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2025 Lubricant Examination Proficiency Test
FTS-25-LUB Summary Report

The Submission Deadline for this test was *April 4, 2025*

The test was manufactured by FTS at the FTS Laboratory Facility (127 W. Grand River Avenue, Williamston, MI 48895) and all activities were coordinated by Rebecca Smith (rsmith@forsci.com), Proficiency Test Program Manager. Ms. Smith is also authorizing the release of this report. This is the summary report issued on 4/17/25. FTS considers all reports confidential and does not release information regarding participant's results without authorization from that participant.

Summary

Test results were received in 12 of 18 tests distributed (67% response rate). Of the 12 respondents:

Item 3 (Trojan® ENZ™ condom)

6 of 12 (50%) eliminated the condom from Item 3 as a possible source for the lubricant in Item 1.
5 of 12 (42%) reported an inconclusive result for whether the condom from Item 3 is a possible source for the lubricant in Item 1.
1 of 12 (8%) included the condom from Item 3 as a possible source for the lubricant in Item 1.

12 of 12 (100%) reported lubricant component(s) were found on Item 1 that could not have come from Item 3.

Item 4 (Trojan® Her Pleasure™ condom with spermicidal lubricant, same lubricant swabbed on Item 1)

12 of 12 (100%) included the condom from Item 4 as a possible source for the lubricant in Item 1.

12 of 12 (100%) reported no lubricant component(s) were found on Item 1 that could not have come from Item 4.

Item 5 (Trojan® Ecstasy™ condom)

5 of 12 (42%) eliminated the condom from Item 5 as a possible source for the lubricant in Item 1.
5 of 12 (42%) reported an inconclusive result for whether the condom from Item 5 is a possible source for the lubricant in Item 1.
2 of 12 (16%) included the condom from Item 5 as a possible source for the lubricant in Item 1.

12 of 12 (100%) reported lubricant component(s) were found on Item 1 that could not have come from Item 5.

Manufacturer's Information

All items were produced and packaged at different times in the same laboratory area.

Item 1 was produced by swabbing a Trojan® Her Pleasure™ condom with spermicidal lubricant (Lot# TT4012U, UPC 2260097452) using two Fisherbrand cotton-tipped swabs (#222363167, Lot 20180918) until the cotton was saturated with lubricant. The swabs were packaged into a Corning® 16 x 125mm culture tube (#430157, Lot 3210009) and labeled. The tube was further packaged into a 6" x 9" manila envelope, sealed and labeled per FTS guidelines.

Item 2 was produced by packaging two blank Fisherbrand Cotton-Tipped Swabs (#222363167, Lot 20180918) into a Corning® 16 x 125mm culture tube (#430157, Lot 3210009). The tube was sealed, labeled and further packaged into a 6" x 9" manila envelope, sealed and labeled per FTS guidelines.

Item 3 was produced by packaging one wrapped Trojan® ENZ™ condom (Lot# KT3237504, UPC 2260093951) into a large coin manila envelope, sealed and labeled per FTS guidelines.

Item 4 was produced by packaging one wrapped Trojan® Her Pleasure™ condom with spermicidal lubricant (Lot# TT4012U, UPC 2260097452) into a large coin manila envelope, sealed and labeled per FTS guidelines.

Item 5 was produced by packaging one wrapped Trojan® Ecstasy™ condom (Lot# TT3312Z, UPC 2260094740) into a large coin manila envelope, sealed and labeled per FTS guidelines.

The five items with matching UTICs were packaged together into a large manila envelope, sealed and labeled per FTS guidelines.

Assigned Value

Proficiency tests under ISO 17043:2023 are assessed via comparison of the participant result to the assigned value of a proficiency test item or items. For quantitative tests, FTS determines the assigned value based on statistical methods described in ISO 13528:2022. For qualitative tests, the FTS study coordinator determines the assigned value based on a number of factors, including product source information, internal and/or external pre-distribution laboratory analysis, and consensus of responses (consensus value).

Quality systems and laboratory reporting guidelines vary greatly from laboratory to laboratory, therefore participating laboratories and their accrediting bodies are responsible for the assessment of whether a reported result is an outlying result.

For this proficiency test, the following assigned values are based on product information, confirmed by laboratory analysis that the lubricant on the swabs from Item 1 showed the presence of the spermicide Nonoxynol-9 that was not present in the condoms from Item 3 and Item 5.

Item 3: Item 3 is not a possible source of compound(s) found on Item 1. Lubricant component(s) were found on Item 1 that could not have come from Item 3.
Item 4: Item 4 is a possible source of compound(s) found on Item 1. Lubricant component(s) were not found on Item 1 that could not have come from Item 4.

Item 5: Item 5 is not a possible source of compound(s) found on Item 1. Lubricant component(s) were found on Item 1 that could not have come from Item 5.

Please compare the condoms collected to any lubricant, if present, on the swabs collected from the victim.

Items Submitted

Item 1: Questioned swabs (Fisherbrand® 22363167) recovered from the victim.
Item 2: Control (Fisherbrand® 22363167) swabs.
Item 3: Trojan® ENZ™ Condom.
Item 4: Trojan® Her Pleasure™ Condom with spermicidal lubricant.
Item 5: Trojan® Ecstasy™ Condom.

(Please Note: For this proficiency test, Items 1 & 2 each contain two swabs. The composition of both swabs within an item are consistent.)

3) Indicate all methods used for analysis (select all that apply):

A) ☐ Macro/Microscopic Examinations
B) ☐ Chemical Spot Tests
C) ☐ GC/FID/TEA/ECD
D) ☐ GC/MS
E) ☐ IC
F) ☐ SEM/EDS
G) ☐ Thin Layer Chromatography
H) ☐ PLM
I) ☐ HPLC
J) ☐ IR/FTIR Analysis
K) ☐ ICP-MS
L) ☐ CE
M) ☐ XRD
N) ☐ XRF
O) ☐ HPLC/MS

P) ☐ DART TOF-MS

Q) ☐ UV Fluorescence/ Polilight

R) ☐ pH

S) ☐ Raman Spectroscopy

T) ☐ ICP-AES

UTIC	Webcode	Indicate all methods used for analysis (select all that apply)
p20251301	W061	Macro/Microscopic Examinations; GC/MS; IR/FTIR Analysis
p20251302	W061	GC/MS; IR/FTIR Analysis
p20251305	W153	GC/MS; HPLC/MS
p20251306	W068	PLM; IR/FTIR Analysis
p20251308	W123	Macro/Microscopic Examinations; PLM; IR/FTIR Analysis; UV Fluorescence/ Polilight; GC/MS
p20251309	W053	Macro/Microscopic Examinations; HPLC/MS
p20251312	W126	Macro/Microscopic Examinations; IR/FTIR Analysis
p20251313	W055	Macro/Microscopic Examinations; GC/MS; PLM; IR/FTIR Analysis; DART TOF-MS
p20251314	W055	IR/FTIR Analysis; DART TOF-MS; Macro/Microscopic Examinations; GC/MS; PLM
p20251315	W055	Macro/Microscopic Examinations; GC/MS; PLM; IR/FTIR Analysis; DART TOF-MS
p20251316	W055	PLM; IR/FTIR Analysis; DART TOF-MS; GC/MS
p20251317	W055	GC/MS; Macro/Microscopic Examinations; PLM; IR/FTIR Analysis; DART TOF-MS

4) Other methods used (if none, please enter "N/A"):

UTIC	Webcode	Other methods used
p20251301	W061	Py-GCMS

5) Is Item 3 a possible source of compound(s) found on Item 1?

A) ○ Yes

B) ○ No

C) ○ Inconclusive

D) ○ No materials foreign to the substrate were found on Item 1.

6) Were lubricant component(s) found on Item 1 that could not have come from Item 3?

A) ○ Yes

B) ○ No

C) ○ Inconclusive

D) ○ No materials foreign to the substrate were found on Item 1.

UTIC	Webcode	Is Item 3 a possible source of compound(s) found on Item 1?	Were lubricant component(s) found on Item 1 that could not have come from Item 3?
p20251301	W061	No	Yes
p20251302	W061	No	Yes
p20251305	W153	No	Yes
p20251306	W068	Yes	Yes
p20251308	W123	No	Yes
p20251309	W053	No	Yes
p20251312	W126	No	Yes
p20251313	W055	Inconclusive	Yes
p20251314	W055	Inconclusive	Yes
p20251315	W055	Inconclusive	Yes
p20251316	W055	Inconclusive	Yes
p20251317	W055	Inconclusive	Yes

7) Is Item 4 a possible source of compound(s) found on Item 1?

A) ○ Yes

B) ○ No

C) ○ Inconclusive

D) ○ No materials foreign to the substrate were found on Item 1.

8) Were lubricant component(s) found on Item 1 that could not have come from Item 4?

A) ◯ Yes

B) ◯ No

C) ◯ Inconclusive

D) ◯ No materials foreign to the substrate were found on Item 1.

UTIC	Webcode	Is Item 4 a possible source of compound(s) found on Item 1?	Were lubricant component(s) found on Item 1 that could not have come from Item 4?
p20251301	W061	Yes	No
p20251302	W061	Yes	No
p20251305	W153	Yes	No
p20251306	W068	Yes	No
p20251308	W123	Yes	No
p20251309	W053	Yes	No
p20251312	W126	Yes	No
p20251313	W055	Yes	No
p20251314	W055	Yes	No
p20251315	W055	Yes	No
p20251316	W055	Yes	No
p20251317	W055	Yes	No

9) Is Item 5 a possible source of compound(s) found on Item 1?

A) ◯ Yes

B) ◯ No

C) ◯ Inconclusive

D) ◯ No materials foreign to the substrate were found on Item 1.

10) Were lubricant component(s) found on Item 1 that could not have come from Item 5?

A) ◯ Yes

B) ◯ No

C) ◯ Inconclusive

D) ◯ No materials foreign to the substrate were found on Item 1.

UTIC	Webcode	Is Item 5 a possible source of compound(s) found on Item 1?	Were lubricant component(s) found on Item 1 that could not have come from Item 5?
p20251301	W061	No	Yes
p20251302	W061	Yes	Yes
p20251305	W153	No	Yes
p20251306	W068	Yes	Yes
p20251308	W123	No	Yes
p20251309	W053	No	Yes
p20251312	W126	No	Yes
p20251313	W055	Inconclusive	Yes
p20251314	W055	Inconclusive	Yes
p20251315	W055	Inconclusive	Yes
p20251316	W055	Inconclusive	Yes
p20251317	W055	Inconclusive	Yes

11) How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court). In order to maintain confidentiality, please refrain from including identifying information specific to your laboratory.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251301	W061	Item 2 comprised two swabs in intimate contact. One swab was examined and used as a reference blank for Item 1. The swab was analysed for the presence of lubricant residues with negative result. Item 3 comprised an unopened “Trojan ENZ” branded condom. A silicone-oil based lubricant was detected from the item. Item 4 comprised an unopened “Trojan Her Pleasure Sensations Armor Spermicidal Lubricant” branded condom. A silicone-oil based lubricant and nonoxynol-9 were detected from the item. Item 5 comprised an unopened “Trojan Stimulations Ecstasy Ultrasmooth Lubricant” branded condom. A silicone-oil based lubricant was detected from the item.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251301 (Cont.)	W061	Item 1 comprised two swabs in intimate contact. One swab was analysed for the presence of lubricant residues. A silicone-oil based lubricant and nonoxynol-9 were detected from the item. The results indicate that the residues detected from Item 1 could have originated from the condom lubricant in Item 4. The frequency of lubricants indistinguishable from Item 4 is unknown. The results indicate that the residues detected from Item 1 could not have originated from the condom lubricants in Item 3 or Item 5. Factors influencing the transfer and persistence of lubricants include lubricant type, activities after the event such as washing, and the individual's excretion ability.
p20251302	W061	Based on the results of the examinations performed, I am of the opinion that: 1) The residue found on the victim swab (Item 1), was determined to be different to the condom lubricant in Item 3 ('Trojan ENZ LUBRICATED' condom). Therefore, Item 3 could not be a possible source for the residue found on Item 1. 2)The residue found on the victim swab (Item 1), was determined to be different to the condom lubricant in Item 5 ('Trojan Ecstasy' condom). Therefore, Item 5 could not be a possible source for the residue found on Item 1. 3) The residue found on the victim swab (Item 1), could not be differentiated from the condom lubricant in Item 4 ('Trojan Her Pleasure' condom). Therefore, Item 4 could not be excluded as a possible source for the residue found on Item 1. Note: Whilst Item 4 could not be excluded as a possible source, condoms are commercially manufactured and another condom of the same type, or a different brand of condom with the same formulation, could not be excluded as a possible source either.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251305	W153	A characteristic profile of lubricant has been found on item 1 : polyethylene glycols (PEGs), polydimethylsiloxanes (PDMS), benzocaine, methylparaben, nonoxynols and tritons. All of these compounds have been detected on item 4. In particularly, they showed the same PDMS profil. As they share the same characteristic chemical fingerprint, the Trojan Her pleasure condom with spermicidal lubricant (item 4) could be a highly probable source for the product found on item 1. Nevertheless, no restriction to a unique common origin could be affirmed as the lubricant on item 1 either came from item 4 or another product indistinguishable in chemical composition. Fatty acids have also been detected on item 1. They can either come from lubricants or natural origin. Item 3 and 5 showed a silicone based lubricant formulation with fatty acids also for item 5. Their PDMS profiles are different from the one identified on item 1. These results do not support the proposition of the combined residues detected on item 1 could originated from the condom lubricants items 3 and 5.
p20251306	W068	**Opinions and Interpretation:** The tested swab recovered from the victim (Item 1) is **associated** to the Trojan Her Pleasure Condom with spermicidal lubricant (Item 4) upon comparison of starch particles and IR characteristics and either originated from this item or from another lubricant source with same characteristics **(Level IV Association)**. This level of association was reached due to the commonly available lubricant components on the readily available evidence type (i.e. manufactured lubricated condoms). The tested swab recovered from the victim (Item 1) is **disassociated** from the Trojan ENZ Condom (Item 3) and the Trojan Ecstasy Condom (Item 5) due to differences in IR characteristics. **Results:** **Item 1 (Questioned swabs recovered from the victim).** Starch and PDMS were identified on the tested swab; nonoxynol-9 was detected. The tested swab in Item 1 is **disassociated** from the Trojan ENZ Condom (Item 3) and the Trojan Ecstasy Condom (Item 5) due to differences in IR characteristics. The tested swab in Item 1 is **associated** to the Trojan Her Pleasure Condom with spermicidal lubricant (Item 4) upon comparison of starch particle and IR characteristics.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251306 (Cont.)	W068	**Item 2 (Control swabs).** No PDMS was identified and no nonoxynol-9 was detected on the tested control swab. **Item 3 (Trojan ENZ Condom).** Starch and PDMS were identified on this item. **Item 4 (Trojan Her Pleasure Condom with spermicidal lubricant).** Starch and PDMS were identified on this item; nonoxynol-9 was detected. **Item 5 (Trojan Ecstasy Condom).** Starch and PDMS were identified on this item. **Level of Association:** Level I Association: A physical fit; items physically fit and/or align one another by way of corresponding surface characteristics. The associated items were once joined together to form a single item. Level II Association: Items correspond in all tested properties and share atypical characteristic(s) that would not be expected to be readily available in the population of this evidence type. No exclusionary differences are detected. Level III Association: Items correspond in all tested properties and, therefore, could have originated from the same source. Other items have been manufactured and/or are naturally occurring that would also correspond to the submitted evidence. No exclusionary differences are detected. Level IV Association: Items correspond in tested properties and, therefore, could have originated from the same source. The items share typical characteristics expected to be readily available in the population of this evidence type. No exclusionary differences are detected. Alternatively, an association between items could be categorized as a Level IV Association if a limited analysis is performed. The extent of limited analysis varies and is specified in the report.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251308	W123	Results: An elevated number of starch particles were observed in Items 1, 4, and 5. Starch is commonly associated with latex products (latex gloves, condoms, some feminine hygiene products, etc.) and can indicate the possible use of a condom when observed on body cavity swabs. Polydimethylsiloxane (PDMS) was identified in Items 1, 3, 4, and 5. PDMS is an ingredient in some sexual lubricants, some lotions, some cosmetics, and is also commercially applied to some condoms for lubrication purposes. Nonoxynol-9 was identified in Items 1 and 4. Nonoxynol-9 is a spermicide that is commercially applied to some condoms, and is also an additive in some sexual lubricants. No lubricants or additives were identified in the control swab Item 2. Conclusions: Based on the above results, the elevated number of starch particles, PDMS, and nonoxynol-9 identified on Item 1 either originated from Item 4, *Trojan® Her Pleasure™ condom with spermicidal lubricant*, or another condom with similar lubricant formulation. Item 3, *Trojan® ENZ™ condom*, or another condom with similar lubricant formulation could not be excluded as a possible source for the PDMS detected on Item 1; however, Item 3 is excluded as a possible source for the elevated number of starch particles and nonoxynol-9. Item 5, *Trojan® Ecstasy™ condom*, or another condom with similar lubricant formulation could not be excluded as a possible source for the elevated number of starch particles and PDMS detected on Item 1; however, Item 5 is excluded as a possible source of the nonoxynol-9. The time of deposition of individual components or whether they were deposited together or separately cannot be determined. Note: PDMS, starch particles, and nonoxynol-9 are not exclusively used in condom formulations.
p20251309	W053	The lubricant on the questioned vaginal swab [item 1] could have come from a same type of condom as the collected Trojan Her Pleasure condom [Item 4]. However, the identified components are not specific for this condom, so another type of condom containing the detected siloxanes and the spermicide 9-nonoxynol cannot be ruled out as a possible source. [Item 3] and [Item 5] have lubricant with different siloxanes than the lubricant found on [Item 1], so [Item 3] and [Item 5] cannot be the source of the lubricant found on [Item 1].

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251312	W126	Staining noted on item 1 (questioned swab) was analysed when it was found to have chemical components commonly encountered in condom lubricants. Item 4 (known condom) was found to show similarities in chemical compostion with the staining on item 1, such that, a condom of this type could have been repsonsible for this stain. Differences were noted between items 3 and 5 (known condoms) with the staining on item 1, such that, condoms of these types could not have been repsonsible for this staining.
p20251313	W055	1. Propylene glycol, glycerin, methylparaben, propylparaben, benzocaine, polydimethylsiloxane, nonoxynol-9, and elevated amounts of starch particles were identified on Exhibit 1 (Questioned swabs). 2. Propylene glycol, glycerin, methylparaben, propylparaben, benzocaine, polydimethylsiloxane, nonoxynol-9, and a significant amount of starch particles were identified on Exhibit 4 (unopened Trojan Her Pleasure condom with spermicidal lubricant). The materials identified on Exhibit 1 (questioned swabs) could have originated from a source with the same characteristics as Exhibit 4. A condom lubricant association is not a means of positive identification and the number of possible sources for a specific condom formulation is unknown. 3. Polydimethylsiloxane was identified on Exhibit 3 (unopened Trojan ENZ Condom). It is indeterminate as to whether the polydimethylsiloxane identified on Exhibit 1 (questioned swabs) could have originated from a source with the same characteristics as Exhibit 3 due to unexplainable differences in the materials identified on the samples. 4. Propylene glycol, polydimethylsiloxane, and a significant amount of starch particles were identified on Exhibit 5 (unopened Trojan Ecstasy condom). It is indeterminate as to whether the propylene glycol, polydimethylsiloxane, and starch particles identified on Exhibit 1 (questioned swabs) could have originated from a source with the same characteristics as Exhibit 5 due to unexplainable differences in the materials identified on the samples . 5. No significant materials used as ingredients in condom lubricants or sexual lubricants were identified on Exhibits 2 (control swabs) or 3.1 (laboratory control swab). 6. This testing cannot determine the time that materials were originally deposited on any exhibit analyzed, or the length of time it takes for materials deposited on the body to be lost due to factors such as decay, degradation, evaporation, washing, or absorption by the body.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251313 (Cont.)	W055	7. This testing cannot determine whether the materials identified on Exhibit 1 originated from a single product source or from multiple sources. 8. It should be noted that the materials identified on Exhibits 1, 3, 4, and 5 are not unique to condoms and may be found in other commercial products. a. Polydimethylsiloxane is an ingredient in products such as some lubricating and personal care products. b. Starch is an ingredient in products such as some baking, cosmetic, and personal care products. c. Nonoxynol-9 is a spermicide, and is an ingredient used in some detergents as a surfactant. d. Benzocaine is a numbing agent, and is an ingredient used in some topical anesthetics. e. Methylparaben and propylparaben are used as ingredients in products such as some medical lubricants, as well as personal care products. f. Propylene glycol is known to be in vaginal secretions and has been demonstrated to be volatile at ambient temperatures. Propylene glycol is also an ingredient in products such as some personal care products. g. Glycerin is known to be in vaginal secretions as well as some cotton tipped swabs. Glycerin is also an ingredient in products such as some personal care products.
p20251314	W055	1. The chemical extracts of the swab cuttings from Exhibit 1 (questioned swabs from the victim) were analyzed for the presence of condom and sexual lubricant residues. Exhibit 2 (control swabs) was analyzed as a control for the swabs analyzed from Exhibit 1. 2. Exhibits 3 (unopened Trojan ENZ condom), 4 (unopened Trojan Her Pleasure condom), and 5 (unopened Trojan Ecstasy condom) were analyzed as known standards for comparison with the questioned swabs from Exhibit 1. Exhibit 3.1 (laboratory control swab) was analyzed as a control swab for Exhibits 3, 4, and 5. 3. No significant materials used as ingredients in condom lubricants or sexual lubricants were identified on Exhibit 2 or Exhibit 3.1. 4. Polydimethylsiloxane (PDMS), nonoxynol-9, methylparaben, benzocaine, propylparaben, and elevated amounts of starch particles were identified in the chemical extracts from Exhibit 1 and Exhibit 4. The materials identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibit 4.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251314 (Cont.)	W055	5. Polydimethylsiloxane (PDMS) was identified in the chemical extract from Exhibit 3. It is indeterminate as to whether the PDMS identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibit 3 due to unexplainable differences in the materials identified on the samples. 6. Polydimethylsiloxane (PDMS) and starch particles were identified in the chemical extracts from Exhibit 5. It is indeterminate as to whether the PDMS and starch identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibit 5 due to unexplainable differences in the materials identified on the samples. 7. This testing cannot determine the time that materials were originally deposited on any exhibit analyzed, or the length of time it takes for materials deposited on the body to be lost due to factors such as decay, degradation, evaporation, washing, or absorption by the body. 8. This testing cannot determine whether the materials identified on Exhibit 1 originated from a single product source or from multiple sources. 9. A condom lubricant association is not a means of positive identification and the number of possible sources for a specific condom lubricant formulation is unknown. 10. It should be noted that the materials identified in Exhibit 1 are not unique to condom lubricants and may be found in other commercial products. a. Polydimethylsiloxane is an ingredient in products such as some lubricating and personal care products. b. Starch is an ingredient in products such as some baking, cosmetic, and personal care products. c. Nonoxynol is a spermicide and is an ingredient used in some detergents as a surfactant. d. Benzocaine is a numbing agent and is an ingredient used in some topical ointments and gels. e. Methylparaben and propylparaben are used as ingredients in products such as some medical lubricants, as well as personal care products.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251315	W055	1. Exhibits 3 (unopened Trojan ENZ Lubricated condom), 4 (unopened Trojan Her Pleasure Sensations Armor Spermicidal Lubricant condom), and 5 (unopened Trojan Stimulations Ecstasy Ultra Smooth Lubricant condom) were submitted as standards for comparison to residues identified on Exhibit 1 (vaginal swabs). Exhibits 3, 4, and 5 were each sampled by swabbing. 2. The chemical extracts of the swab cuttings from Exhibits 1 (vaginal swabs), 2 (control swabs), 3 (Trojan ENZ condom), 3.1 (laboratory control swab), 4 (Trojan Her Pleasure condom), and 5 (Trojan Stimulations Ecstasy condom) were analyzed for the presence of condom and sexual lubricant residues. a. Exhibit 2 was analyzed as a control for Exhibit 1. b. Exhibit 3.1 was analyzed as a control for Exhibits 3, 4, and 5. c. No significant materials used as ingredients in condom or sexual lubricants were identified on Exhibits 2 or 3.1. 3. Polydimethylsiloxane (PDMS), elevated amounts of starch, nonoxynol-9 (a spermicide), benzocaine, methylparaben, and propylparaben were identified on Exhibit 1 (vaginal swabs) and may have originated from a condom lubricant or a sexual lubricant. a. Polydimethylsiloxane (PDMS), starch, nonoxynol-9 (a spermicide), benzocaine, methylparaben, and propylparaben were also identified on Exhibit 4 (unopened Trojan Her Pleasure condom). The materials identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibit 4. b. Polydimethylsiloxane (PDMS) and starch were identified on Exhibits 3 (unopened Trojan ENZ condom) and 5 (unopened Trojan Stimulations Ecstasy condom). Exhibit 3 is considered a low donor of starch. i. It is indeterminant as to whether the PDMS identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibit 3 due to unexplainable differences in the materials identified on the samples (i.e., elevated amounts of starch, the presence of nonoxynol-9, benzocaine, methylparaben, and propylparaben identified on Exhibit 1).

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251315 (Cont.)	W055	ii. It is indeterminant as to whether the PDMS and starch identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibit 5 due to unexplainable differences in the materials identified on the samples (i.e., the presence of nonoxynol-9, benzocaine, methylparaben, and propylparaben identified on Exhibit 1). 4. The following contextual statements apply to the capabilities of this analytical testing: a. This testing cannot determine the time that materials were originally deposited on any specific exhibit examined, or the length of time it takes for materials deposited to be lost due to factors such as decay, degradation, evaporation, washing, or absorption by the body. b. This testing cannot determine whether the materials identified on Exhibit 1 (vaginal swabs) originated from a single product source or from multiple sources. c. A condom association is not a means of positive identification and the number of possible sources for a specific condom formulation is unknown. d. It should be noted that the materials identified on Exhibit 1 (vaginal swabs) are not unique to condom and sexual lubricants and may be found in other commercial products. i. Polydimethylsiloxane (PDMS) is an ingredient in products such as some lubricating and personal care products. ii. Starch is an ingredient in products such as some baking, cosmetic, and personal care products. iii. Nonoxynol-9 is a spermicide and is an ingredient used in some detergents as a surfactant. iv. Benzocaine is a numbing agent and is an ingredient used in some topical anesthetics. v. Methylparaben and propylparaben are common preservatives and are used as ingredients in products such as some medical lubricants and personal care products.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251316	W055	1. The chemical extracts of the swab cuttings from Exhibits 1 (questioned swabs assumed to be vaginal swabs) and 2 (control swabs) were analyzed for the presence of condom lubricant and sexual lubricant residues. 2. Exhibits 3 (unopened Trojan ENZ condom), 4 (unopened Trojan Her Pleasure condom), and 5 (unopened Trojan Ecstasy condom) were submitted as standards for comparison with any condom lubricant or sexual lubricant residues identified on Exhibit 1 (questioned swabs assumed to be vaginal swabs). 3. Exhibit 3.1 (laboratory control swab) was examined as a negative "control" sample for the examination of Exhibits 3, 4, and 5. 4. No significant materials used as ingredients in condom lubricants or sexual lubricants were identified on Exhibits 2 (control swabs) or 3.1 (control swab). 5. Polydimethylsiloxane (PDMS), elevated amounts of starch, nonoxynol-9, benzocaine, methylparaben, and propylparaben were identified on Exhibit 1 (questioned swabs assumed to be vaginal swabs). Polydimethylsiloxane (PDMS), starch, nonoxynol-9, benzocaine, methylparaben, and propylparaben were identified on Exhibit 4 (unopened Trojan Her Pleasure condom). The materials identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibit 4. 6. Polydimethylsiloxane (PDMS) was identified on Exhibit 3 (unopened Trojan ENZ condom). It is indeterminate as to whether the PDMS identified in Exhibit 1 (questioned swabs assumed to be vaginal swabs) could have originated from a source with the same characteristics as Exhibit 3 due to unexplainable differences in the materials identified on the samples (elevated starch, nonoxynol-9, benzocaine, methylparaben, and propylparaben). 7. Polydimethylsiloxane (PDMS) and elevated starch were identified on Exhibit 5 (unopened Trojan Ecstasy condom). It is indeterminate as to whether the PDMS and elevated amounts of starch identified in Exhibit 1 (questioned swabs assumed to be vaginal swabs) could have originated from a source with the same characteristics as Exhibit 5 due to unexplainable differences in the materials identified on the samples (nonoxynol-9, benzocaine, methylparaben, and propylparaben).

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251316 (Cont.)	W055	8. The following contextual statements apply to the results reported above. a. This testing cannot determine the time that materials were originally deposited on any exhibit analyzed, or the length of time it takes for materials deposited on the body to be lost due to factors such as decay, degradation, evaporation, washing, or absorption by the body. b. This testing cannot determine whether the materials identified on Exhibit 1 (vaginal swabs) originated from a single product source or from multiple sources. c. A condom lubricant association is not a means of positive identification and the number of possible sources for a specific condom lubricant formulation is unknown. d. It should be noted that the materials identified on Exhibit 1 (vaginal swabs) are not unique to condom lubricants and may be found in other commercial products. i. Polydimethylsiloxane (PDMS) is an ingredient in products such as some lubricating and personal care products. ii. Starch is an ingredient in products such as some baking, cosmetic, and personal care products. iii. Nonoxynol-9 is a spermicide and is an ingredient used in some detergents as a surfactant. iv. Benzocaine is a numbing agent and is an ingredient used in some topical anesthetics. v. Methylparaben and propylparaben are ingredients in products such as some personal care products.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251317	W055	1. The chemical extracts of the swab cuttings from Exhibit 1 (questioned swabs recovered from victim) and Exhibit 2 (control swabs) were analyzed for the presence of condom and sexual lubricant residues. Exhibits 3 (unopened Trojan ENZ condom), 4 (unopened Trojan Her Pleasure condom with spermicidal lubricant), and 5 (unopened Trojan Ecstasy condom) were submitted as standards for comparison with any condom lubricant or sexual lubricant residues identified on Exhibit 1. a. Exhibit 2 was examined as a control sample for Exhibit 1. No significant materials used as ingredients in condom lubricants or sexual lubricants were identified on Exhibit 2. b. Exhibit 3.1 (laboratory control swab) was examined as a negative control sample for the swabs used to sample Exhibits 3, 4, and 5. No significant materials used as ingredients condom lubricants or sexual lubricants were identified on Exhibit 3.1. 2. Polydimethylsiloxane (PDMS), nonoxynol-9 (N9), methylparaben, propylparaben, benzocaine, and elevated amounts of starch were identified on Exhibit 1 and may have originated from a condom lubricant. 3. PDMS and starch were identified on Exhibits 3 and 5. a. Exhibit 3 is considered a low donor of starch. b. It is indeterminate as to whether the PDMS and starch identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibits 3 or 5 due to unexplainable differences in the materials identified on the samples (N9, methylparaben, propylparaben, benzocaine, and/or elevated starch). 4. PDMS, N9, methylparaben, propylparaben, benzocaine, and starch were also identified in Exhibit 4, thus the materials identified on Exhibit 1 could have originated from a source with the same characteristics as Exhibit 4. a. A known lubricant association is not a means of positive identification and the number of possible sources for a specific lubricant formulation is unknown. b. This testing cannot determine whether the materials identified on Exhibit 1 originated from a single product source or from multiple sources.

UTIC	Webcode	How would you state your findings in a report? (Use the same wording as you would to submit a report to the lead investigator and/or court).
p20251317 (Cont.)	W055	c. It should be noted that the materials identified on Exhibit 1 are not unique to condom lubricants and may be found in other commercial products. i. PDMS is an ingredient in products such as some lubricating and personal care products. ii. Starch is an ingredient in products such as some baking, cosmetic, and personal care products. iii. N9 is a spermicide and is an ingredient used in some detergents as a surfactant. iv. Benzocaine is a numbing agent and is an ingredient used in some topical anesthetics. v. Methylparaben and propylparaben are used as ingredients in products such as some medical lubricants as well as personal care products. 5. This testing cannot determine the time that materials were originally deposited on any exhibit analyzed, or the length of time it takes for materials deposited on the body to be lost due to factors such as decay, degradation, evaporation, washing, or absorption by the body.

12) How long did it take to complete this test (in hours)? Please report actual analytical hours only.

13) Did you find this test to be a fair test of the process of the examination and interpretation of evidence containing lubricants?

A) ◯ Yes

B) ◯ No

UTIC	Webcode	How long did it take to complete this test (in hours)? Please report actual analytical hours only.	Did you find this test to be a fair test of the process of the examination and interpretation of evidence containing lubricants?
p20251301	W061	20	Yes

UTIC	Webcode	How long did it take to complete this test (in hours)? Please report actual analytical hours only.	Did you find this test to be a fair test of the process of the examination and interpretation of evidence containing lubricants?
p20251302	W061	16 hours	Yes
p20251305	W153	8h	Yes
p20251306	W068	18 hours	No
p20251308	W123	18	No
p20251309	W053	10	Yes
p20251312	W126	3	Yes
p20251313	W055	24	Yes
p20251314	W055	40	Yes
p20251315	W055	40	Yes
p20251316	W055	40	Yes
p20251317	W055	40	Yes

14) How would you change the aspects of the test (i.e. scenario, test samples, question sections, report format) to improve a future version of this test? Comments and suggestions are welcome.

Additionally, this question is a means to provide you with an opportunity to explain or include information about your findings or interpretation, as needed. In order to maintain confidentiality, please refrain from including identifying information specific to your laboratory.

UTIC	Webcode	How would you change the aspects of the test (i.e. scenario, test samples, question sections, report format) to improve a future version of this test? Comments and suggestions are welcome.	FTS Response
p20251306	W068	**Scenario Changes:** When performing a lubricant exam, a history of assault (HOA) form is usually provided in order to provide a sample history that can be used to help interpret the results. This proficiency test had no such information. Situations such as: 1) The sample is not collected until 10+ hours after the incident might impede our ability to detect water soluble lubricants such as Nonoxynol-9.	Thank you for the suggestion. While we understand the request for case scenario details in order to aid in evidence interpretation and significance, any information would be contrived, potentially misrepresenting the items. Additionally, FTS does not evaluate case evidence interpretation and significance.

UTIC	Webcode	How would you change the aspects of the test (i.e. scenario, test samples, question sections, report format) to improve a future version of this test? Comments and suggestions are welcome.	FTS Response
p20251306 (Cont.)	W068	2) Post assault activities such as showering or wiping might impede our ability to detect lubricants. 3) An account of previous consensual sexual activities or lubricant use is helpful information. 4) Situations with multiple assailants indicated by a victim may play a role in conclusions drawn by an analyst.	
p20251308	W123	The test questions and wording are confusing and may be easily misinterpreted since all known condoms have PDMS on them, as well as the questioned item. For example, question 5) 'Is Item 3 a possible source of compound(s) found on Item 1?' Item 3 in fact could be the source of the PDMS on Item 1. However, based on previous test results and how those results are summarized, it seems like the intent may be to eliminate the other 2 condoms. If the question was posed 'Is Item 3 a possible source of ALL the compound(s) found on Item 1?' or 'Is Item 3 consistent with Item 1 in ALL its components?' Then the answer would have to be no. Even if the question is phrased similarly to the summary report from last year's test, there is uncertainty with these test samples. Using the same example, Can the lubricant from Item 3 be eliminated as a possible source for the lubricant in Item 1? With the evidence in this test, that	Thank you for the specific suggestions for wording changes. These are very helpful!

UTIC	Webcode	How would you change the aspects of the test (i.e. scenario, test samples, question sections, report format) to improve a future version of this test? Comments and suggestions are welcome.	FTS Response
p20251308 (Cont.)	W123	statement is false if referring to only the lubricant, since the starch and spermicide are not classified as lubricants, in my opinion. Perhaps modify to ask what was identified, similar to the explosives PT. For example, were any lubricants or related compounds identified? If yes, what type of compounds were detected? List possible compounds with checkboxes: PDMS, PEG, PG, glycerol, other, etc. Otherwise, this test is very good in the sense of understanding the limitations of comparing known samples with overlapping components. In a case scenario with multiple suspects, there is a real possibility that none of the condoms could be excluded from contributing to the presence of PDMS on the victim sample.	
p20251309	W053	Review the questions, as technically speaking non of the condoms can be the true source of the lubricant on the questioned vaginal swab, since all packages were unopened and hence the condoms unused.	Thank you for the suggestion.
p20251312	W126	Casework is very limited in this area at this time. There is an expectation that there may be swabs with biological staining also submitted.	Thank you for the suggestion.

UTIC	Webcode	How would you change the aspects of the test (i.e. scenario, test samples, question sections, report format) to improve a future version of this test? Comments and suggestions are welcome.	FTS Response
p20251315	W055	Although Exhibit 3 (Trojan ENZ condom) contained starch. Exhibit 3 would be considered a low donor in this case. The quantity of starch observed on Exhibit 1 could not have originated from Exhibit 3 or any condom with the same characteristics.	Thank you for clarifying your response.