregularities, but to determine what has caused it, is not to be considered a standard task. In my opinion.

In practically all immuno assays for Opiates, morphine is the calibrator. Cross reactivity for codeine is high, apparently higher than 100% relative to morphine. Only 4 labs reported negative. All with tests of type 6 (quick test / point of care test).

Quantification of codeine in the confirmational analysis went well (mean 94%, SD 25%, N=5).

Immuno assays for cocaine allways contain anti-bodies against benzoylecgonine (BE). Here was the tea spiked with cocaine! On one side cocaine will have some cross reactivity with the BE-antibodies. On the other hand cocaine might have partially hydrolysed to BE. 46 labs reported negative, 26 positive. In this case there is no good or fault. The results of the confirmational analysys of BE show that this is in an extend of about 30% (N=5). Lab nr. 3231 reports a confirmation on the basis of an (other) immuno assay. This is not in conformity with the guidelines. Their quantitative result (>2000 ug/L) is remarkable.