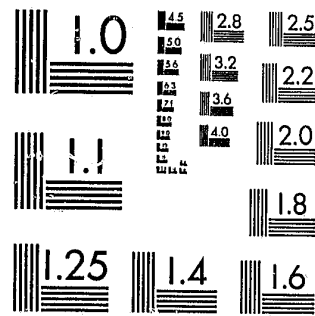


National Criminal Justice Reference Service



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National Institute of Justice  
United States Department of Justice  
Washington, D. C. 20531

4-23-82

LABORATORY PROFICIENCY TESTING PROGRAM

NCJRS

MAY 23 1977

ACQUISITIONS

SUPPLEMENTARY REPORT

SAMPLES 11-15

PROJECT ADVISORY COMMITTEE

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## PREFACE

The analyses summarized in this report are intended for use as a supplement to previously distributed reports.

The Proficiency Testing Project, initiated in the fall of 1974, is a research study of how to prepare and distribute specific samples; how to analyze laboratory results; and how to report those results in a meaningful manner. Participation in the program is voluntary and anonymous, and involves approximately 240 laboratories. To date, 21 samples of evidence have been distributed. A Test Report has been published or is in the process of being published for each of these samples, each report being a statistical summary of the findings of the participating laboratories.

This report is the third of a series of supplementary reports which evaluates results from a grouping of samples. The observations are based on data which has been reported in the individual test reports for those samples.

The citing of any product or method in this report is done solely for reporting purposes and does not constitute an endorsement by the project sponsors.

Comments or suggestions relating to any portion of this report or of the program in general will be appreciated.

U.S. Department of Justice  
National Institute of Justice

January 1977

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## INTRODUCTION

This is the third in a series of Supplementary Reports pertaining to the Proficiency Testing Project. This report, as in the case of the first two Supplementary Reports, discusses the frequency of correct and incorrect responses reported by participating laboratories.

The Project Advisory Committee wishes to point out that the specific numbers of laboratories reporting correct or incorrect responses is not central to the tenets of the Proficiency Testing Program. The degree of difficulty of the various samples was determined by the Project Advisory Committee on a sample to sample basis. The Project Advisory Committee could have composed or manufactured samples that would have guaranteed a 99% correct response rate, or samples that would have resulted in a 5% correct response rate. Due to this variation in degree of difficulty, the actual percentage of laboratories submitting correct or incorrect responses may not reflect the actual capability of the participating laboratories.

The Project Advisory Committee also wishes to point out that each sample consists of a different data matrix, and that it is not possible to assess the capability of a laboratory to perform one type of examination by examining its performance in another category.

## RESPONSE RATES

#11 SOIL EXAMINATION (90)	N.R. (84)	(62)
---------------------------	-----------	------

Participation rate = 52%

#12 FIBER EXAMINATION (116)	N.R. (79)	(42)
-----------------------------	-----------	------

Participation rate = 61%

#13 PHYSIOLOGICAL FLUIDS (128)	N.R. (73)	(33)
--------------------------------	-----------	------

Participation rate = 63%

#14 ARSON EXAMINATION (114)	N.R. (77)	(43)
-----------------------------	-----------	------

Participation rate = 59%

#15 DRUG ANALYSIS (146)	N.R. (82)	(12)
-------------------------	-----------	------

Participation rate = 64%

N.R. = No Response

⋯ = Do not perform this type of analysis

## TEST #11 - SOIL EXAMINATION

Test Sample #11 consisted of three items: Item A was a soil sample from near Fresno, California. Items B and C were duplicate samples of soil from near Patterson, California. Laboratories were asked if Items B and C could have shared a common origin with Item A. Eighty eight laboratories returned results for this exercise. Of these laboratories, 55 or 62.5%, correctly reported that neither B nor C could have shared a common origin with Item A. Twenty-five laboratories, or 28.4%, incorrectly reported that both B and C could have shared a common origin with A. Two laboratories, or 2.2% of the total, reported that Item B could have shared a common origin with Item A, but that Item C could not. Five laboratories, or 5.7% of the laboratories responding, reported inconclusive results for both B and C. One laboratory reported that Item B could not have shared a common origin with Item A, and indicated no response for Item C.

To summarize these data in terms of total responses, 56 laboratories (63.5%) reported that Item B could not have shared a common origin with Item A, and 57 laboratories (64.8%) reported that Item C could not have shared a common origin with Item A. Twenty-seven laboratories (30.7%) incorrectly stated that Item B could have shared a common origin with Item A, and 25 laboratories (28.4%) incorrectly reported that Item C could have shared a common origin with Item A.

The Project Advisory Committee is in accord with the following general comments regarding this sample:

The Project Advisory Committee notes a positive relationship between incorrect responses and the failure to perform comparative density determinations; those laboratories who did not perform a density determination were more likely to draw an erroneous conclusion in this exercise than those who did perform the density determinations. At the same time, a number of laboratories reporting incorrect results did in fact conduct a density determination and reported identical density distributions for both A and B/C. Other laboratories reported a difference between B and C when tested by density gradient, despite the fact that B and C were replicate samples taken from a homogenous whole.

From this, the Project Advisory Committee concludes that the density gradient technique is very useful for discriminating among soil samples, but in itself is not a guarantee of success in soil comparisons. The Project Advisory Committee also concludes that in those instances in which the density gradient technique was attempted but erroneous results reported, one or more of the following may have occurred:

- Carelessness or lack of experience on the part of the examiner,
- Coarseness or heterogeneity in the density gradients resulting from improper technique in their preparation.

The Project Advisory Committee notes that in a number of instances in which incorrect results were reported, instrumental analysis was performed. In some instances the ambiguous or erroneous data from the instrumental approaches (emission spectroscopy, x-ray spectroscopy) was apparently given more weight than more correct data derived from other tests. The Project Advisory Committee cautions laboratories against an unjustified faith in instrumental approaches, and wishes to point out that the proper utilization of these instrumental approaches presumes both a correct operating technique and careful interpretation of the results projected against an adequate data base. The Project Advisory Committee most emphatically is not suggesting that sophisticated instrumentation not be acquired and used, but wishes to emphasize the necessity for the proper training of personnel, the use of in-house standards and blind controls, and properly selected protocols of analysis.

## TEST #12 - FIBER EXAMINATION

Test Sample #12 consisted of three items of virtually the same color: Item A was wool, Item B was acrylic (70% acrylic + 30% modacrylic), and Item C was polyester. Laboratories were asked if Item A could have shared a common origin with Item C, and if Item B could have shared a common origin with Item C.

All 116 laboratories participating in this exercise correctly reported that Item A could not have shared a common origin with Item C. Two laboratories, or 1.7% of the total, incorrectly reported that Item B could have shared a common origin with Item C.

The Project Advisory Committee is in accord with the following general comments regarding this sample:

One laboratory reporting that Items B and C could have shared a common origin used microscopic examination of the fiber and of its cross section, melting point determination, and solubility tests. On the basis of these tests, Item B was identified as acrylic and Item C was tentatively identified as polyester. The differences in solubility and cross sectional appearance were noted. The analytical results clearly do not support a determination of possible common origin, and the Project Advisory Committee concludes that a check was made in the wrong box in Question 1 of the Data Sheet (See Appendix, Figure 3). The Project Advisory Committee wishes to point out, however, that an error in reporting may have the same consequences as an error in the analytical work, and suggests that laboratories review their procedures for ensuring that the conclusions stated in reports are in consonance with the laboratory work that has been performed.

The second laboratory reporting that Items B and C could have shared a common origin used microscopic examination, solubility tests, Pyrolysis-GC, and birefringence determination. Solubility tests and Pyrolysis-GC were reported as giving the same results on Items B and C, and both fibers were identified as being an acrylic. The Project Advisory Committee concludes that one or more of the following errors may have occurred:

- Inadequate or erroneous data base relative to solubility tests and Pyrolysis-GC,
- Misinterpretation of the test results by the operator resulting from carelessness or lack of experience.

Several laboratories correctly reported that Items A and B could not have shared a common origin with Item C, but did so for incorrect reasons. One laboratory reported that Item C was a plant fiber, one

laboratory identified Item C as nylon, and two laboratories tentatively identified Item C as nylon. The Project Advisory Committee wishes to point out that a correct answer which is only coincidental is still an error, and urges the laboratories who misidentified the polyester of Item C to review their methodology to eliminate the possible sources of error cited above.

### TEST #13 - PHYSIOLOGICAL FLUID

Test Sample #13 consisted of two items: Item A was a saliva stain from a Type A secretor individual, and Item B was a seminal stain from a Type A secretor individual with a normal sperm count. One hundred and twenty-eight laboratories responded in this exercise. With respect to Item B (seminal stain), 107 laboratories, or 83.6% of the total number responding, conclusively identified the stain as a seminal stain. Eighteen laboratories, or 14.1% of the total, tentatively identified it as a seminal stain. Two laboratories, or 1.6%, reported inconclusive results. With respect to Item A (saliva stain), 47 laboratories, or 36.7% of those reporting, tentatively identified the stain as a saliva stain and 23 laboratories (18.0%) conclusively identified the stain as a saliva stain. Thirty-seven laboratories (28.9%) reported inconclusive results. Sixteen laboratories (12.5%) eliminated at that point. One laboratory (0.8%) tentatively identified the stain as that of vaginal exudate, and two laboratories (1.6%) conclusively identified the stain as vaginal exudate.

The Project Advisory Committee is in accord with the following general comments regarding this sample:

The Project Advisory Committee recognizes that the probative value of the identification of saliva stain may be low in many instances, and that many laboratories have adopted a policy in routine cases of terminating an examination once it has been established that a stain is not a seminal stain. The Project Advisory Committee does not, therefore, consider the response "not a seminal stain" to represent an incorrect response.

In a like manner, the Project Advisory Committee does not take issue with the tentative identification of the stain as a saliva stain if it is the normal laboratory policy not to pursue a rigorous identification in situations of this sort. At the same time, the Project Advisory Committee would urge laboratories to push for a rigorous identification when it is of concern to establish that the stain is in fact a saliva stain. Among the situations that would call for a rigorous identification would include those cases in which a blood group determination is attempted.

The two laboratories that reported that Item A was conclusively a vaginal stain both failed to attempt a starch amylase test. Since the identification of a stain as a vaginal stain rests heavily on negative evidence, the Project Advisory Committee wishes to point out the necessity of attempting the appropriate tests to indicate the probable nature of the stain. In this instance, the positive starch amylase test would have suggested the probability of the stain being attributable to saliva.

Two laboratories reported inconclusive results for Item B (seminal stain). One of these laboratories failed to indicate any methods used, and the Project Advisory Committee cannot express any meaningful statement regarding the adequacy of the methodology used. In the remaining instance where an inconclusive result was reported, a microscopic examination was performed and an acid phosphatase test was conducted. No specific results were reported, but the Project Advisory Committee assumes that no intact spermatazoa were recovered.

Eighteen laboratories reported Item B as being tentatively identified as a seminal stain. Virtually all of these laboratories reported being unable to demonstrate intact spermatazoa in the stain. No positive relationship was observed between the stain used and the ability or inability to recover intact spermatazoa. In view of the fact that the overwhelming majority of laboratories were able to recover spermatazoa from the stain, the Project Advisory Committee concludes that one or more of the following may have occurred:

- Improper extraction and fixing of the stain,
- Failure to systematically examine the slides prepared from the stain,
- Or a failure to continue the search for cells after an initial lack of success.

The Project Advisory Committee urges laboratories to review their methods for the extraction of stains and the fixation of the cells to the microscope slide, and to ensure that reasonable perseverance is exercised in the search for spermatazoa.



TEST #14 - ARSON EXAMINATION

Test Sample #14 consisted of three items: Item A was approximately 8 ml of leaded gasoline, specifically Chevron Supreme (94.5 octane). Item B was a piece of 100% cotton cloth with 2 ml of the gasoline described under Item A absorbed in the cloth. Item C was another piece of cloth identical to that described under Item B, but with no gasoline. Items B and C were cut with scissors from one piece of cloth. Laboratories were asked if Items A or C could have a common origin with Item B. One hundred and fourteen laboratories responded in this exercise. Ninety laboratories, or 78.9% of the total laboratories responding, stated correctly that Item A could have shared a common origin with Item B. One hundred and one laboratories, or 88.6%, correctly reported that Item C could have shared a common origin with Item B. Twelve laboratories (10.5%) stated incorrectly that Item A could not have shared a common origin with Item B, and 4 laboratories (3.5%) incorrectly reported that Item C could not have shared a common origin with Item B.

The Project Advisory Committee is in accord with the following general comments regarding this sample:

The four laboratories that reported that Item C and Item B and the five laboratories that reported inconclusive results for this portion of the exercise failed to recognize the physical match between the cotton cloth in the two items. The Project Advisory Committee urges laboratories to take the steps necessary to ensure that one form of physical evidence is not ignored simply because it is not typical of the type of case under examination.

The twelve laboratories reporting that Item A could not have shared a common origin with Item B relied in part on gas chromatographic analysis. The Project Advisory Committee concludes that carelessness or lack of experience on the part of the operator may have lead to these erroneous conclusions.

Several laboratories reported less than correct results which appear in part to reflect an unjustified reliance on Infrared Spectrophotometry to discriminate between gasoline mixtures. The Project Advisory Committee urges that considerable caution be exercised in the interpretation of IR data on complex mixtures of hydrocarbons and petroleum distillates.

TEST #15 - DRUG ANALYSIS

A mixture of methamphetamine and ephedrine in lactose and sodium carbonate was sent out as Test Sample #15. One hundred forty-six laboratories reported results. Eighty-seven laboratories, or 59.6% of the total correctly reported both methamphetamine and ephedrine. Thirty-one laboratories, or 21.2%, reported methamphetamine only. Seventeen laboratories, or 11.6% of the total, reported ephedrine only. Four laboratories, or 2.7%, reported amphetamine, and seven laboratories, representing 4.8% of the total laboratories, reported no drug material present.

The Project Advisory Committee is in accord with the following general comments regarding this sample:

The Project Advisory Committee recognizes that many laboratories have a policy of pursuing an analysis only to the point where relevant statutory considerations are fulfilled, and, having identified the methamphetamine, would conclude the examination. The Project Advisory Committee cannot conclude that any error has taken place if a laboratory reported only methamphetamine.

Seven laboratories failed to report either ephedrine or methamphetamine. Among the methods used by these laboratories were Gas Chromatography, UV and IR Spectrophotometry, Color and Crystal Tests, GC/MS, X-Ray Diffractometry, and Thin-Layer Chromatography. In no instance would it appear that the failure to identify the drug materials could be attributed to a lack of available instrumentation or to insufficient methodology. The Project Advisory Committee can conclude that one of the following may have occurred:

- Inadequate data base or inadequate standard spectra,
- Misinterpretation of the test results by the operator resulting from carelessness or lack of experience.

Four laboratories reported the presence of amphetamine, the four being split on whether the amphetamine was the dextrorotary isomer or the racemic mixture. Each laboratory reported the use of gold chloride or platinum chloride for the identification of the material. The Project Advisory Committee can conclude that one of the following may have occurred:

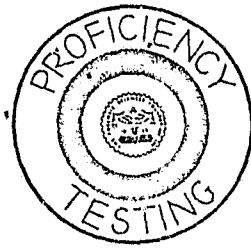
- Mislabeled or contaminated primary standard,
- Reagent made up incorrectly,
- Misinterpretation of test results by the operator resulting from carelessness or lack of experience leading to failure to properly recognize and interpret crystal forms.

The Project Advisory Committee wishes also to point out that a quickly performed and easily interpreted color test exists to distinguish primary and secondary amines, and urges the application of this test when the circumstances warrant. The application of this test would have avoided the mistakes of the type under discussion.

Seventeen laboratories reported only ephedrine. The Project Advisory Committee considers the reporting of ephedrine only to be a less than correct response for this sample. The methods used by these laboratories run a full gamut of instrumental approaches, color and crystal tests, and chromatographic methods. The Project Advisory Committee urges the laboratories missing the methamphetamine to review their analytical approach to ensure that the presence of one non-controlled material will not mask the presence of another, controlled drug material. In the case of the phenethylamines, considerable caution should be placed on the interpretation of the results of Ultraviolet Spectrophotometry and color tests.

## APPENDIX





LAB CODE B- \_\_\_\_\_

FIGURE 1

CHECK HERE AND RETURN IF YOU DO NOT PERFORM SOIL EXAMINATIONS

DATE RECEIVED IN LAB \_\_\_\_\_

DATE PROCESSED IN LAB \_\_\_\_\_

DATA SHEET  
 PROFICIENCY TESTING PROGRAM  
 TEST #11  
 SOIL EXAMINATION

Item A represents a soil sample from a burglary scene. Items B and C represent samples of soil removed from the shoes of two different suspects.

1. Could Items B or C have a common origin with Item A?

	Item B	Item C
Yes	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>
Inconclusive	<input type="checkbox"/>	<input type="checkbox"/>

2. What information (qualitative and quantitative) did you develop to arrive at your conclusions in Question 1? Please check all appropriate boxes and provide values where applicable.

In the left hand column indicate the sequence (1,2,3, etc.) in which the tests were run. Indicate with an asterisk (\*) the point where a conclusion was reached, even though subsequent tests were performed for confirmatory purposes. If elemental and/or mineral composition is determined, indicate the elements and/or minerals identified.

Sequence of Testing	ITEM A	ITEM B	ITEM C
_____ Color			
_____ Density Studies			
_____ Microscopic Examination			
_____ Emission Spectroscopy			
_____ X-Ray Diffraction			
_____ X-Ray Spectroscopy			
_____ Other (Specify) _____			

3. Please provide the results obtained with each of the methods and instruments checked in Question 2. (Example: Density Gradient tubes using mixture of bromoform and bromobenzene, etc.) Please provide specific and complete responses. Attach additional sheets if necessary.

Method:

Method:

Method:

4. Additional Comments

DATA SHEETS MUST BE RECEIVED AT THE FOUNDATION OFFICE BY JANUARY 2, 1976

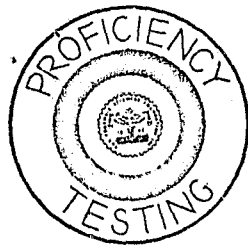


FIGURE 2

QUICK REPORT

PROFICIENCY TESTING PROGRAM  
TEST #11 - SOIL EXAMINATION

Thank you for returning your data sheets and test results.

The soil samples have been characterized by the manufacturer as follows:

- Sample A - Hanford Sandy Loam, Fresno, California
- Sample B] same - Columbia Sandy Loam, Patterson, California
- Sample C]

Samples A, B, and C key in the Munsell Soil Color Chart as:

10 YR/5/3 (dry)  
10 YR/3/3 (wet)

A may be distinguished from B and C by density gradient and elemental analysis. Therefore, A does not have common origin with B or C.

At a later date, a complete report will be sent to you including the results of the referee laboratories and the results of all laboratories by code number.

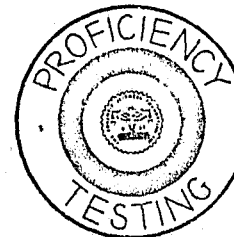


FIGURE 3

LAB CODE B \_\_\_\_\_

CHECK HERE (AND RETURN) IF YOU DO NOT PERFORM FIBER EXAMINATION

DATE RECEIVED IN LAB \_\_\_\_\_

DATE PROCESSED IN LAB \_\_\_\_\_

DATA SHEET  
PROFICIENCY TESTING PROGRAM

TEST #12  
FIBER EXAMINATION

Item C represents fibers from the scene of a homicide. Items A and B represent fibers found on the shoes of two different suspects.

1. Could Items A or B have common origin with C?

	ITEM A	ITEM B
YES	<input type="checkbox"/>	<input type="checkbox"/>
NO	<input type="checkbox"/>	<input type="checkbox"/>
INCONCLUSIVE	<input type="checkbox"/>	<input type="checkbox"/>

2. What information (qualitative and quantitative) did you develop to arrive at your conclusions in Question 1? Please check all appropriate boxes and provide values where applicable.

In the left hand column indicate the sequence (1, 2, 3, etc.) in which the tests were run. Indicate with an asterisk (\*) the point where a conclusion was reached, even though subsequent tests were performed for confirmatory purposes.

Sequence of Testing	ITEM A	ITEM B	ITEM C
_____ BIREFRINGENCE			
_____ EMISSION SPECTROSCOPY (Specify Elements Identified)			
_____ FLUORESCENT STUDIES			
_____ INFRARED ANALYSIS			
_____ MACROSCOPIC EXAMINATION			
_____ MELTING POINT DETERMINATION			
_____ MICROSCOPIC EXAMINATION (Specify Type)			
_____ PYROLYSIS C-C			
_____ REFRACTIVE INDEX			
_____ SOLUBILITY TESTS (Specify Solvents Used)			
_____ THIN LAYER CHROMATOGRAPHY			
_____ UV SPECTRAPHOTOMETRY			
_____ X-RAY DIFFRACTION			
_____ X-RAY FLUORESCENCE (Count Ratio)			
_____ OTHER (SPECIFY)			
_____			
_____			
_____			

3. Please specify the information developed with each of the methods and instruments checked in Question 2. (Example: Solubility tests using HCl, H<sub>2</sub>SO<sub>4</sub>, Acetone and HNO<sub>3</sub>; microscopic-fibers identified as cotton, nylon, etc.)

Please provide specific and complete responses. Attach additional sheets if necessary.

Method:

Method:

Method:

4. Additional Comments:

DATA SHEETS MUST BE RECEIVED AT THE  
FOUNDATION OFFICE BY FEBRUARY 10, 1976

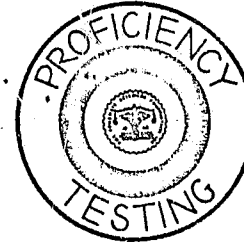


FIGURE 4

QUICK REPORT  
PROFICIENCY TESTING PROGRAM

TEST #12  
FIBER EXAMINATION

Thank you for returning your data sheets and test results. The fibers can be characterized according to the sample manufacturer as follows:

- Item A - Composition: 100% wool  
Manufacturer: Philadelphia Carpet Company  
Color: Heather Green
- Item B - Composition: Acrylic (70% acrylic + 30% modacrylic)  
Manufacturer: Brinkcrest Company  
Color: #1014 Avocado
- Item C - Composition: 100% Dacron Polyester  
Manufacturer: Burlington Industries  
Color: #31 Pine

At a later date, a complete report will be sent to you including the results of these referee laboratories and the results of all laboratories. (by code numbers).



FIGURE 5

LAB CODE B \_\_\_\_\_

CHECK HERE (AND RETURN) IF YOU DO NOT DO PHYSIOLOGICAL FLUID EXAMINATION.

DATE RECEIVED \_\_\_\_\_  
DATE PROCESSED \_\_\_\_\_

DATA SHEET  
PROFICIENCY TESTING PROGRAM  
TEST #13  
PHYSIOLOGICAL FLUID EXAMINATION

Items A and B represent evidence collected in connection with a rape case. Please examine the items according to your normal laboratory procedures and complete portion(s) which comply with your laboratory policy. Please add any additional information you consider pertinent to your response.

1a. The stain on Item A (Blue Cloth):

- was examined with inconclusive results
- was examined and determined  tentatively as representing a \_\_\_\_\_ stain.  
 conclusively

1b. The following tests were conducted to arrive at the answer to question 1a:

- Microscopic examination
- Phase contrast
- Bright field (specify stains used) \_\_\_\_\_  
\_\_\_\_\_
- Acid phosphatase determination  
specify substrate: \_\_\_\_\_ specify dye: \_\_\_\_\_  
\_\_\_\_\_
- Starch amylase
- Microcrystalline (specify) \_\_\_\_\_  
\_\_\_\_\_
- Blood group determination (specify factors sought, and methods used).  
Factors: \_\_\_\_\_ Methods used: \_\_\_\_\_  
\_\_\_\_\_
- Other (specify) \_\_\_\_\_  
\_\_\_\_\_

(OVER)

2a. The stain on Item B (Pink Cloth):

- was examined with inconclusive results
- was examined and determined  tentatively as representing a \_\_\_\_\_ stain  
 conclusively

2b. The following tests were conducted to arrive at the answer to question 2a:

- Microscopic examination
- Phase contrast
- Bright field (specify stains used) \_\_\_\_\_  
\_\_\_\_\_
- Acid phosphatase determination  
specify substrate: \_\_\_\_\_ specify dye: \_\_\_\_\_  
\_\_\_\_\_
- Starch amylase
- Microcrystalline (specify) \_\_\_\_\_  
\_\_\_\_\_
- Blood group determination (specify factors sought, and methods used).  
Factors: \_\_\_\_\_ Methods used: \_\_\_\_\_  
\_\_\_\_\_
- Other (specify) \_\_\_\_\_  
\_\_\_\_\_

3. Additional Comments:

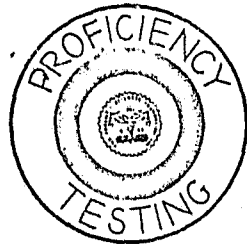


FIGURE 6

QUICK REPORT  
PROFICIENCY TESTING PROGRAM  
TEST #13  
PHYSIOLOGICAL FLUID EXAMINATION

Thank you for returning your data sheets and test results. The stains are characterized by the manufacturer as follows:

Item A: (Blue Cloth) is stained with saliva from a Type A secretor individual.

Item B: (Pink Cloth) is stained with seminal fluid from a Type A secretor individual with a normal sperm count.

At a later date, a complete report will be sent to you including the results of three referee laboratories and the results of all laboratories (by code number).

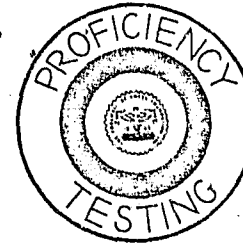


FIGURE 7

LAB CODE B \_\_\_\_\_

CHECK HERE (AND RETURN) IF YOU DO NOT PERFORM ARSON EXAMINATION

DATE RECEIVED IN LAB \_\_\_\_\_

DATE PROCESSED IN LAB \_\_\_\_\_

DATA SHEET  
PROFICIENCY TESTING PROGRAM

TEST #14  
ARSON EXAMINATION

Item B represents a piece of evidence found at the scene of an attempted arson. Items A & C were found in the back seat of a fleeing motor vehicle minutes after a silent alarm was activated at police headquarters.

1. a. Could Items A or C have common origin with Item B?

	A	C
Yes	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>
Inconclusive	<input type="checkbox"/>	<input type="checkbox"/>

b. Does the evidence denote a conspiracy?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Inconclusive	<input type="checkbox"/>

2. What information (qualitative, quantitative and criminalistic) did you develop to arrive at your conclusion in Question 1? List the order of tests performed. Asterisk (\*) the point at which a conclusion or conclusions were reached.

Sequence of Testing	<u>Information Developed</u>
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____

3. a. Was an accelerant found? Yes  No   
b. If "Yes", was it identified? Yes  No

Identified as: \_\_\_\_\_

4. Please specify the information developed with each of the methods and instruments used.

Please provide specific and complete responses. Attach additional sheets if necessary.

Method:

Method:

Method:

Method:

5. Additional Comments:

DATA SHEETS MUST BE RECEIVED AT THE FOUNDATION  
OFFICE BY APRIL 23, 1976

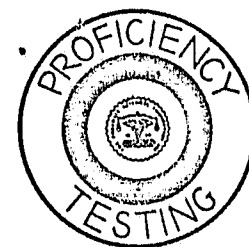


FIGURE 8

QUICK REPORT  
PROFICIENCY TESTING PROGRAM  
TEST #14  
ARSON EXAMINATION

Thank you for returning your data sheets and test results. The arson examination sample is characterized by the manufacturer as follows:

Item A Contained approximately 8 ml of leaded gasoline  
Chevron Supreme (High test)  
94.5 Octane

Item B A portion of a 8" square of 100% white cotton  
cloth purchased at J. C. Penney's with 2 ml of  
Item A absorbed thereon.

Item C The other portion of the 8" square used in  
Item B.

The cloth in B and C was cut with scissors. Therefore:

- Gasoline of Item A exhibits all the same characteristics as the gasoline of Item B.
- Cloth of Item B is an exact fit to the cloth of Item C and at one time was a single unit.

At a later date, a complete report will be sent to you including the results of three referee laboratories and the results of all laboratories (by code numbers).

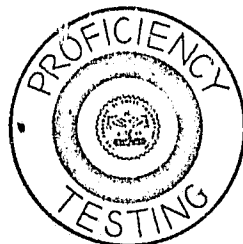


FIGURE 9

LAB CODE B \_\_\_\_\_

CHECK HERE (AND RETURN) IF YOU DO NOT PERFORM DRUG ANALYSIS

DATE RECEIVED IN LAB \_\_\_\_\_

DATE PROCESSED IN LAB \_\_\_\_\_

DATA SHEET

PROFICIENCY TESTING PROGRAM

TEST #15

DRUG ANALYSIS

1. The enclosed substance was a street buy. The agent needs all the qualitative and quantitative information you can provide.

(Over)

Information is being collected for research and statistical purposes only. Such information will not be revealed or used for any other purpose. Information furnished by any person or agency and identifiable to any specific person or laboratory will not be revealed or used for any purpose other than the research and statistical purposes for which it was obtained.

2. Indicate method(s) used:

DATA SHEETS MUST BE POSTMARKED BY JUNE 9, 1976



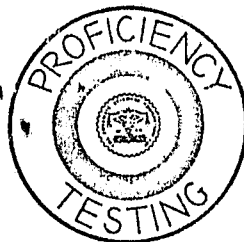


FIGURE 10

QUICK REPORT  
PROFICIENCY TESTING PROGRAM

TEST #15

DRUG ANALYSIS

Thank you for returning your data sheets and test results. The drug sample is characterized by the manufacturer as follows:

<u>Component</u>	<u>Composition by Weight</u>	<u>% Composition</u>
d1 Methamphetamine HCl	3.0 grams	1%
Ephedrine Sulfate	3.0 grams	1%
Lactose	147 grams	49%
Sodium Carbonate (Anhydrous)	147 grams	49%
	<u>300 grams</u>	<u>100%</u>

At a later date, a complete report will be sent to you including the results of the referee laboratories and the results of all laboratories (by Code Number).

**END**