Review Form

Please complete a separate Review Form for each Docket.

Which Docket is being reviewed? (please underline)

Titles: NIOSH Manual of Analytical Methods (NMAM)

- 9106: *Methamphetamine and Illicit Drugs, Precursors, and Adulterants on Wipes by Liquid-Liquid Extraction (NIOSH-176)*
- 9109: *Methamphetamine and Illicit Drugs, Precursors, and Adulterants on Wipes by Solid Phase Extraction (NIOSH-177)*
- 0911: *Methamphetamine on Wipes by Liquid Chromatography-Mass Spectrometry-SIM (NIOSH-178).*

Anticipated Publication: NIOSH Manual of Analytical Methods (NMAM), 5th Edition

Return by: September 30, 2009

Return to: Dr. W. Gregory Lotz, Director, Division of Applied Research and Technology, Mailstop R-2, NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226, or email at wlotz@cdc.gov.

	YES	NO (explain below)
1. Does the Backup Data Report explain the problem and summarize relevant literature adequately?	_X__	___
2. Is the information in the Method and Backup Data Report technically accurate?	__X_	___
3 Are there any recommendations concerning organization of the documents?	___	_X__
4. Are there any changes or corrections needed in the Backup Data Report?	___	__X_
5. Are there any changes needed in the Method?	___	_X__
6. In general, is the Method and Backup Data Report satisfactory?	_X__	___
7. What is your recommendation for this Method as now written? (Check One):		
a. Approve for publication/dissemination	_X__	___
b. Approve after modification (please describe)	___	___
c. Do not approve (please describe)	___	___

DETAILED COMMENTS: (Provide comments in this space or on a separate sheet. Check here if a separate sheet is attached). _X__

Dr. W. Gregory Lotz, Director
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Greg,

Thank you very much for the opportunity to comment on the three new methamphetamine wipe sampling methods that you have recently developed. I am very sorry that I am late on the review but it has been a busy summer and I dropped to 20% time. Things just got away from me I guess.

I could only comment on the industrial hygiene portion of the Methods since I am not a chemist and know very little about the chemistry of the Methods. In general, I thought that everything was very well written and presented. The background portion provided by DataChem was also good and easy to understand, even for a non-chemist. I only have a few things to add to the method and a few comments. None of my comments would warrant major (or even minorfor that matter) changes to the documents. Since the IH portion is the same (I believe) for all of the methods, I am including them on this one sheet.

The biggest comment that I have is the applicability of the method on porous items. I believe that you do provide the information that the efficacy of the methods depends upon what material is being sampled but the inability of wipe samples to adequately determine the concentration of meth on a porous surface is very poor. I have enclosed a report on recovery that we did for Utah where we found that the recovery rate from very porous surfaces is less than 20%. It also seems to depend upon how the surface is contaminated. If it is contaminated by an aerosol formed by evaporating the meth, then penetration into surfaces like painted dry wall is common. Even with methanol, only about 40% of the meth present in the drywall is released. In my opinion, using a wipe to measure meth in a carpet, popcorn ceiling, unpainted wood, clothes, etc. is a poor choice of sampling methods. Sending actual pieces of the material to the lab would be much better.

I believe that the limit of detection is very good. We also conducted some testing to determine the ability of a laboratory to accurately determine the amount of meth in a cotton wipe (as well as some other media) and I have attached that report. In general, especially DataChem, provided results that were very close to the spike. The number of false positives or false negatives were very low, especially at DataChem.

Regarding the background document, the material suggests that there is not a health-based standard and that is relatively correct, although California has developed a risk-based standard. Based on that standard, some states are revising their limits upward. You might want to check Table 1 in the background report since I believe that Utah and maybe a few other states have recently changed the accepted standard. The accepted levels do seem to be in flux at this time.

The Method requires that the sample be refrigerated during collection and shipping. The method does say, however, that the sample may be OK without refrigeration. Our experience has been that refrigeration was not necessary. The accuracy of the spike samples that we sent were as good un-refrigerated as they were refrigerated but we did ship all of the samples via overnight mail.

The use of blotting surfaces during sampling on surfaces where the cotton gauze will catch may be a problem since if you have to blot, the return will be very poor based on our experience. Surfaces that are rough will not give up the meth easily.

Regarding the use of methanol and isopropanol. We also found that either solvent worked well although we normally use methanol. There was a difference between sampling meth that had been dropped on the surface with a pipette and that which was aerosolized onto the surface. Aerosolized meth was not removed with distilled water as easily as was meth dropped onto the surface. This is likely due to penetration into drywall, etc.

All-in-all, I believe that the method is a good method and I did not see any changes that were absolutely necessary. I have also included the reviews and some experiment reports for your information. I hope that this helps in some small way. Again, I am sorry that I was so late.

Sincerely,