

BUTLER UNIVERSITY FORENSIC LABORATORY
REPORT OF INVESTIGATION

On Thursday, January 15 a 911 call was received from a citizen who lives in the vicinity of Butler University. The caller complained of a noxious chemical odor which seemed to originate from her neighbor's house.

The Indianapolis Metropolitan Police Department (IMPD) did a drive-by of the area and confirmed the presence of the noxious odor and the fact that it seemed to be emanating from the house in question. IMPD's assessment of the situation was that a clandestine drug lab where methamphetamine is being manufactured is the potential cause of the noxious odor.

IMPD referred this matter to the Meth Suppression Section of the Indiana State Police (ISP), which operates in coordination with the U.S. Drug Enforcement Administration (DEA). The Meth Suppression Section evaluated the information and secured a search warrant. However, prior to the execution of that warrant, a fire broke out in the house in question followed by a loud explosion. Two individuals were seen fleeing the premises. The Indianapolis Fire Department was then called and extinguished the fire.

Based on a search of the fire scene, the Meth Suppression Section has determined through observation and technical means that there is a meth lab of some sort in this house and that it is currently in an inactive state. Also during the search, various bomb-making paraphernalia (e.g., pipe nipples, end caps, fuses, re-loading powders, etc.) was observed. In addition, there were numerous books, maps, photographs, diagrams, etc., lying around the premises.

The two individuals who fled the scene were identified as students majoring in chemistry at Butler University. It is suspected that they were engaged in methamphetamine manufacture. During questioning, one of the students indicated they obtained information on methamphetamine synthesis from the internet as well as from discussions with a professor in the chemistry department. The suspect later re-canted this information after procuring an attorney.

The following exhibits were submitted to Butler University for analysis:

1. A sample of fire debris for determination of any ignitable liquids that may be present
2. Samples of clear liquids recovered from the scene
3. Partially burned hand written documents that appear to describe the manufacture of methamphetamine
4. Pens that were recovered from the student's homes
5. Pens recovered from several Butler University chemistry professors
6. Samples of pills that are suspected methamphetamine pre-cursors
7. Exemplar pills from local pharmacies
8. Metal fragments that are suspected to be the remains of an improvised explosive device
9. Samples of explosive powders that were found in the home

KEY QUESTIONS

1. Was the fire intentionally set or accidental?
2. What pen was used to write the instructions for methamphetamine manufacture?
3. What method was in use to manufacture the methamphetamine?
4. What were the pills and what was the source of the pills?
5. If the metal fragments are the remains of an IED, what explosive filler was used and was the filler found in the home?

TASKS

1. Optimize and validate a method to address each specific question (multiple techniques are best)
2. Analyze a sample created "in-house" to show accuracy
3. Analyze crime scene exhibits
4. Interpret data and make a reasonable claim.