

# Behavioral Health is Essential To Health



Prevention Works



Treatment is Effective



People Recover



# SAMHSA's Center for Substance Abuse Prevention Drug Testing Advisory Board

## Hair Contamination Questions

June 11, 2014



# Question 1 - PT

- If labs are required to have hair testing methods that will allow them to distinguish contaminated hair – what is a realistic concentration of drug that hair must be spiked or contaminated with in order to validate the ability of the laboratory to be able to detect and classify the as a hair sample as “contaminated”.

# Question 2 – Wash Procedure

- Given the numerous publications on hair contamination, especially with cocaine, would you agree that the hair washing procedures used by Schaffer et al appear to be most effective in determining hair contamination, even though there is no published rationale of the formula that is used?

# Question 3 - Standardization

- It seems likely that inclusion of hair drug testing in the Federal Workplace Drug Testing program must include either or both of the following elements:
  - The lab must test in hair for a true metabolite that arises only from use of the drug and is not present as a manufacturing byproduct.
  - The lab must use appropriate wash procedures and apply a “Wash Criterion” to distinguish between drug in hair from drug use and drug in hair from external contamination.
- Since we seem to be far away from being able to satisfy element 1 for some drugs (that is, using cocaine for example, most published work has focused on absolute values of BE, CE, or NCOC or ratios of those compounds to parent COC, and none of them appears to adequately discriminate use from contamination), would the program consider mandating a rigid decontamination protocol (i.e., all labs use the same solvents and aqueous washing solutions, same time periods, etc.) and a standardized Wash Criterion that must be followed by all certified hair testing labs?

# Question 4 - QC

- If a decontamination protocol is required by certified labs, there would have to be a mechanism to assess adequacy of that protocol in each confirmatory batch. How feasible is it to produce a stable externally contaminated hair specimen that could be used as a quality control material to monitor effectiveness of decontamination in every batch? (In other words, a “decontamination control” to be used in addition to the usual analytical performance controls.)

# Question 5 – Metabolite Criteria

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- It was stated that analysis for metabolites or metabolite ratios may be a key in distinguishing contamination from use. Is there consensus on what drugs this has been established for and what is that criteria?

# Question 6 - Spiking

- Interference studies for urine drug testing include analyte addition to samples spiked at specific drug concentrations. Have any hair studies to evaluate contamination and the effectiveness of wash steps included such an approach?

# Question 7 – Contamination Studies

- There appeared to be only one study noted where non-drug users were exposed to drugs to evaluate contamination. The other studies noted used in vitro drug exposure for evaluation. Please comment on how reliable contamination studies are based on this approach.